

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Carriage of Digital Television Broadcast Signals)	
)	
Amendments to Part 76 of the Commission's Rules)	CS Docket No. 98-120
)	
Implementation of the Satellite Home Viewer Improvement Act of 1999)	
)	
Local Broadcast Signal Carriage Issues)	CS Docket No. 00-96
)	
Application of Network Non-Duplication, Syndicated Exclusivity and Sports Blackout Rules to Satellite Retransmission of Broadcast Signals)	CS Docket No. 00-2
)	
To: The Commission		

COMMENTS OF PUBLIC BROADCASTERS

June 11, 2001

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SUMMARY

It is time to take a fresh and comprehensive look at where the digital transition is and where it needs to go. Public television stations have joined with numerous non-profit and other partners in their communities to develop specific, concrete plans for a mixture of high definition prime time programming and a rich array of daytime multicast educational, foreign language, civic and children's programming services. This strategy is designed to provide Americans with a more interactive and locally oriented educational service, to enhance civic and cultural participation in local communities, and to address the needs of minority and other underserved audiences. Public television stations have pledged to devote the equivalent of one multicast channel solely for formal educational service.

Yet it is widely recognized that the transition is faltering and that, on its present course, it will be delayed for decades and may fail altogether. Success hinges on implementing a coherent and comprehensive solution to the issues of cable carriage, station build-out, and DTV reception capability, performance and cable interface. Because cable carriage is the single most critical requirement for an effective transition, this *Further Notice* provides perhaps the last effective opportunity to devise such a plan. The Commission, despite issuing a tentative opinion on the subject, has not begun to examine the range of carriage options available that would respect cable's capacity constraints while ensuring the public's access to DTV.

Public Broadcasters – APTS, PBS and CPB – hereby submit the “Working Draft: Comprehensive Plan for Digital Transition” as one set of possibilities to jumpstart that planning process.

- In the top 30 television markets where broadcasters are transmitting a digital signal or in any market where two or more digital stations are on the air, cable systems that have upgraded to 750 MHz would carry both the analog and digital signals of qualified stations. Cable systems that have not upgraded to 750 MHz would be required to carry local digital signals when they upgrade to 750 MHz *or*

within one year, whichever is earlier. Small cable systems would be exempt. The Commission could also consider a modest reduction in the cap on the channel capacity devoted to transitional commercial carriage requirements. Appropriate limitations on the carriage of noncommercial stations could also be considered.

- For other markets, the Commission should tie the obligation to construct digital broadcast stations to national DTV receiver penetration, with different staged build-out requirements for major network affiliates, commercial stations not affiliated with major networks, and noncommercial stations.
- If further moderation of the carriage requirements is needed, the Commission might allow a cable system to drop the analog signal of a broadcaster transmitting in both analog and digital once the cable system demonstrates certain levels of DTV subscription and/or reception capability.
- The Commission should consider stronger measures for digital tuner requirements, digital receiver performance thresholds and cable-receiver interoperability. Major goals are to ensure that a certain percentage of television receivers are capable of receiving over-the-air digital signals and to safeguard the interests of consumers.

The Commission should conclude that the 1992 Cable Act requires it to adopt DTV carriage rules for the transition. Alternatively, the Commission possesses discretionary authority to implement a flexible, temporary and market-driven digital carriage requirement that serves the public interest. Such a requirement would survive constitutional scrutiny because in general the burden need not exceed that of the analog carriage rules and the government interests served by the requirement are at least as compelling as in the analog context.

Finally, while the definition of what is “program-related” for noncommercial stations moderates the damage caused by the *First Report and Order*’s narrow reading of the term “primary video,” it does not solve the problem. It will not necessarily ensure that the broad range of noncommercial multicast services are carried and, subject to the outcome of pending petitions for reconsideration, it would not take effect until after the transition is completed.

