FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 76

[CS Docket No. 98–120; FCC 07–170]

Carriage of Digital Television Broadcast Signals

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: This *Third Report and Order* finalizes the material degradation requirements adopted by the Commission in 2001, and establishes two alternative approaches that cable operators may use to meet their responsibility to ensure that cable subscribers with analog television sets can continue to view all must-carry stations after the end of the DTV transition. The Commission adopts rules to ensure that cable subscribers will continue to be able to view broadcast stations after the transition, and that they will be able to view those broadcast signals at the same level of quality in which they are delivered to the cable system. The Commission announces these rules now to ensure that cable operators and broadcasters have sufficient time to prepare to comply with them.

DATES: Effective March 3, 2008.

ADDRESSES: Federal Communications Commission, 445 12th Street, SW., Washington, DC 20554. In addition to filing comments with the Office of the Secretary, a copy of any comments on the Paperwork Reduction Act information collection requirements contained herein should be submitted to Cathy Williams, Federal Communications Commission, 445 12th Street, SW., Washington, DC 20554, or via the Internet to *PRA@fcc.gov*.

FOR FURTHER INFORMATION CONTACT: For additional information on this proceeding, please contact Lyle Elder, *Lyle.Elder@fcc.gov*, or Eloise Gore, *Eloise.Gore@fcc.gov*, of the Media Bureau, Policy Division, (202) 418–2120. For additional information concerning the Paperwork Reduction Act information collection requirements contained in this document, contact Cathy Williams on (202) 418–2918, or via the Internet at *PRA@fcc.gov*.

SUPPLEMENTARY INFORMATION: This is a summary of the Federal Communications Commission's Third Report and Order in CS Docket No. 98–120, FCC 07–170, adopted September 11, 2007, and released November 30, 2007. The full text of this document is available for public inspection and copying during regular business hours in the FCC Reference Center, Federal Communications Commission, 445 12th Street, SW., CY–A257, Washington, DC 20554. These documents will also be available via ECFS (*http://www.fcc.gov/cgb/ecfs/*). (Documents will be available electronically in ASCII, Word 97, and/or Adobe Acrobat.) The complete text may be purchased from the Commission's copy contractor, 445 12th Street, SW., Room CY–B402, Washington, DC 20554. To request this document in accessible formats (computer diskettes, large print, audio recording, and Braille), send an e-mail to *fcc504@fcc.gov* or call the Commission's Consumer and Governmental Affairs Bureau at (202) 418–0530 (voice), (202) 418–0432 (TTY).

Paperwork Reduction Act of 1995 Analysis:

This document contains modified information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, will invite the general public to comment on the information collection requirements contained in this R&O as required by the Paperwork Reduction Act of 1995, Public Law 104–13. The Commission will publish a separate **Federal Register** Notice at a later date seeking these PRA comments from the public. In addition, the Commission notes that pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, *see* 44 U.S.C. 3506(c)(4), we previously sought specific comment on how the Commission might ''further reduce the information collection burden for small business concerns with fewer than 25 employees.''

Summary of the Third Report and Order

1. As discussed below, the Act requires that cable systems carry broadcast signals without material degradation and ensure that all subscribers can receive and view mandatory-carriage signals. This *Third Report and Order* finalizes the material degradation requirements adopted by the Commission in 2001, and establishes two alternative approaches that cable operators may use to meet their responsibility to ensure that cable subscribers with analog television sets can continue to view all must-carry stations after the end of the DTV transition. Cable operators may either carry such signals in analog, or, for all-digital systems, carry the signal in digital only.

A. Material Degradation—Sections 614(b)(4)(A) and 615(g)(2)

2. In this section, we adopt rules requiring that cable operators not discriminate in their carriage between broadcast and non-broadcast signals, and that they not materially degrade broadcast signals. As explained below, we reaffirm the approach adopted by the Commission in 2001 to determining whether material degradation has occurred, as well as the requirement that HD signals be carried in HD.

3. The Act requires that cable operators carry local broadcast signals ''without material degradation,'' and instructs the Commission to ''adopt carriage standards to ensure that, to the extent technically feasible, the quality of signal processing and carriage provided by a cable system for the carriage of local commercial television stations will be no less than that provided by the system for carriage of any other type of signal.'' As noted above, section 614(b)(4)(B) of the Act directs the Commission ''to establish any changes in the signal carriage requirements of cable television systems necessary to ensure cable carriage of such broadcast signals of local commercial television stations which have been changed'' as a result of the DTV transition.

4. In the *Second Further Notice of Proposed Rulemaking (Second FNPRM)* 72 FR 312444, December 31, 2007, we sought comment on proposals for ensuring that broadcast signals would not be materially degraded after the digital transition. We proposed that the measurement by which we determine whether an operator is degrading the broadcast signal change from a subjective to an objective standard or, in the alternative, to maintain the comparative standard established in the *First Report and Order* 66 FR 16523, March 26, 2001. We asked whether we should require cable operators to pass through all primary video and program-related bits (''content bits''). In addition, we proposed a rule that would create a framework for negotiations between cable operators who wanted to carry fewer than all content bits and the broadcasters whose signals were at issue. Such a rule would require any operator that wished to carry fewer than all content bits to demonstrate to the broadcaster that it could meet the picture-quality-nondegradation standard without carriage of all content bits. Finally, in the *Second FNPRM*, we reminded commenters of the existing requirement to carry high definition signals in HD to those subscribers who have signed up for an HD package, and

reiterated that this requirement will continue after the transition.

5. We retain the requirement that HD signals be carried in HD, as well as the comparative approach to determining whether material degradation has occurred. In 2001, the *First Report and Order* established two requirements to avoid material degradation. First, ''a cable operator may not provide a digital broadcast signal in a lesser format or lower resolution than that afforded to any'' other signal on the system. Second, a cable operator must carry broadcast stations such that, when compared to the broadcast signal, ''the difference is not really perceptible to the viewer.'' Thus, ''a broadcast signal delivered in HDTV must be carried in HDTV.'' Because we decline to rely on measurement of bits to determine whether degradation has occurred, we do not require carriage of all content bits. Additionally, for the reasons described below, we decline to adopt the proposed negotiation framework.

6. The Act requires that broadcast signals not be ''materially degraded.'' It also requires the Commission to ''adopt carriage standards to ensure that, to the extent technically feasible, the quality of signal processing and carriage provided by a cable system for the carriage of local commercial television stations will be no less than that provided by the system for carriage of any other type of signal.'' The Commission stated in 2001 that ''[f]rom our perspective, the issue of material degradation is about the picture quality the consumer receives and is capable of perceiving.'' Cable commenters argued that this should remain the focus of the Commission's decision making, and we agree.

7. We considered the ''all content bits'' proposal, the main benefit of which was a clear means of measurement and consequently ease of enforcement. Ultimately, we conclude, however, that the all content bits approach is likely to stifle innovation and the very efficiency that digital technology offers, and may be more exacting a standard than necessary to ensure that a given signal will be carried without *material* degradation. We also conclude that it is unnecessary at this time to impose such a requirement in light of the paucity of material degradation complaints over the 15 years since enactment of the Must Carry statute.

8. A number of commenters support the existing standard, and most argue that a comparative approach remains the best method of measuring material degradation. As these commenters point out, there is little evidence to indicate otherwise. We note Comcast's observations that there appear to have been no more than two material degradation complaints since the 1992 adoption of the prohibition, and that both of those were dismissed. Even if there has been limited opportunity to ''test'' these rules in a digital context, there is every reason to believe that they will prove just as robust in an environment of greater attention to picture quality.

9. Furthermore, there are technological benefits to the current comparative standard. Time Warner argues that the content bits standard proposed in the *Second FNPRM* would require devoting additional bandwidth to carriage even when it would not improve the quality of the transmitted image, hurting consumers by limiting other uses of the bandwidth. AT&T further argues that an ''all content bits'' standard could ''dampen[ ] incentives to invest in video compression and other technologies * * * that would allow even greater transmission efficiencies and higher quality pictures.'' We recognize these concerns, and do not intend to impede improvements in technology. Some cable operators may, currently or in the future, rely on advanced compression technologies such as MPEG 4 to provide service to subscribers with greater efficiency. We particularly recognize the value of compression technologies that take the broadcast signal back to uncompressed baseband and then re-encode it in a more efficient manner without materially degrading the picture. Such advanced compression utilizes a minimum bit rate that does not reduce the quality of the resolution. We agree with commenters that a comparative standard is currently the best way to encourage and reward technological innovations, like MPEG4 compression, that allow for more efficient use of bandwidth without diminishing viewer experience.