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COMMENTS OF PUBLIC BROADCASTERS

More than three years into the digital television transition and with a new Commission taking shape, it is now time to take a fresh and comprehensive look at where the transition is and where it needs to go. Government, industry and the public all recognize that the transition is faltering and that on its present course it will be delayed for decades and may fail altogether. The simple fact is that even though almost 200 television stations are transmitting digital signals and hundreds more are well on their way to doing their part in a \$16 billion technical conversion, very few viewers have sets capable of receiving the new signals or subscribe to cable or satellite systems that are carrying them. The success of the now virtually stalled transition hinges on implementing a comprehensive solution, based on market-triggered deadlines rather than arbitrary dates, that will resolve once and for all the issues of cable

carriage, station build-out, and DTV reception capability, performance levels and cable interface solutions. Because cable carriage is the single most critical requirement for a successful transition, the Commission's *Further Notice of Proposed Rulemaking*¹ provides perhaps the last effective opportunity to devise the comprehensive plan that the transition needs. The Association of America's Public Television Stations ("APTS"), the Public Broadcasting Service ("PBS"), and the Corporation for Public Broadcasting ("CPB") (collectively, "Public Broadcasters")² hereby submit comments on the *Further Notice* setting forth what we believe are important components of that comprehensive plan.

At the outset, Public Broadcasters emphasize that the potential benefits that digital television will deliver to the public are extraordinary. Five years ago, when the Telecommunications Act of 1996 was enacted, policymakers were convinced of the tremendous promise of digital television to deliver high definition, multicast and interactive television over the air and for free. Public Broadcasters have devoted the ensuing period to developing and investing in concrete and detailed plans for realizing this promise and now believe that digital's potential is even greater than we originally thought. As described in Attachment A hereto, which

¹ *In re Carriage of Digital Television Broadcast Signals, Amendments to Part 76 of the Commission's Rules, etc.*, First Report and Order and Further Notice of Proposed Rulemaking, CS Docket Nos. 98-120, 00-96, and 00-2, FCC 01-22 (rel. Jan. 23, 2001) ("*First Report and Order*" and "*Further Notice*").

² APTS is a nonprofit organization whose members comprise the licensees of nearly all of the nation's 354 noncommercial educational television stations. APTS represents public television stations in legislative and policy matters before the Commission, Congress, and the Executive Branch and engages in planning and research activities on behalf of its members. PBS is a nonprofit membership organization of the licensees of the nation's public television stations. PBS distributes national public television programming and provides other program-related services to the nation's public television stations. CPB is a private, nonprofit corporation created and authorized by the Public Broadcasting Act of 1967 to facilitate and promote a national system of public telecommunications. *See* 47 U.S.C. § 390 *et. seq.*

details some of the digital initiatives public broadcasting has undertaken or plans to undertake, the public television community has joined with numerous public and private-sector parties, such as AOL, Intel, community colleges, state universities and local schools and libraries to design specific programming and other innovative services that harness digital's potential for the improvement, for example, of educational services in this country.³ These specific plans include high definition presentation of premium prime time programming and, at other times during the broadcast schedule, a rich array of multicast educational, foreign language, and children's programming services.⁴ Together, these components of public television's digital programming strategy maximize noncommercial stations' potential to fulfill their mission to deliver "public goods" to all American consumers.

So, it is with a sense of excitement about digital's high-quality service offerings that Public Broadcasters approach the issues that challenge the transition. This optimism does not ignore the stark reality that the transition is at a serious impasse. It does, however, bring a sense of urgency to the task of clearing the barriers to its realization. The elements for a comprehensive and effective solution are readily at hand, and the benefits to the public of implementing this solution are incalculable.

In Part One, below, we describe why this proceeding, and a comprehensive approach to the DTV transition of which it should be a part, deserves the Commission's keenest

³ Public television stations have committed to Congress to devote one multicast channel per station, or the equivalent of 4.5 megabits per second, to formal educational services. *See* Attachment A at 2.

⁴ *See* Attachment A; *see also* Joint Petition for Reconsideration of the Association of America's Public Television Stations, the Public Broadcasting Service, and the Corporation for Public Broadcasting in CS Docket Nos. 98-120, 00-96, and 00-2, at 11-12 (Apr. 25, 2001) ("Public Broadcasters' Petition for Reconsideration").

attention. In Part Two, we lay out the elements of our “Working Draft: Comprehensive Plan For Digital Transition,” which we commit to developing further with the Commission and other industries essential to making the transition happen. (Attachment B is a condensed outline of the Working Draft.) This Working Draft addresses the three critical components of the transition strategy: (i) station build-out, (ii) cable carriage and (iii) DTV reception — all also necessary to protect consumer interests. Part Three briefly addresses the legal underpinnings of the kind of transitional cable carriage plan we propose. Part Four comments on the definition of “program-related” for the purpose of digital carriage rules.

I. WHY COMMISSION INVOLVEMENT IN THE DTV TRANSITION MATTERS

Broadcast television reaches 98% of American homes in every corner of the country. It reaches all economic strata. Even among cable subscribers, 60% of viewing is devoted to over-the-air television programming. Moreover, many cable and DBS subscribers have television sets in the kitchen, basement, or elsewhere that are not connected to those services and rely on over-the-air reception. We take it for granted that we can switch on our televisions and watch local stations without paying a dime for these services. As an essential part of the broadcast service, public television plays a role unlike that of any other medium. Neither cable nor satellite offers services comparable to public television’s mix of instructional, informative and cultural programming, and this will be even more true if public television can launch its ambitious digital multicasting plans. Neither cable nor satellite offers local news of the kind local broadcasters provide. Neither cable nor satellite can achieve universal reach nor provide service to the poor.

The digital television transition will make or break both commercial and non-commercial television. The question of whether or not this transition can succeed is far more than a question of whether our nation’s only universal video programming service can

successfully add bells and whistles. And more is at stake than the efficient use of spectrum, although the digital transition is necessary to harness and re-farm spectrum that analog technology uses inefficiently. The transmission of digital signals and the ability of all consumers to receive them are necessary (1) to migrate the public's analog television service into the otherwise all-digital environment in which other communications services increasingly are operating and (2) to ensure that there will be a broadcast television service in the years to come. The public's free broadcast service simply cannot afford to straddle between digital and analog operations for the indefinite future, as Congress recognized by establishing a spectrum giveback date.

It is far too late for the Commission to play a neutral role, deferring to the market, in the digital transition. The transition itself is the creature of the government's appropriate intervention in the marketplace to achieve compelling public policy ends. And so it is unremarkable that market incentives are lacking or lead to conduct antithetical to the transition and that, therefore, some government intervention is necessary. As we show in Part Three below, the tentative decision in the *First Report and Order* to adopt carriage rules only for the period after the completion of the transition was not well-supported and is contrary to the Cable Act of 1992.⁵ But equally important from a policy perspective, it ignored the reality made clear in the marketplace — that without the certainty or even the possibility of transitional must-carry rules, many public television stations (as well as many commercial stations) will not be able to deliver their digital signals to consumers. We note that the National Cable Telecommunications

⁵ See Public Broadcasters' Petition for Reconsideration at 14-18; see also Joint Reply to Oppositions to Petitions for Reconsideration of the Association of America's Public Television Stations, the Public Broadcasting Service, and the Corporation for Public Broadcasting filed in (continued...)

Association has been working to facilitate discussions between public television stations and cable MSOs regarding possible voluntary digital carriage agreements. However, although Public Broadcasters greatly appreciate these efforts, we have been attempting to engage in digital carriage discussions with cable MSOs since 1999 and have to date reached agreement with only a single cable MSO, Time Warner, which covers 18% of cable households. We are hopeful that we will reach further agreements and that the Working Draft, which would provide for limited, market-oriented transitional rules where voluntary agreements are not reached, will encourage rather than discourage further negotiations by providing new ways of thinking about digital carriage issues. Nonetheless, it remains clear at this point that the marketplace alone cannot assure the cable carriage necessary to a successful DTV transition.

The *First Report and Order* threatens to hamper the success of digital television further by defining "primary video" so as to deny carriage rights to any broadcast multicasting services not only during, but also after, the transition is completed. The present effect is to undercut public television stations' ability to raise funds both for digital construction and multicast programming development, thereby frustrating full use of the digital spectrum.