10. We decline to adopt the proposal of Agape Church Inc., that we require carriage of secondary channels. Our rules here focus only on the broadcaster's primary video and program related content. The prohibition on material degradation adds no additional requirement to carry non-program-related content.

11. Commenters requested clarification that downconversion to analog does not constitute material degradation. We accordingly clarify that it is not material degradation to downconvert that signal to comply with the ''viewability'' requirement discussed below.

12. As noted above, we do not adopt the negotiation framework proposed in the *Second FNPRM*, and direct parties to continue to follow the rules as established in section 76.61. Both broadcasters and cable operators, the parties who would be involved in these negotiations, raised serious objections to the proposal. The National Association of Broadcasters (''NAB'') and The Association for Maximum Service Television (''MSTV'') are highly critical of any required negotiations, particularly ones which would begin and end upon the request of operators. They state that the 30 day window for carriage complaints is too short, and that the proposal as a whole places the burden of ensuring compliance on the broadcasters, rather than on the operators who have the duty by statute. Finally, they argue that the requirements and penalties for noncompliance are insufficiently detailed or strict. Cable commenters object to the requirement that operators make a showing of non material-degradation to the satisfaction of the broadcaster. They express concern about what they anticipate would be: (1) A major shift in power to must-carry broadcasters, who do not have an incentive to bargain; and (2) an addition of significant transaction costs for operators, who currently do not negotiate with must carry stations at all. They argue that this would add an unnecessary complication to mandatory carriage. As NAB and MSTV note, the goal of these rules is to provide cable subscribers with the full benefits of the digital transition. Given the broad based objections to the proposal, we decline to establish a formal procedure by which broadcasters would waive the material degradation requirements. We note that enforcement of the material degradation requirements is initiated by a broadcaster's carriage complaint, and that the rules provide for the broadcaster to complain first to the cable operator before filing such a complaint. This gives the parties an opportunity to informally address material degradation disputes, and if the station is satisfied with the resultant carriage, no complaint will be filed. No additional formal process is necessary. 47 CFR 76.61.

B. Availability of Signals—Sections 614(b)(7) and 615(h)

13. In this section, we adopt rules requiring cable systems that are not ''all-digital'' to provide must-carry signals in analog, while ''all-digital'' systems may provide them in digital form only. We also require that the cost of any downconversion be borne by operators, but that downconverted signals may count toward the cap on commercial

broadcast carriage. Pursuant to sections 614 and 615 of the Act, cable operators must ensure that all cable subscribers have the ability to view all local broadcast stations carried pursuant to mandatory carriage. Specifically, section 614(b)(7) (for commercial stations) states that broadcast signals that are subject to mandatory carriage must be ''viewable via cable on *all* television receivers of a subscriber which are connected to a cable system by a cable operator or for which a cable operator provides a connection.'' Similarly, section 615(h) for noncommercial stations states that ''[s]ignals carried in fulfillment of the carriage obligations of a cable operator under this section shall be available to every subscriber as part of the cable system's lowest priced tier that includes the retransmission of local commercial television broadcast signals.'' These statutory requirements plainly apply to cable carriage of digital broadcast signals, and, as a consequence, cable operators must ensure that all cable subscribers—including those with analog television sets—continue to be able to view all commercial and non-commercial must-carry broadcast stations after February 17, 2009.

14. These rules shall be in force for three years from the date of the digital transition, subject to review by the Commission during the last year of this period (i.e., between February 2011 and February 2012). In light of the numerous issues associated with the transition, it is important to retain flexibility as we deal with emerging concerns. A three-year sunset ensures that both analog and digital cable subscribers will continue to be able to view the signals of must-carry stations, and provides the Commission with the opportunity after the transition to review these rules in light of the potential cost and service disruption to consumers, and the state of technology and the marketplace. To assist the Commission in this review, we will include questions in our annual Cable Price Survey to assess, for example, digital cable penetration, cable deployment of digital set-top boxes with various levels of processing capabilities, and cable system capacity constraints.

15. In the *Second FNPRM*, we sought comment on proposals that would ensure the viewability, for all subscribers, of signals carried pursuant to mandatory carriage. To that end, we proposed that

> cable operators must either: (1) Carry the signals of commercial and non-commercial must-carry stations in analog format to all analog cable subscribers, or (2) for all-digital systems, carry those signals only in digital format, provided that all subscribers with analog television sets have the necessary equipment to view the broadcast content.

We also proposed that the cost of any down conversion rendered necessary by these rules be borne by the cable operators.

16. We adopt these proposals, and note that they apply to all operators, regardless of their rate-regulated status. In sum, cable operators must comply with the statutory mandate that must-carry broadcast signals ''shall be viewable via cable on all television receivers of a subscriber which are connected to a cable system by a cable operator or for which a cable operator provides a connection,'' and they have two options of doing so. First, to the extent that such subscribers do not have the capability of viewing digital signals, cable systems must carry the signals of commercial and non-commercial must-carry stations in analog format to those subscribers, after downconverting the signals from their original digital format at the headend. This proposal is in line with the approach already voluntarily planned by many cable operators, as described in testimony by Time Warner CEO Glenn Britt before the House Subcommittee on Telecommunications and the Internet. In the alternative, operators may choose to operate ''all-digital systems.'' ''All-digital'' systems are systems that do not carry analog signals or provide analog service. Under this option, operators will not be required to downconvert the signal to analog, and may provide these stations only in a digital format. In any event, any downconversion costs will be borne by the operator.

17. To fulfill its must-carry obligations in cases where a cable operator uses digital-to-analog converter boxes that do not have analog tuners, the operator can deliver a standard definition digital version of a must-carry broadcaster's high definition digital signal, in addition to the analog and high definition signal, or use boxes that convert high definition signals for viewing on an analog television set, or use other technical solutions so long as cable subscribers have the ability to view the signals.

18. As NCTA notes, the congressionally mandated end of the Digital Television transition does not apply directly to cable operators. We thus recognize that there may be two different kinds of cable systems for some period of time after the DTV transition is complete. Some operators may choose to deliver programming in both digital and analog format. NAB and MSTV describe these systems as those in which they ''keep an analog tier and continue to provide local television signals (and perhaps many cable channels as well) to analog receivers in a format that does not require additional equipment.'' Other operators may choose, as many already have, to operate or transition to ''all-digital systems,'' and as NAB and MSTV further note, ''virtually all cable operators ultimately will do so.'' Game Show Network, LLC (''GSN'') questions why there should be any rules protecting owners of analog sets, since that is ''a format the government itself has determined is no longer worthy of any spectrum.'' Congress did decide to end analog broadcasting, but declined to turn its backs on the millions of Americans with analog sets. Thus, they established the NTIA converter box program to protect the continued availability of over-the-air signals to all Americans; they accepted the claims of the cable industry that subscribers with analog sets would continue to be served; and we now establish these rules to ensure that those subscribers do continue to be served.

19. NAB proposes that cable operators carry all broadcasters on their systems in the same manner; i.e., if one must carry station is carried in analog, all broadcasters, whether carried pursuant to retransmission consent or must carry, would be carried in analog. Cable operators object to this proposal, and we decline to adopt it. Although a system that is not ''all-digital'' will be required to carry analog versions of all must-carry signals to ensure their viewability, retransmission consent stations may be carried in any manner that comports with the private agreements of the parties.

20. The ''viewability'' requirement that we adopt today is based on a straightforward reading of the relevant statutory text. While some cable commenters dispute our interpretation of section 614(b)(7), their arguments are at odds with both the plain meaning of the statutory text as well as the structure of the provision. These commenters principally argue that the viewability mandate is satisfied whenever cable operators transmit broadcast signals and '' '*offer* to sell or lease * * * a converter box' to their customers'' that will allow those signals to be viewed on their receivers. To the extent that such subscribers do not have the necessary equipment, however, the broadcast signals in question are not ''viewable'' on their receivers. In addition, it is important to note that the relevant question under the statute is not whether subscribers can view over-the-air broadcast signals using their receivers. Rather, it is whether

subscribers can view the signals of broadcast stations that are carried through their cable system. *See* 47 U.S.C. 534(b)(7). To be sure, ''[i]f a cable operator authorizes subscribers to install *additional* receiver connections, but does not provide the subscriber with such connections, or with the equipment and materials for such connections, the operator [is only required to] notify such subscribers of all broadcast stations carried on the cable system which cannot be viewed without a converter box and * * * offer to sell or lease such a converter box to such subscribers at rates in accordance with section 623(b)(3).'' But these commenters confuse the separate mandates set forth in the second and third sentences of section 614(b)(7), a distinction we clarified as early as 1993. As NAB and MSTV observe, ''there is no evidence that the third sentence of section 614(b)(7) was intended to narrow the scope of the viewability requirement for sets connected by cable operators.'' For every receiver ''connected to a cable system by a cable operator or for which a cable operator provides a connection,'' that operator must ensure that the broadcast signals in question are actually viewable on their subscribers' receivers.

21. As we explained in the *Second FNPRM*, the operators of either all-digital or mixed digital-analog systems will be responsible under the statute for ensuring that mandatory carriage stations are actually viewable by all subscribers, ''including those with analog television sets.'' Two commenters argued that our proposed rules were overbroad, because analog-only televisions will not ''qualify as 'television receivers' after the transition for purposes of the viewability requirement.'' These arguments fail to recognize, however, that the hard deadline set by Congress does not apply to Low Power television stations, including translators and Class A stations. Thus, Low Power broadcasters, operating hundreds of channels, will still be lawfully transmitting analog signals on February 18, 2009, and for some period of time afterwards. Those consumers who rely on Low Power stations and turn on their over-the-air analog sets that morning to watch a local newscast will be using a device ''engaged or able to engage in 'the process of * * * radio transmission.' '' More broadly, as NAB and MSTV point out, the Commission's authority over these sets is not predicated merely on their ability to receive over the air signals. Rather, we believe that a device that allows subscribers to view signals sent by their cable operator is a television receiver for purposes of section 614(b)(7) of the Act.

22. NCTA also argues that the situation in the early 1990s that spurred the creation of these viewability requirements was different from the situation that will be faced by consumers post-transition. Therefore, they posit, it is inappropriate to rely on sections 614(b)(7) and 615(h) to address viewability on analog receivers. To begin with, it is our primary task to implement the text of the statutory provision. While the enactment of a statute may be principally aimed at a particular set of circumstances present at the time, it is often written in general language so that it applies to similar sets of circumstances in the future. As the United States Supreme Court has instructed, ''statutory prohibitions often go beyond the principal evil to cover reasonably comparable evils, and it is ultimately the provisions of our laws rather than the principal concerns of our legislators by which we are governed.'' In any event, the cable commenters' own descriptions of the driving force behind the statutory provision demonstrate that the situation at hand is directly analogous. NCTA explains that ''[a]t the time [of the provision's enactment], certain television sets were not 'cable-ready' and could not receive [some] channels at all,'' and observes that the Commission therefore required converter boxes provided by cable operators to contain ''the necessary channel capacity to permit a subscriber to access a UHF must-carry signal through the converter.'' Replace ''cable-ready'' with ''digital cable-ready,'' and ''UHF'' with ''digital,'' and NCTA has described the problem at hand, and one of the options the Commission has again offered to resolve it. The Commission's charge is to implement the statutory language enacted by Congress, and this language reflects Congress's unambiguous determination that broadcast signals must be viewable by all cable subscribers. Indeed, as NAB and MSTV note, ''the authority that Congress gave the Commission under section 614(b)(4)(B) to make rules regarding advanced television reflects Congress' understanding that broadcast technology certainly would change over time, and that the Commission was expected to modify the carriage rules as needed.'' While the circumstances today differ from those present at the time of the provision's enactment, the basic issue, ensuring the viewability of broadcast signals, is the same.

23. Time Warner argues that we do not have the authority to read section 614(b)(7) as a ''manner of carriage'' requirement, even to offer analog carriage as one option for complying with the statute. They see the Commission's early interpretation of the viewability provision as a statement that operators must provide converter boxes ''in a specific and limited context,'' and that the section cannot serve as the basis for a carriage requirement. On the contrary, the Commission has frequently allowed cable operators to meet their 614(b)(7) obligations by placing must carry signals on a channel viewable to all subscribers instead of by providing boxes. The rules we adopt today are firmly grounded in longstanding Commission practice, and echo previous solutions to similar problems.

24. Some cable programmer commenters, such as the Weather Channel, argue that the proposal ''unquestionably would consume vast amounts of cable system bandwidth'' with duplicative programming. In actuality, as Time Warner admits, these rules will not have an impact on the carriage of most stations; the ''vast majority of broadcasters opt for retransmission consent.'' Thus, as NAB notes in its reply, any incremental increase of bandwidth devoted to must-carry stations will be ''negligible.'' Gospel Music Channel, LLC (Gospel) articulates a concern that flows from Weather Channel's: That these rules could reduce their chances of carriage on any given system. While we recognize Gospel's concerns, Congress already acknowledged them when it mandated that systems with more than 12 usable activated channels need carry local commercial television stations only ''up to one-third of the aggregate number of usable activated channels of such system[s].'' Furthermore, Gospel fails to recognize that to the extent operators choose the second option and become ''all-digital,'' these rules could contribute to a very positive impact on independent programmers' ability to make carriage deals due to the concomitant effective increase in channel capacity. The Africa Channel, et al. (''TAC'') also argue that the potential loss of independent cable programmers serving focused audiences ''are digital transition issues as important as a consideration of what constitutes viewability or material degradation for broadcasters who are the least likely television market participants to be left behind with or without burdensome new must-carry rules.'' In essence, TAC argues that independent cable programmers deserve protections on par with must-carry broadcasters. Congress, however, disagrees, and the Supreme Court has

upheld the must-carry regime to ensure the viewability and prevent the material degradation of the signals of those broadcasters.

25. Some commenters have incorrectly characterized our rule as ''dual carriage.'' Comcast attempts to frame this requirement as ''a requirement to carry broadcast signals in [analog] * * * in perpetuity.'' Not only is this not the Commission's rule, Comcast's proposal for avoiding ''dual carriage'' would read ''viewability'' itself out of the Act. Dual carriage, as considered and rejected by the Commission, would have required cable operators ''to carry both the digital and analog signals of a station during the transition when television stations are still broadcasting analog signals''; that is, the mandatory simultaneous carriage of two different channels broadcast by the same station. The Commission ultimately rejected this concept. The rule we establish in this *Third Report and Order* is quite distinct. It requires carriage only of a single broadcast signal, and gives operators the freedom to choose how to ensure that signal is viewable by all subscribers. It does not require carriage of more than one broadcast signal from a given must-carry broadcaster, and it does not require carriage of an analog version of a signal unless an operator chooses not to operate an all-digital system.

26. NCTA notes that the Act allows a cable operator to decline to carry signals from stations whose programming substantially duplicates that of a station it already carries. The commenter argues from this that the statute can not be read to require carriage of additional versions of a signal under any circumstances. The connection, however, is tenuous at best. Section 614(b)(5) speaks specifically to the issue of the carriage of different stations providing substantially identical programming, and does not address a requirement to carry multiple versions of a single station's signals. In the former case, subscribers would be receiving multiple channels all showing the same programs at virtually the same time. In this case, however, some subscribers will not be able to see any of a station's programming unless a downconverted version is carried. From the perspective of these subscribers, the actual people sections 614 and 615 were designed to reach, there need not be more than one viewable version of a broadcaster's signal—but there must be at least one.

27. Comcast argues that enforcement of the viewability provisions of the Act will force the Commission into conflict with other sections of the Act, particularly the effective competition provisions of section 623(b). Comcast misstates the case, however, when it says that a deregulated system may provide must carry stations ''in any format that it wishes.'' Indeed, as the Commission made clear in the 2001 Order, signals broadcast in HD must be carried by cable operators in HD, regardless of whether or not the system is rate-regulated. While some requirements are lifted when an operator is deregulated, deregulation is not an exemption from the carriage requirements of the statute. Stations electing mandatory carriage must be carried, they must not be materially degraded, and they must be made viewable.