Public Broadcasters previously have asked the Commission to reconsider these decisions. In these comments, we urge something more. We urge the Commission to dig into the difficult issues posed by cable carriage and other necessary components of the digital transition. As regulated entities expending large sums, devoting our creativity and risking our future to satisfy the government's transition requirements and bring a revolutionized television service to consumers, Public Broadcasters ask the Commission to take the appropriate and

CS Docket Nos. 98-120, 00-96, and 00-2, at 2-4 (June 7, 2001) ("Public Broadcasters' Joint Reply").

limited government action necessary to finish what it started and achieve the goals of spectrum efficiency and recovery without sacrificing the public's free, over-the-air broadcast service. We ask the Commission to explore the range of possible cable carriage requirements that would satisfy constitutional concerns and to ensure that consumers are equipped with the receiver capability to receive DTV signals over the air and via cable. At a minimum, the Commission should help to prod and shape an industry solution.

II. WORKING DRAFT: COMPREHENSIVE PLAN FOR DIGITAL TRANSITION

This Working Draft offers a framework for intense, inclusive and all-embracing discussions designed to revive the transition, set it on an effective and coherent course and achieve the compelling public policy purposes that lie behind and support the digital transition. Public Broadcasters offer this proposal as a starting point for cooperative discussion and public comment.

A. Station Build-Out And Carriage Requirements

1. *Stage One: Revitalizing The Transition Where DTV Is On the Air*

Immediate action is needed to get the DTV transition back on track. The initial regulatory stimulus in the form of carriage and build-out requirements need not be radical or overly burdensome and should not be triggered by arbitrary deadlines set by the Commission in a vacuum. Instead, interrelated build-out and carriage requirements should be closely tailored to those situations where they would have the greatest impact and the least burden, and where market forces alone will not suffice. Thus, in those markets (predominantly but not exclusively large markets) where broadcasters have constructed DTV facilities and are broadcasting digital signals but have been unable to obtain voluntary cable carriage, cable operators with upgraded systems would be required, within a reasonable period (*e.g.*, 60 days) and subject to a suitable cap, to carry all local digital signals. These carriage and build-out requirements would be

accompanied and supported by parallel receiver and receiver/cable interface requirements or commitments as described below.

*Carriage Requirements Tied To Market Size and DTV Activation.*⁶ The requirement that upgraded systems carry all local digital signals on the air at the time the requirement becomes effective would apply to: (1) the top 30 television markets *plus* (2) any market with two or more digital stations on the air, except any one station in the case of one- or two-station markets (“the two-station test”).

In the 32 markets satisfying these criteria, broadcasters have already invested up to \$1 billion to construct DTV facilities and are spending millions more in increased transmission costs to operate them. Because these markets contain 55% of television households nationwide, very few of whom now can receive these services through their cable systems, cable carriage in these markets would provide a critically needed jump-start to the transition. It would make digital signals immediately available to a critical mass of consumers and encourage them to purchase digital receivers to take advantage of digital services.

Carriage Requirements Tied To Cable Capacity. Within the markets satisfying the criteria for immediate carriage, only those cable operators that have upgraded their systems to expand capacity to 750 MHz would be subject to the carriage requirement.⁷ Cable systems in

⁶ Carriage requirements would be those finally adopted in Dockets Nos. 98-120, 00-96, and 00-2. As part of these final regulations, Public Broadcasters are particularly concerned that on reconsideration the Commission correct its interpretation of “primary video” — an interpretation that will thwart public broadcasting’s plans to use the digital spectrum to enhance greatly the public’s television service through a mix of high definition and multicast services.

⁷ See Public Broadcasters’ Joint Reply at 2 n.9 (“The majority of cable homes are passed by upgraded cable systems with a capacity of [at least] 750 MHz.”) (citing Strategic Policy Research, Cable TV Capacity Study at 9 (“Capacity Study”), submitted as Exhibit A to Public Broadcasters’ Joint Reply).

qualifying markets (the top 30 markets and lower markets meeting the two-station test) that have not already upgraded to 750 MHz would be required to carry local digital broadcast signals at such time as they do upgrade to 750 MHz *or* within one year of the carriage requirement's effective date, whichever is earlier. This principle would discourage cable systems from delaying (or scaling back) system upgrades to avoid digital carriage obligations. Finally, as in the analog context, "small cable systems" satisfying the FCC's definition (which the FCC could adjust for the duration of the transition) would be exempt from carriage requirements until such time as they surpass the subscriber limit for a "small cable system."