28. If an operator chooses not to operate an ''all-digital system'' and therefore ensures viewability by providing a digital broadcast signal and a downconverted version of the signal for analog subscribers, it will in some cases use more than the 6 MHz of bandwidth occupied by an analog must-carry signal alone. Comcast argues that this improperly forecloses the use of the bandwidth for other purposes. Congress recognized the importance of preserving cable bandwidth for non-broadcast programmers when it mandated that systems with more than 12 usable activated channels need carry local commercial television stations only ''up to one-third of the aggregate number of usable activated channels of such system[s].'' This limit has been upheld by the courts and will continue to ensure that operators have sufficient bandwidth for carriage of non-broadcast programming and other services. Moreover, to the extent that a cable operator wishes to free bandwidth for other purposes, it may choose to operate an ''all-digital'' system.

29. We are bound by statute to ensure that commercial and non-commercial mandatory carriage stations are actually viewable by all cable subscribers. The Commission also believes, however, that it is important to provide cable operators flexibility in meeting the requirements of sections 614(b)(7) and 615(h). Therefore, we have declined to require a specific approach, instead allowing operators to choose whether or not to operate ''all-digital systems,'' and therefore whether or not to provide mandatory carriage stations in an analog format. This is in accord with the Commission's decision, in the *First Report and Order*, not to require operators to provide set-top boxes.

30. Time Warner argues that the requirement of section 629, that navigation devices be available at retail, supersedes the requirements of section 614(b)(7), which was enacted four years earlier. We disagree. Section 629(f) provides that ''[n]othing in this section shall be construed as expanding or limiting any authority that the Commission may have under [the] law'' prior to the 1996 Telecommunications Act. This includes the viewability provisions of section 614(b)(7). Furthermore, Time Warner's argument is premised on an interpretation of section 614(b)(7) that we decline to adopt, namely that it requires cable operators to provide set top boxes. Indeed, the retail availability of set-top boxes should facilitate subscriber purchase of digital equipment and lessen the burden on all-digital cable operators to provide such boxes. However, we adopt the analog downconversion option to address these very concerns, and provide an option which does not even potentially implicate set-top boxes. An operator may choose not to go ''all-digital,'' and instead satisfy its section 614(b)(7) obligations by downconverting must carry stations to analog, until the operator concludes that the local market is ready for an all-digital cable system.

31. We note that Americans for Tax Reform, Ovation, LLC, and other commenters appear to misapprehend the functionality of the ''converter boxes'' that will be available through the NTIA coupon program. These boxes will, by design, be limited to use in converting over-the-air digital signals into analog signals that can be interpreted by an analog television. Because of differences in the modulation used by digital broadcasters and digital cable systems, these boxes will not be usable by digital cable subscribers to connect their analog receivers. Such converters will be available, but it is important to ensure that the public understands that there are different functionalities provided by different boxes.

32. Discovery observes that, during the transition period, a digital-only broadcaster has had the right to request carriage in digital only, rendering it non-viewable to analog subscribers. As the Commission explained in the *First Report and Order,* however, this is an interim policy, assisting both broadcasters and cable operators to adjust to digital broadcasting over a limited period of time. Discovery argues that the post-transition period will ''similarly be limited,'' and indeed, eventually analog-only sets will be as rare as VHF tuner-only sets are today. There are still important differences, however. In the post-transition period, every channel subject to mandatory carriage will be broadcast solely in digital, while the use of analog receivers

will continue for an indefinite time. Furthermore, making stations actually viewable to cable subscribers is the most fundamental interest expressed in the must carry rules that have been upheld by the Supreme Court. If we declined to enforce the viewability requirement it would render the regime almost meaningless, contrary to the clearly expressed will of the Congress as upheld by the Supreme Court.

33. Because the interim policy governing downconversion makes it an option exercised by broadcasters, they are responsible for any associated costs. Cequel argues that post-transition analog downconversion would only be necessary because the broadcaster itself is no longer providing an analog signal, and that any costs should therefore be borne by the broadcaster. Agape Church Inc. and other broadcast commenters agree with our proposal that, because the decision will shift to cable operators after the transition, so should the costs. NAB and MSTV further argue that these downconversion costs would be modest. ACA says that one of its members paid as much as $4,390.25 per channel to downconvert from HD to analog, and argues in an ex parte that these costs could approach $16,500 per channel. We find this estimate surprisingly high and note that $12,000 of this total appears to be dedicated to format conversion, rather than digital to analog conversion. It is also unclear whether or not the prices or equipment quoted are industry standards, or whether some of the equipment costs presented cumulatively are actually redundant or usable for more than just analog downconversion of one broadcast signal. Nevertheless, we are taking up the issue of flexibility for small cable operators in the *Third FNPRM, infra.* Entravision Holdings, LLC (Entravision) notes that, while it supports our proposal, it would not object to a requirement that broadcasters pay the cost of downconversion if it became necessary in order to ensure the continued viewability of must-carry stations for analog subscribers. However, since the post-transition downconversion will be undertaken by operators at their discretion, in order to comply with the Act, we adopt the proposal that any expense necessary for an operator's compliance with the requirements of sections 614(b)(7) and 615(h) shall be borne by the operator, and not the broadcaster. Specifically, operators of systems that provide analog service are responsible for the cost of downconverting a digital must-carry signal to analog at the headend. To the extent that a standard definition digital subscriber is unable to view a high definition signal via their equipment, operators have a similar responsibility to ensure that the signal is viewable.

34. Such downconverted signals will, however, count toward the one-third carriage cap. Section 614(b)(1)(B) of the Act requires that cable systems with more than ''12 usable activated channels'' devote ''up to one-third of the aggregate number of usable activated channels of such system[s]'' to the carriage of local commercial television stations. Beyond this requirement, the carriage of additional commercial television stations is at the discretion of the cable operator. The Commission determined in the *First Report and Order* that with respect to carriage of digital broadcast signals, the channel capacity calculation will be made by taking the total usable activated channel capacity of the system in megahertz and dividing it by three to find the limit on the amount of system spectrum that a cable operator must make available for commercial broadcast signal carriage purposes. After the transition, when calculating whether an operator has reached or exceeded the one-third cap, we will count the system spectrum occupied by all versions of a commercial broadcast signal (both digital and analog).

35. We also find that operators of systems with an activated channel capacity of 552 MHz or less that do not have the capacity to carry the additional digital must-carry stations may seek a waiver from the Commission. Such systems must, however, commit to continue carrying an analog version such that their subscribers are assured of being able to view all must-carry stations carried on the system.

36. We observe that a number of cable comments imply or state that it is not possible to transition from a system that provides analog service to an all-digital system without the agreement of all current subscribers. While each operator will choose to transition or not based on local market conditions and other business considerations, it is clear that this choice is fully within their discretion. Both of these options are available to all operators at any time, a fact unaffected by this rule. We do note, that as with any change in programming service, particularly one which will have an impact on the compatibility of subscriber equipment, cable operators must comply with certain notice requirements. We remind operators who transition their systems to all-digital that they must provide written notice to subscribers about the switch, containing any information they need or actions they will have to take to continue receiving service.

37. Entravision, licensee of a number of commercial broadcast stations, argues that analog downconversion is the best way to ensure continued viewability, but does not object to the use of other methods by cable operators so long as the result is the same. As an alternative to the option we proposed for systems that continue to carry analog programming, Entravision proposes that must-carry stations be provided in analog, but only until such time as 85% of subscribers in each zip code served by a given operator have the means to view those signals if provided in digital. As Entravision acknowledges, however, the statute requires that must carry broadcast stations be made available to all cable subscribers with analog television sets. As we have noted before, we do not believe we have the authority to exempt any class of subscribers from this requirement, no matter how few the analog subscribers. Therefore, we decline to adopt the proposal offered by Entravision.

38. The Consumer Electronics Association (CEA) asks that the Commission rely on technical solutions shaped by earlier rules and developed by the market to resolve concerns about viewability. CEA suggests that the agency can rely on the retail availability of sets with digital tuners to ensure continued viewability of high quality programming. It argues that this can be assured by requiring the carriage of must carry signals to conform to three requirements: (1) Unencrypted, unscrambled, and in QAM (i.e., ''in the clear''); (2) modulated using MPEG–2, a widely used and accepted codec; and (3) not in switched digital. CEA expresses concern that the requirement to carry must-carry stations ''in the clear'' is not sufficiently articulated outside the context of rate-regulated systems. Although we decline to reach the question of requiring MPEG–2 and prohibiting switched digital, as they are beyond the scope of this proceeding, we do address CEA's essential concern, which is at the heart of our viewability proceeding. Like CEA's proposals, our rules are designed to ensure that all subscribers to a cable system have ''in the clear'' access to all must carry stations.

C. Constitutional Issues

1. The Viewability Requirements Are Consistent With the First Amendment

39. A number of commenters assert that the rules we adopt herein constitute ''mandatory dual carriage'' and are unconstitutional. We disagree. The

statutory must-carry provisions upheld by the Supreme Court in *Turner II* include the requirement that must-carry signals ''shall be viewable'' on all television receivers of a subscriber which are connected to a cable system by a cable operator or for which a cable operator provides a connection. The rules we adopt in this order do nothing more than ensure the continued fulfillment of this statutory mandate at the conclusion of the digital television (''DTV'') transition in February 2009. The must-carry obligation is meaningful only if all cable subscribers are able to view local broadcasters' signals, even if they have analog televisions. If we fail to act, however, analog cable subscribers will be unable to view must-carry stations after the DTV transition. Rather than mandating downconversion to prevent this loss of signals after the transition, however, we offer cable operators a choice: those operators that choose not to operate an ''all-digital system'' must down-convert the broadcasters' digital signal for their analog subscribers. Cable operators that elect to operate ''all-digital'' systems, on the other hand, do not have to down-convert these signals and may provide them solely in a digital format. The choice rests with the individual cable operator. In this way, cable operators decide for themselves, taking into account their particular circumstances, how best to operate following the digital transition.

40. We reject the argument of cable commenters that the ''second option is effectively no option at all,'' or that we have presented cable operators with a ''Hobson's Choice.'' Rather, we believe that the second option represents a viable choice for complying with the viewability mandate. Cable operators complain about the burden of transitioning to ''all-digital systems.'' In particular, they object to requiring subscribers with analog television sets who do not yet have digital-set top boxes to use such boxes because, they argue, it is not ''feasible'' to require those customers to install set-top boxes, because customers do not want set-top boxes, or because of the expense associated with providing the boxes. After the DTV transition, however, some sort of set-top or converter box will be the rule rather than the exception for those Americans with analog television sets. Whether consumers currently obtain video programming through over-the-air broadcasts, cable, or DBS, they generally will need either set-top boxes or digital televisions to receive programming once the transition is complete. Thus, cable operators' fear that they will lose customers to other providers of video programming if they pursue this option seems misplaced. As to cable operators' concerns about the expense of providing set-top boxes, nothing in this order precludes them from recovering the costs of those boxes from subscribers, and cable operators offer no evidence to support their claim that they will lose a meaningful number of customers because of such charges. Indeed, such claims are rather ironic in light of the cable industry's recent practice of raising its prices at a rate significantly in excess of inflation.

41. Cable operators' complaints about the second option are also belied by these same parties' assurances that they have both the incentive and the means to ''mak[e] the digital transition as seamless as possible for their customers.'' NCTA asserts, for example, that cable operators have committed to ''ensure that cable viewers do not experience disruption after February 17, 2009,'' and that they ''already have the means to ensure continuing service to analog television sets with no government intervention or subsidy required.'' Cequel Communications notes that it has every incentive to continue providing must-carry stations to all subscribers after the transition, if only because it welcomes free programming. Comcast similarly assures us that ''cable operators have powerful incentives to meet their customers' demands'' and that ''no cable operator will allow its subscribers to become 'disenfranchised' since to do so would be economically irrational.'' If cable operators, in fact, ''have every incentive to move customers to digital'' and ''equipment will be available to enable cable customers to view digital broadcast signals,'' then we do not understand the cable companies' complaint that the all-digital option is so burdensome that it is merely a ''fantasy.'' Indeed, numerous cable operators have indicated to the Commission their intent to convert to all-digital operations prior to February 2009. The record in this proceeding also demonstrates that cable operators are already reducing analog programming and moving it to digital tiers. For all of these reasons, we conclude that the second option set forth in this item offers cable operators a meaningful choice about how to fulfill their must-carry obligations.

42. Turning to the First Amendment challenge, we do not believe that the ''all-digital'' option for complying with the statute's viewability mandate implicates any First Amendment interest beyond that inherent in the must-carry mandate for digital signals already adopted by the Commission. We note, moreover, that this mandate is significantly less burdensome than the analog must-carry mandate upheld by the Supreme Court in *Turner II* because digital signals occupy much less bandwidth on a cable system than do analog signals. The ''all-digital'' option does not require cable operators to carry *any* additional signals over its system or to displace *any* additional programming beyond that required by the Commission's previously adopted digital must-carry mandate. Rather, it simply requires cable operators to take steps to ensure that all subscribers are able to view signals that will already be carried on their systems, and we do not believe that such a mandate can reasonably be described as an independent ''infringement'' of cable operators' free speech rights.

43. While cable commenters argue that the second option triggers additional First Amendment scrutiny, we do not find their claims to be persuasive. We do not agree that the second option coerces operators into downconverting broadcaster's digital signals or impermissibly penalizes them for failing to downconvert. The purpose and effect of the second option are neither to coerce operators into downconverting nor to penalize them for failing to do so. Rather, they are to provide cable operators with an alternative means of fulfilling the statutory requirement that the signals of must-carry stations must be viewable by all subscribers.

44. However, even if we were to find that the second option implicates a First Amendment interest beyond that inherent in the must-carry mandate for digital signals already adopted by the Commission or, for that matter, that the second option did not represent a realistic choice for cable operators, we would still conclude that our approach here is constitutional because we believe that *both* options for complying with the viewability mandate are fully and independently consistent with the First Amendment.

45. *Content-Neutral Regulation.* As articulated by the Supreme Court in *Turner II*, ''[a] content-neutral regulation will be sustained under the First Amendment if it advances important governmental interests unrelated to the suppression of free speech and does not burden substantially more speech than necessary to further those interests.'' There can be little argument that must-carry obligations are content-neutral regulations. The Supreme Court held in *Turner I* that must-carry does not ''distinguish favored speech from disfavored speech on the basis of the

ideas or views expressed'' but is instead a content-neutral regulation subject to intermediate-level scrutiny under the First Amendment. Similarly, with respect to the first option provided to cable operators today, requiring downconversion of digital signals does not distinguish speech on the basis of content; it merely requires cable operators to carry whatever message the must-carry stations choose to transmit. We thus reject the notion that ensuring that cable subscribers with analog television sets are able to view must-carry stations reflects an ''effort to exercise content control'' that triggers strict scrutiny. With respect to the ''all-digital'' option, we do not think that permitting cable operators to fulfill their must-carry obligations by providing digital must-carry signals that are viewable by all of their subscribers changes the analysis. This option does not distinguish speech on the basis of content; instead, it simply requires that subscribers can view broadcasters' digital signals—regardless of the content those signals contain.

46. We also reject the argument that, in light of ''enormous technological and market changes,'' a First Amendment challenge to must-carry regulations today would be subject to strict scrutiny. This argument is premised on the mistaken notion that the Supreme Court applied intermediate scrutiny to must-carry regulation due to the existence of cable market power. The Court made clear, however, that the applicable level of scrutiny was tied to the content-neutral character of must-carry regulation. Like the regulations upheld in the *Turner* decisions, requiring cable operators to down-convert digital must-carry signals or make such signals viewable by all subscribers is a content-neutral regulation that guarantees the carriage of broadcast programming regardless of content and is not designed to promote speech of a particular content.

47. Moreover, to the extent cable operators' arguments about market power are meant to suggest that they no longer represent the threat to free, over-the-air broadcasting that drove the *Turner* decisions, the evidence convinces us otherwise. Although it faces competition by DBS operators and others, the cable industry by far remains the dominant player in the MVPD market, commanding approximately 69 percent of all MVPD households. By contrast, the percentage of households that rely on over-the-air broadcast signals has declined significantly since the *Turner* decisions. In 1992, 40 percent of American households continued to rely on over-the-air signals for television programming. Today, however, that figure has shrunk to 14 percent. The shift in the competitive balance between broadcast and cable can also be seen in viewership trends. Between 1995 and 2006, ad-supported cable channels' total day share of the market increased from 28 to 49.5 percent, whereas the total day share of ABC, CBS, and NBC affiliates shrunk precipitously from 44 percent to 23.5 percent. As cable capacity and the number of cable programming networks have grown, the fragmentation of the market for video programming has accelerated, further weakening broadcast stations.