Reduced Cable Capacity Cap. In the analog context, a cable operator's obligation to carry local commercial broadcast stations is capped at one-third of usable activated channel capacity.⁸ During the DTV transition, however, once a cable system has upgraded to 750 MHz and incurred transitional carriage obligations, the proportion of usable activated channels⁹ subject to carriage obligations could be reduced.¹⁰ There are a number of ways to do this. One alternative that might be explored is to reduce the capacity cap for carriage of both analog and digital commercial signals at a specified level somewhat below the current analog percentage cap. This reduced capacity cap might be made possible by the huge increases in cable capacity

⁸ See 47 U.S.C. § 614(b)(1)(B).

⁹ Usable activated channels must be determined on the basis of *all* capacity available to the cable operator that *could* be used for video programming, not just capacity the operator chooses to dedicate to video programming.

¹⁰ Because the one-third analog commercial channel cap is statutory, Congress may need to amend the statute in order to lower the cap. However, given that the Commission has reasonable discretion to adapt the carriage rules for the digital environment, *see* 47 U.S.C. § 614(b)(4)(B), it might be able, without legislation, to adjust the total burden a transitional carriage requirement would place on a cable operator's capacity.

that have occurred since the analog cap went into effect¹¹ and would further moderate the transitional carriage requirement. A reduced cap would also guarantee to cable operators control over the great preponderance of their digital capacity and reserve substantial opportunity for cable programmers. A second alternative would set the carriage cap for combined digital and analog signals at a percentage equal to the percentage of capacity that each cable system devoted to carriage of analog signals at the time the analog carriage rules went into effect. (Such a requirement would, by definition, impose no greater burden on cable systems than did the analog carriage rules that were upheld in *Turner II*).

When a cable system becomes obligated to carry DTV signals because a year has transpired since the two-station test was met (and not because the system has upgraded to 750 MHz), it would not be entitled to the lower transitional-period cap. A somewhat lower cap for the digital transition period would provide an incentive and a reward to cable systems for adding capacity and converting to digital. Systems that fail to upgrade should not be able to take advantage of the lower cap to reduce their transitional carriage obligations.

The existing cap for commercial analog stations does not apply to public stations.¹² But along the lines of the above-described proposals, Public Broadcasters will work with the Commission and others to develop reasonable provisions for carriage of analog and digital noncommercial stations during the transition that would generally limit the proportion of cable capacity devoted to noncommercial stations consistent with the analog rules.

A guarantee that a transitional carriage requirement encompassing carriage of both analog and digital signals will occupy no more than a specified percentage of a cable

¹¹ See Capacity Study at 5-6.

system's capacity, which is *less* than the percentage capacity cap applicable only to analog carriage, should assure the carriage requirement's constitutionality under *Turner II*. Moreover, because a cable system's conversion to digital technology generates large capacity increases,¹³ the Commission can establish a lower transitional capacity cap for both analog and digital signals that would exclude few existing DTV broadcasters from carriage, yet would protect cable operators from having to devote too much capacity to new DTV stations. Furthermore, the exclusion of some broadcast stations from carriage due to a transitional cap would often be only temporary because cable systems can be expected over time to convert a growing number of channels from analog to more efficient digital use. Thus, the number of channels available for carriage of local DTV stations will be increasing at the same time more DTV stations are coming on line (although the proportion of capacity dedicated to such stations would remain at or below the cap), which will further ensure that the transitional carriage requirement tracks marketplace developments.

2. Stage Two: Market-Triggered Build-Out And Carriage Requirements For Other Stations And Other Markets.

Once the Stage One stimulus has gone into effect in the markets where the most investment in the broadcast side of the DTV transition has already been made, the Commission can allow this initial stimulus to have beneficial ripple effects in other markets and can tailor the requirements with respect to other stations and cable systems accordingly. Phasing in future cable carriage requirements will not run afoul of the Commission's statutory mandate to assure

¹² See 47 U.S.C. § 615(b) & (e).