48. In addition, cable operators continue to ''exercise 'control over most (if not all) of the television programming that is channeled into the subscriber's home [and] can thus silence the voice of competing speakers with a mere flick of the switch.''' As in 1992, few consumers have the choice of more than one cable operator. Cable systems also are more clustered than they were in 1992. While clustering may have beneficial effects, the Supreme Court has recognized that it also may increase cable's threat to local broadcasters and the risk of anticompetitive carriage denials. Furthermore, the share of subscribers served by the 10 largest multiple system operators (''MSOs'') has continued to accelerate since Congress recognized a trend toward horizontal concentration of the cable industry, ''giving MSOs increasing market power.'' The figure was nearly 54 percent in 1989 and over 60 percent in 1994. The figure remains over 60 percent in 2005. And there remains a significant amount of vertical integration in the cable industry. In 2005, approximately 22 percent of the 531 nonbroadcast video programming networks were vertically integrated with at least one cable operator. ''Congress concluded that vertical integration gives cable operators the incentive and ability to favor their affiliated programming services.''

49. The incentives that the *Turner II* Court recognized for cable operators to drop local broadcasters in favor of other programmers less likely to compete with them for audience and advertisers also have steadily increased. The Court explained that:

> Independent local broadcasters tend to be the closest substitutes for cable programs, because their programming tends to be similar, and because both primarily target the same type of advertiser: those interested in cheaper (and more frequent) ad spots than are typically available on network affiliates. The ability of broadcast stations to compete for advertising is greatly increased by cable carriage, which increases viewership substantially. With expanded viewership, broadcast presents a more competitive medium for television advertising. Empirical studies indicate that cable-carried broadcasters so enhance competition for advertising that even modest increases in the numbers of broadcast stations carried on cable are correlated with significant decreases in advertising revenue for cable systems. Empirical evidence also indicates that demand for premium cable services (such as pay-per-view) is reduced when a cable system carries more independent broadcasters. Thus, operators stand to benefit by dropping broadcast stations.

In addition, the Court observed that ''[t]he incentive to subscribe to cable is lower in markets with many over-the-air viewing options.''

50. Consistent with the *Turner II* Court's analysis, the evidence confirms that local advertising revenue has become an increasingly important source of revenue for the cable industry, ''providing a steady, increasing incentive to deny carriage to local broadcasters in an effort to capture their advertising revenue.'' For example, between 1992 and 2003, cable revenue from local advertising rose dramatically, increasing by approximately 525 percent. Thus, cable operators have even greater incentives today to withhold carriage of broadcast stations.

51. We also cannot conclude that the option of switching between cable and broadcast input significantly weakens cable operators' ability to harm broadcasters. With respect to the A/B switch, the Supreme Court found, *inter alia*, that many households lack adequate antennas to receive broadcast signals and that installation and use of such switches with other video equipment could be cumbersome or impossible. Notwithstanding technical improvements since then, moreover, there is no evidence of consumer acceptance of the switch, or that more households have adequate antennas to receive broadcast signals. And since the percentage of television viewers relying solely on broadcast signals has dropped from approximately 40 percent to 14 percent in the years since *Turner II*, the number of households with adequate antennas to receive broadcast signals through an A/B switch has almost certainly dropped. Thus, while A/B switches have largely moved from mechanical to electronic in the decade since the *Turner* decisions, switching signal sources still remains cumbersome or impossible for television viewers and does not represent an adequate alternative to must-carry regulation. In sum, we cannot conclude that technological and market changes dictate that must-carry obligations

would now be subject to strict constitutional scrutiny.

52. *Important Governmental Interests.* The Supreme Court has already recognized that must-carry regulations serve important governmental interests. In particular, it held that there was substantial evidence to support a finding that must-carry requirements serve the important, and interrelated, governmental interests of (1) preserving the benefits of free, over-the-air local broadcast television; and (2) promoting the widespread dissemination of information from a multiplicity of sources. Congress found, and the Court agreed, that both these interests were threatened by cable operators' refusals to carry local broadcast stations. Broadcasters denied carriage on cable systems lose a substantial portion of their audience, which, in turn, translates into lost advertising revenues. As a result, the stations have less money to invest in equipment and programming, leading to further reductions in audience size. This cycle of audience loss followed by revenue loss repeats to the point that the stations ''deteriorate to a substantial degree or fail altogether.'' Thus, the viability of local broadcast stations and, consequently, the availability of over-the-air broadcasts for non-cable households depend to a material extent on cable carriage. Furthermore, we note that the must-carry mandate found by the Court in *Turner II* to advance these governmental interests required that the signals of must-carry stations be viewable by all cable subscribers; it did not merely require cable operators to carry such signals and make them viewable to a limited class of their customers.

53. The steps we take here to ensure that cable operators comply with the statutory viewability requirement after the DTV transition serve these same interests. Cable operators are free to choose whether or not to operate as all-digital systems. We require cable operators that choose not to operate ''all-digital systems'' to down-convert the digital broadcast signals; otherwise, their analog subscribers will lose access to must-carry stations altogether on February 17, 2009. This fact distinguishes the present circumstances from those the Commission addressed in 2005 when it decided not to require cable operators to carry both the digital and analog signals of broadcast stations during the DTV transition, while television stations continue to broadcast analog signals. At that time, the Commission concluded that a dual carriage requirement was not needed to preserve over-the-air broadcasting for viewers who lack cable because local analog broadcasts were already carried on virtually every cable system. Therefore, the lack of a dual carriage requirement would not have any meaningful effect on a station's viewership, and there was thus no evidence that the absence of dual carriage would diminish the availability of broadcast signals to non-cable subscribers. In contrast, this order addresses the impact of the end of the DTV transition, where the signals of must-carry stations will be completely unavailable to analog cable subscribers, absent the actions we take here. This obviously poses a much more serious challenge for must-carry stations. For this reason, we do not agree that this order is at odds with the Commission's 2005 constitutional analysis. If cable operators did not downconvert the digital signals, broadcasters would stand to lose an audience of millions of households that are analog cable subscribers and the concomitant advertising revenues, thus jeopardizing their continued health and viability. Should these stations deteriorate or cease to exist, the impact of these lost programming options would fall most heavily on those that most need them: the roughly fifteen percent of Americans who rely solely on over-the-air television, which disproportionately consist of low-income and minority households. This is precisely the harm that Congress sought to prevent when it enacted the must-carry provisions upheld by the Supreme Court in *Turner II*, and no party has suggested a plausible argument that preserving free, over-the-air broadcast television no longer qualifies as an important governmental interest. The Court also recognized that ''preserving a multiplicity of broadcasters'' serves the related governmental interest of ''promoting the widespread dissemination of information from a multiplicity of sources.'' All cable programming other than that carried in fulfillment of must-carry obligations is under the control of cable operators. Unless we act, analog cable subscribers and households that rely solely on over-the-air broadcast television may well face ''a reduction in the number of media voices'' and the loss of ''the widest possible dissemination of information from diverse and antagonistic sources.'' Thus, this Order clearly advances the important governmental interests identified by Congress and upheld by the Supreme Court. Alternatively, cable operators may fulfill their must-carry and viewability obligations by providing digital signals that are viewable by all of their subscribers, thus serving the same governmental interests upheld in the *Turner* cases.

54. In addition, the actions we take here advance a separate, but also important, governmental interest of minimizing adverse consumer impacts associated with the DTV transition. The DTV transition results in the return of analog spectrum that can be allocated for other important, indeed critical, purposes, but Congress also recognized the need to protect consumers by ensuring that their television sets continue to work at the end of the transition just as they do today. To that end, Congress created a program to make available coupons that consumers can use to buy digital-to-analog converter boxes for the analog television sets in their homes. Just as Congress sought to minimize the burden of the DTV transition on consumers who rely on over-the-air broadcasting, we act here to minimize the impact of the DTV transition on cable subscribers. Analog downconversion minimizes the impact of the DTV transition on cable subscribers who do not own digital television sets. By ensuring that these consumers continue to receive local broadcast signals, we ensure that they experience little or no disruption in service due to the DTV transition. We do not agree that requiring cable systems offering analog programming to down-convert digital signals undermines, rather than promotes, the digital conversion by encouraging continued dependence on analog televisions. Just as Congress's set-top box program does not undermine but merely smoothes the transition for certain vulnerable consumers, we act here to promote widespread consumer acceptance of the DTV transition by addressing a major source of potential consumer confusion and frustration. Similarly, subscribers to cable systems that convert to all-digital operations will continue to receive local broadcast signals without interruption and thus will experience minimal disruption due to the DTV transition.