¹³ Each digital channel on a cable system can accommodate two over-the-air DTV signals. See Capacity Study at 6.

cable carriage for digital television signals because the timing would be linked to build-out deadlines for broadcast stations in those markets.

For Stage Two, the Commission should tie obligations to construct digital broadcast stations and carry digital signals to some proxy reflecting market developments. Public Broadcasters urge that DTV receiver penetration at the *national* level be used as the proxy to trigger regulatory obligations at the *local* level for two reasons.¹⁴ First, momentum at the national level (*i.e.*, in the larger markets and in smaller markets where broadcasters are pioneering) will have an impact on demand for DTV products and services in smaller markets. Because consumer demand is national in scope and consumers themselves are highly mobile, viewers in smaller markets are influenced by technological and consumer developments in larger markets. Second, DTV receiver penetration at the national level brought on by the Stage One carriage requirements will help create the economies of scale that will bring down prices and make DTV transmission equipment and receivers more affordable, and more varied, for smaller market broadcasters and consumers.

Broadcast Build-Out Deadlines. Given the scarcity of resources, DTV equipment and qualified personnel to install and service DTV equipment, it is unrealistic to expect that all or even almost all commercial and noncommercial broadcast stations will be able to meet the Commission's arbitrary May 2002 and May 2003 construction deadlines. It is likely that hundreds of television stations will be unable to raise the funds necessary to construct digital facilities. Forcing these stations to forfeit their DTV licenses is not a viable option. It would be blind to market realities and injure rather than promote the DTV transition. Nor would an

¹⁴ The level of DTV receiver penetration would be determined by comparing the number of DTV receivers with DTV tuners sold against the number of national television households.

arbitrary one- or two-year extension solve the problem. Instead, the Commission should tie build-out requirements — for public stations, for commercial stations in the top 30 markets that are not affiliated with a major network and for commercial stations below the top 30 markets — to market-defined mileposts based on national DTV receiver penetration. After each milepost is reached, stations in the relevant category would have one year to construct and become operational, unless they were entitled to waivers. Commercial stations not affiliated with a major network should have an additional year beyond the major network affiliates' build-out deadline, and, as was the case in the Commission's original build-out requirements, noncommercial stations should be given an additional two years on top of the major network affiliates' deadline to become operational.¹⁵

Proposed Build-Out Matrix

<u>Affected Markets/Stations</u>	<u>National Penetration Trigger*</u>
Markets 31-100 (plus stations in top 30 markets that are not affiliated with a major network)	X%
Markets 101-150	Y%
Markets below 150	Z%

* Major network affiliates would have one year after the trigger is reached to complete construction and begin DTV operations. Commercial stations not affiliated with a major network would have an additional year, and noncommercial stations would be given two additional years to become operational.

¹⁵ Dates for choosing a post-transition channel, replicating analog Grade B service areas, providing a stronger signal over cities of license and various simulcast deadlines would also need to be adjusted accordingly.

Future Cable Carriage Obligations. As national progress in the DTV transition stimulates DTV activation by stations in additional markets, cable operators in those markets would incur carriage obligations. These cable carriage obligations would be triggered as the above thresholds are met and DTV stations come on line. Thus, cable systems would be required to carry a new DTV signal within 60 days after it goes on the air in each of the following three situations: (i) when at least two DTV stations are already being carried, (ii) in a three- or more station market when the new DTV signal is the second DTV signal to be broadcast in the market and (iii) in a one- or two-station market.

This requirement would apply only to systems that have upgraded to 750 MHz capacity. A non-upgraded system would have to carry those signals within a year of the applicable trigger set forth above *or* after it upgrades to 750 MHz capacity, whichever is earlier. Of course, a cable system and television station could always negotiate for digital carriage for the period prior to when transitional carriage requirements take effect. As described above, systems that become obligated to carry DTV signals because a year has expired but that have failed to upgrade could not take advantage of the lower transition cap.

3. Stage Three: Possible Sunset Of Transitional Carriage Requirement

Finally, if the Commission believes it necessary to further moderate the transitional carriage requirement, it could provide for termination of the analog/digital carriage requirement prior to completion of the transition. Cable operators' obligation to carry both analog and digital signals could sunset at a point when market stimuli were thought sufficient to propel the DTV transition forward to completion. Public Broadcasters' preferred course would be for the Commission to take up the sunset issue at some defined point in the future after development of a relevant experience base, such as when national DTV receiver penetration

reaches a certain level. Two sample sunset provisions to consider at that time are described below.

One sunset regimen might allow a cable system to carry only a local station's digital signal once: (a) [75%] of its subscribers own DTV receivers with DTV tuners *and* (b) set-top boxes capable of down-converting DTV signals delivered over the cable system for viewing on an analog set are commercially available in the local market at a reasonable price and are fully functional with the conditional access POD provided by the cable system. A second sunset option would allow a cable system to drop the analog signal of a local station for which it is carrying a digital signal, *provided that* the digital signal could be viewed by all the cable system's subscribers (either because a down-converted analog signal, in addition to the digital signal, is transmitted from the cable headend or because subscribers owning only an analog receiver are provided with a set-top box at a reasonable cost that can output an analog signal). In either case, the cable operator first would need to confirm with the affected broadcaster that the broadcaster's digital signal substantially duplicates the content carried on the station's analog signal.

B. DTV Reception Capability, Performance Levels And Cable Interface

Public Broadcasters, like many at the FCC, have been relatively sanguine that marketplace forces and voluntary commitments would move the transition in the right direction with respect to including DTV tuners in television receivers, attaining adequate DTV set performance and resolving the technical incompatibilities that have bedeviled the seamless connection of DTV sets to cable systems. But in light of the modest and, as yet, insufficient progress that has been made in the three and a half years since the digital standard was adopted, the Commission should outline expected voluntary commitments without any further delay. If

the commitments are not fulfilled, it should impose regulatory requirements, and it should signal now that it is prepared to take this step.

The Commission should move forward on these receiver and receiver/cable interoperability issues in tandem with its action on build-out and carriage requirements. They are essential parts of the comprehensive roll-out strategy whose necessary contribution to the transition the Commission must assure by adopting, if and when necessary, suitable and limited regulation.

It should be stressed that the actions Public Broadcasters seek are in the interest of consumer protection, in addition to the interest of furthering of the DTV transition. That is because it is manifestly *contrary* to consumers' interests for 97% of current receiver purchases to be analog-only, when national policy calls for an early give-back of analog spectrum and the concurrent obsolescence of analog-only sets. It is *contrary* to consumers' interests for digital sets purchased at significant expense to work only under perfect conditions, especially because imperfect receiver performance in the case of digital can result in no picture at all. And it is *contrary* to consumers' interests for the interface between digital sets and cable to remain uncertain and potentially ineffective.

1. *DTV Tuner Requirements*

Whatever marketplace incentives there may be to prompt the manufacture of DTV receivers, those incentives have proved insufficient thus far to ensure a sufficiently large installed base of DTV reception capability in America's television households. In fact, rather than incrementally increasing the percentage of television sets that are DTV-capable, we are moving backward. Of the 32 million sets sold in 2000, less than a million were digital sets (meaning that they can display digital signals) and fewer than 1% were equipped with DTV tuners (meaning that they can receive DTV signals off the air). Testimony before Congress

shows that the transition will not progress effectively without DTV receiver penetration.¹⁶

Public Broadcasters believe the Commission should seek voluntary commitments that, beginning on a date certain, some portion of all television sets of a certain size (13 inches would be the logical size, given the V-chip and other requirements)¹⁷ should include DTV tuners. Any phased-in tuner requirements (or commitments) should be fully effective within four years. If such commitments are not forthcoming, the Commission should adopt a requirement to the same end. One or the other is necessary to assure that DTV tuners are brought to the marketplace.