55. For all of these reasons, we conclude that both options available to cable operators—downconversion of digital signals and the operation of all-digital systems—advance numerous important governmental interests.

56. *Burden on Speech.* The thrust of the cable operators' objections to downconversion is the ''severe burden'' they allege it imposes on protected speech. They contend that a downconversion obligation imposes a greater burden than the must-carry rules upheld in *Turner II* because cable

companies will now be required to transmit the must-carry stations' digital signal *and* down-convert it to analog, thus displacing additional speech. Even assuming that analog downconversion, together with digital must-carry, requires greater bandwidth than existing must-carry requirements, we do not agree that it burdens ''substantially more speech than necessary'' to further the government's important interests.

57. The relative burden that must-carry regulation places on cable operators must be measured in context. At the time of the *Turner* cases, cable capacity was significantly more constrained than it is today. In the early 1990s, most cable systems were all-analog and offered far fewer than 100 channels. In 1995, for example, the Commission defined a ''high capacity'' cable system as a system with 54 or more channels. By contrast, analog carriage today accounts for only a small percentage of the total number of cable channels and spectrum capacity. By 2004, cable operators were providing, on average, 70 analog video channels and approximately 150 digital video channels, with enough additional bandwidth to provide high-definition television, video-on-demand, Internet access services, and both circuit-switched and IP-based voice services. As a result, the *relative* burden of the first option set forth above on cable operators today would be far less of a burden than was the analog mandate upheld by the Supreme Court in *Turner II.*

58. The Supreme Court foresaw in 1994 that ''rapid advances in fiber optics and digital compression technology'' might one day result in ''no practical limitation on the numbers of speakers that may use the cable medium.'' And today, we have every reason to expect that cable capacity will continue to expand in future years, thus further decreasing the relative burden on cable operators. Cable operators continue to develop ways to use their available capacity more efficiently. For example, cable operators, in order to keep pace with their competitors, are beginning to deploy ''switched digital'' capability in their networks. In a switched digital environment, a channel is transmitted via coaxial cable to a subscriber's premises only when the subscriber tunes to that channel. Time Warner already has deployed switched digital in three cities. Time Warner has said that switched digital gives cable operators the means of adding channels and never running out of capacity. Moreover, because digital cable systems offer so much more capacity, the proportion of overall bandwidth devoted to must-carry signals is that much smaller than was the case at the time of the *Turner* decisions. For example, NAB and MSTV explain that 18 basic analog channels, which includes all must-carry stations, represent about 4.2 percent of the total number of channels and about 6.8 percent of the total downstream spectrum of a typical cable system today. In 1993, by contrast, the same number of channels represented 33 percent of the capacity of a ''high capacity'' cable system. We believe that the typical cable operator electing to down-convert digital signals will devote significantly less than one-third of its channel capacity to local broadcasters, the cap that was upheld in *Turner II.*

59. We also conclude that the relative burden on speech of downconversion is outweighed by the benefits. Unless we act, subscribers of cable systems that choose not to operate ''all-digital systems'' will suffer both the loss of local broadcasts and confusion over that loss, and non-MVPD consumers risk deterioration, if not loss, of over-the-air broadcasting options. Preserving local television broadcasting will help these consumers more than a downconversion obligation will hurt cable operators, particularly given that downconversion is necessary only until cable operators complete the transition to all-digital systems. We also reject Time Warner's contention that a downconversion requirement burdens more speech than is necessary because the governmental interests at issue can be promoted in a less burdensome manner—namely by providing digital set-top boxes to subscribers. Time Warner's objection proves too much, of course, for we have provided cable operators with precisely that choice: they may avoid analog downconversion by converting to all-digital systems, including by providing their subscribers with set-top boxes. Also, to the extent that cable operators do not take the necessary steps to ensure that the digital signals of must-carry stations can be viewed by all subscribers, the carriage of analog signals is necessary to advance the governmental interests identified above. Although we conclude that downconversion is in fact necessary to advance important governmental interests, we note that a regulation is not invalid under the intermediate scrutiny analysis even if the government's interest might be adequately served by some less-restrictive alternative. Finally, we note that the cable operators' arguments about the burdens of downconversion are undercut by their admission that they might down-convert on a purely voluntary basis. For all these reasons, we find that analog-down conversion does not burden ''substantially more speech'' than is necessary and, therefore, this option does not violate the First Amendment.

60. We also conclude that the ''all-digital'' option does not burden ''substantially more speech than necessary'' to further the important governmental interests discussed above. Indeed, this option imposes less of a burden on speech than the must-carry regulations upheld in *Turner II.* The transmission of digital signals requires far less bandwidth than that required for analog signals, so cable companies transmitting signals, including must-carry signals, in digital rather than analog will gain bandwidth. In addition, while cable operators complain that transitioning to ''all-digital systems'' will impose an onerous burden on them and therefore does not represent a meaningful choice, we reject those arguments for the reasons discussed above.

61. We conclude, therefore, that both analog downconversion and the ''digital-only'' options are consistent with the First Amendment on a stand-alone basis. By offering cable operators the flexibility to choose, based on their particular circumstances, either option to fulfill their must-carry obligations, moreover, we have minimized the burden imposed on any particular cable operator.

2. The Viewability Requirements Are Consistent With the Fifth Amendment

62. In addition to the First Amendment issue, some parties contend that requiring downconversion of digital must-carry signals constitutes a taking of property without just compensation in violation of the Fifth Amendment. To begin with, as discussed above, we provide cable operators here with two options for complying with the statutory viewability requirement and do not mandate the downconversion of digital signals. But in any event, for the reasons stated below, we also conclude that requiring cable operators to down-convert the digital must-carry signals so that they are viewable by their subscribers with analog televisions would present no problems under the Fifth Amendment.

63. The ''takings'' clause of the Fifth Amendment provides: ''[N]or shall private property be taken for public use, without just compensation.'' In general, there are two types of Fifth Amendment takings: ''per se'' takings and ''regulatory'' takings. Government authorization of a permanent physical occupation of property constitutes a per

se taking. A permanent physical occupation of property is a taking without regard to the public interest that it may serve, the size of the occupation, or the economic impact on the property owner. NAB has argued elsewhere that must carry regulation cannot constitute a per se taking because no physical property is involved; rather the ''property'' taken consists of electronic bits. Moreover, we agree that the downconversion obligation does not affect the takings analysis. As NAB states:

If requiring cable operators to carry channels of broadcast signals indeed takes 'private property for public use' without compensation, then the requirement is unconstitutional regardless of whether the cable companies must accommodate one, five, or one hundred channels.

64. Applying the above framework to the issue here, we believe that a court would find that a per se takings analysis would not apply. The Supreme Court has advised that a per se taking is ''relatively rare and easily identified,'' and this is not one of those rare and easily identifiable instances. Mandatory carriage regulation effectuates no permanent physical occupation of a cable operator's property, such as the installation of physical equipment that was at issue in *Loretto* v. *Teleprompter Manhattan CATV Corp.* Rather, multiple programming streams are simply transmitted in bits of data over cable bandwidth through electrons or photons at the speed of light while the cable operator retains complete control over its physical property (i.e., headend equipment). Courts have consistently rejected attempts to apply the concept of permanent physical occupation to the technological realm, and we believe these decisions to be consistent with the Supreme Court's admonition that a permanent physical occupation of property is easily identified and, where found, ''presents relatively few problems of proof.''

65. We therefore turn to whether requiring downconversion of digital must-carry signals would constitute a regulatory taking. An allegation that a regulation is so onerous as to constitute a regulatory taking is analyzed under the multi-factor inquiry set forth by the Supreme Court in *Penn Central Transportation Co.* v. *City of New York.* A court will examine the following factors identified in *Penn Central* to determine whether a regulatory taking has occurred: (1) The character of the governmental action; (2) its economic impact; and (3) its interference with reasonable investment-backed expectations. Applying this test here, we easily conclude that requiring downconversion of digital signals does not effectuate a regulatory taking.

66. First, looking at the character of the governmental action at issue here, we believe it to be a quite modest attempt to ''adjust the benefits and burdens of economic life to promote the common good.'' As explained above, requiring downconversion of digital must-carry signals will likely impose only a modest burden on a cable operator's system as a whole and will materially advance the government's important interests in preserving over-the-air broadcasting, promoting the widespread dissemination of information from a multiplicity of sources, and minimizing any adverse consumer impacts associated with the DTV transition. Moreover, it is critical to recognize that the government action here involves what traditionally has been and remains a heavily regulated industry.

67. Second, there is no evidence in the record that the economic impact on cable operators of requiring downconversion will cause significant harm. As we explain above, mandatory carriage of analog signals accounts for only a small percentage of the total number of cable channels and total spectrum capacity. As cable operators continue to convert to digital programming, must-carry signals will impose a decreasing relative capacity burden. Given that the cable channels devoted to the mandatory carriage of commercial broadcast signals is capped at one-third of the cable system's usable capacity and in practice is likely to be significantly less than one-third, we find the economic burden on cable operators to be modest.

68. Third, there is no evidence in the record that requiring downconversion will interfere with reasonable investment-backed expectations. Based upon the statutory cap for commercial stations and the numerical limit for non-commercial stations, cable operators should reasonably expect to devote up to one-third of their capacity to carriage of local broadcast stations. Requiring downconversion of digital must-carry signals does not change this limit. Finally, cable operators should have reasonably expected that they would be required to comply with the statutory viewability mandate after the digital transition. For all of these reasons, we conclude that requiring downconversion does not interfere with reasonable investment-backed expectations.

69. We do not find evidence or persuasive argument in the record that requiring downconversion transforms must-carry regulation into a per se taking or a regulatory taking.

D. Other Issues

70. In its comments, United Communications Corporation made an argument for a revision of the Must Carry rules generally, to increase the carriage rights of low power stations, particularly Class A stations that serve as local network affiliates. Ensuring the continued viability of low power broadcasters is a major concern of the Commission; these proposals, however, are beyond the scope of the current proceeding. We will consider whether there is some alternative or future proceeding in which they could be more fully addressed.

71. Given the statutory directive to treat OVS operators like cable operators with regard to broadcast signal carriage, we find that OVS operators must carry digital-only television stations pursuant to section 76.1506 of the Commission's Rules. Thus, OVS operators must comply with all requirements set forth in this *Third Report and Order.* Section 653(c)(1) of the Act provides that any provision that applies to cable operators under sections 614, 615, and 325 shall apply to open video system operators certified by the Commission. Section 653(c)(2)(A) provides that, in applying these provisions to open video system operators, the Commission ''shall, to the extent possible, impose obligations that are no greater or lesser'' than the obligations imposed on cable operators. The Commission, in implementing the statutory language, held that there are no public policy reasons to justify treating an open video system operator differently from a cable operator in the same local market for purposes of broadcast signal carriage. Thus, OVS operators generally have the same requirements for the carriage of local television stations as do cable operators except that these entities are under no obligation to place television stations on a basic service tier. OVS operators are also obligated to abide by section 325 and the Commission's Rules implementing retransmission consent. We note that section 76.1506(e) specifically emphasizes the mandate to make must-carry signals viewable, and reiterates that the requirements established in this *Third Report and Order* apply equally to cable operators and OVS operators.

E. Conclusion

For the reasons discussed above, we adopt these rules with respect to material degradation and viewability. A number of detailed issues must be addressed now that the broad

framework of rules has been established. We believe it is appropriate to provide stakeholders and the public with an opportunity to weigh in on these matters; therefore the *Third Further Notice* seeks comment on some specific applications of these general rules.

II. Procedural Matters

A. Third Report and Order

1. Final Regulatory Flexibility Analysis

72. As required by the Regulatory Flexibility Act of 1980 (''RFA''), the Commission has prepared a Final Regulatory Flexibility Analysis (''FRFA'') relating to this *Third Report and Order.* The FRFA is set forth in Appendix A of the order.

2. Final Paperwork Reduction Act Analysis

73. This *Third Report and Order* contains modified information collection requirements subject to the Paperwork Reduction Act of 1995 (''PRA''), Public Law 104–13. The modified information collection requirements relate solely to Office of Management and Budget (''OMB'') Control No. 3060–0647, the Commission's Annual Cable Price Survey. They will be submitted to OMB for review under section 3507(d) of the PRA. OMB, the general public, and other Federal agencies will be invited to comment on the modified information collection requirements contained in this proceeding. The Commission will publish a separate **Federal Register** Notice at a later date seeking these PRA comments from the public. In addition, we note that pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, *see* 44 U.S.C. 3506(c)(4), we have considered how the Commission might ''further reduce the information collection burden for small business concerns with fewer than 25 employees.'' We find that the modified requirements must apply fully to small entities (as well as to others) to protect consumers and further other goals, as described in the Order.

3. Congressional Review Act

74. The Commission will send a copy of this *Third Report and Order* in a report to be sent to Congress and the Government Accountability Office, pursuant to the Congressional Review Act.

III. Ordering Clauses

75. *It is ordered* that, pursuant to the authority contained in sections 4, 303, 614, and 615 of the Communications Act of 1934, as amended, 47 U.S.C. 154, 303, 534, and 535, this Third Report and Order and Third Further Notice of Proposed Rule Making *is adopted* and the Commission's Rules *are hereby amended* as set forth in Appendix C of the order.

76. *It is further ordered* that this *Third Report and Order* and the rules in Appendix C *are adopted* and *shall be effective* March 3, 2008. The modified information collection requirements concerning the Annual Cable Price Survey will become effective upon approval by the Office of Management and Budget and our publication in the **Federal Register** of a notice announcing the effective date of the modified requirements.

77. *It is further ordered* that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, *shall send* a copy of this Third Report and Order and Third Further Notice of Proposed Rule Making, including the Initial and Final Regulatory Flexibility Analyses, to the Chief Counsel for Advocacy of the Small Business Administration.

78. *It is further ordered* that the Commission *shall send* a copy of this Third Report and Order and Third Further Notice of Proposed Rule Making in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review *Act*, see 5U.S.C. 801(a)(1)(A).

List of Subjects in 47 CFR Part 76

Cable television.

Federal Communications Commission.

Marlene H. Dortch,

Secretary.

Final Rules

■ For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR part 76 as follows:

PART 76—MULTICHANNEL VIDEO AND CABLE TELEVISION SERVICE

■ 1. The authority citation for part 76 continues to read as follows:

Authority: 47 U.S.C. 151, 152, 153, 154, 301, 302, 303, 303a, 307, 308, 309, 312, 315, 317, 325, 336, 338, 339, 503, 521, 522, 531, 532, 533, 534, 535, 536, 537, 543, 544, 544a, 545, 548, 549, 552, 554, 556, 558, 560, 561, 571, 572, 573.

■ 2. Section 76.56 is amended by adding paragraphs (d)(3), (d)(4), (d)(5) and paragraph (f) to read as follows:

§ 76.56 Signal carriage obligations.

* * * * *

(d) * * *

(3) The viewability and availability requirements of this section require that, after the broadcast television transition from analog to digital service for full power television stations cable operators must either:

(i) Carry the signals of commercial and non-commercial must-carry stations in analog format to all analog cable subscribers, or

(ii) For all-digital systems, carry those signals in digital format, provided that all subscribers, including those with analog television sets, that are connected to a cable system by a cable operator or for which the cable operator provides a connection have the necessary equipment to view the broadcast content.

(4) Any costs incurred by a cable operator in downconverting or carrying alternative-format versions of signals under § 76.56(d)(3)(i) or (ii) shall be the responsibility of the cable operator.

(5) The requirements set forth in paragraph (d)(3) of this section shall cease to be effective three years from the date on which all full-power television stations cease broadcasting analog signals, unless the Commission extends the requirements in a proceeding to be conducted during the year preceding such date.

* * * * *

(f) *Calculation of Broadcast Signals Carried.* When calculating the portion of a cable system devoted to carriage of local commercial television stations under paragraph (b) of this section, a cable operator may count the primary video and program-related signals of all such stations, and any alternative-format versions of those signals, that they carry.

■ 3. Section 76.62 is amended by revising paragraph (b) and adding paragraph (h) to read as follows:

§ 76.62 Manner of carriage.

* * * * *

(b) Each digital television broadcast signal carried shall be carried without material degradation. Each analog television broadcast signal carried shall be carried without material degradation and in compliance with technical standards set forth in subpart K of this part.

* * * * *

(h) If a digital television broadcast signal is carried in accordance with § 76.62(b) and either (c) or (d), the carriage of that signal in additional formats does not constitute material degradation.

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