2. DTV Receiver Performance Thresholds

As Public Broadcasters and other commenters pointed out in the *DTV Biennial Review* proceeding,¹⁸ manufacturers must improve the performance of DTV tuners because to date it has been substandard.¹⁹ The Commission should be prepared to adopt performance thresholds based on the technical performance assumptions on which the DTV table of allotments/assignments was premised. In addition, the Advanced Television Systems Committee is developing a multipath performance threshold that should be adopted in a matter of months. It, too, should become a performance threshold. These thresholds need not, and should not, consist of rigid design specifications any more than automobile emissions standards or fuel consumption requirements specify any particular technology. Voluntary commitments by

¹⁶ See Testimony of Thomas W. Hazlett, Ph.D., Resident Scholar, American Enterprise Institute for Public Policy Research, before the Senate Committee on Commerce, Science, and Transportation, Hearings on the Transition to Digital Television Broadcasting, at 11-12 (Mar. 1, 2001).

¹⁷ See Comments of the National Association of Broadcasters in MM Docket No. 00-39 (“DTV Biennial Review Proceeding”) at 15-16 (May 17, 2000).

¹⁸ See *id.* at 14; see also Comments of the Association of America’s Public Television Stations and the Public Broadcasting Service in MM Docket No. 00-39 at 15-16 (May 17, 2000).

¹⁹ See VSB/COFDM Project: Investigation of VSB Improvements at 8-9 (Dec. 2000).

receiver manufacturers to meet these performance thresholds would be an acceptable alternative to including the thresholds in the rules.

3. *Cable/Receiver Interface*

The third issue that needs to be resolved is receiver/cable interoperability. In the summer of 1998, the Senate Commerce Committee expressed dismay and displeasure that, 18 months after adoption of the DTV standard, consumers could not routinely plug DTV receivers into cable facilities.²⁰ Nearly three years later, though progress has been made (the most recent agreement was entered into in March), full solutions are not being implemented generally, and many DTV sets now on the market are not compatible with existing cable equipment. The Commission should be prepared to adopt requirements (or if it believes it is necessary, ask Congress to give it the authority to adopt requirements) providing for full, convenient, effective and prompt cable/receiver interoperability. This Commission should not repeat the mistake of the last Commission — urging cooperation between the cable and receiver industries, while at the same time undercutting that message by ruling out regulation even if an agreement cannot be reached. The past tells us that this is a prescription for delay and failure.

III. LEGAL UNDERPINNINGS OF TRANSITIONAL CARRIAGE PROPOSAL

The Commission's *First Report and Order*, now subject to reconsideration, plainly erred in concluding that the 1992 Cable Act did not require the Commission to adopt transitional digital carriage rules that are based on the analog must carry rules. As Public Broadcasters and MSTV/NAB/ALTV explained in their Petitions for Reconsideration filed in this proceeding on April 25, 2001, the 1992 Cable Act compels the opposite conclusion. When

²⁰ See Opening Statement of Senator John McCain, Senate Committee on Commerce, Science, Transportation, Hearing on the Transition to HDTV, at 1-2 (July 8, 1998).

Congress adopted the 1992 Cable Act, the Commission, in full exercise of its expertise in such matters, had estimated that the transition would take 15 years.²¹ It was in the context of this estimate that the Cable Act provided that *at the time* the Commission adopted its digital standard (now 3 1/2 years ago), it must “initiate” a proceeding to adapt the analog carriage rules for digital signals.²² The Cable Act cannot reasonably be read to give the Commission the option of adopting digital carriage rules that would go into effect some 15 years later, after the expected conclusion of the transition. If that is what Congress had intended, it would never have required that the rulemaking be launched so early in the process, at the time the standard was adopted — a relatively rare legislative directive as to an administrative agency’s timing that is entitled to special weight.²³ Nor would it make sense for Congress to have contemplated a digital carriage requirement that would take effect only after the transition was completed (at a time when DTV penetration exceeds 85%), when carriage during the transition is necessary *in order to* reach that statutorily-set penetration level.

²¹ See *In re Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, Memorandum Opinion and Order/Third Report and Order/Third Further Notice of Proposed Rulemaking, 7 FCC Rcd 6924, 5957-64 (1992).

²² See 47 U.S.C. § 534(b)(3)(A).

²³ If the Commission correctly concludes on reconsideration that the Act requires digital must-carry during the transition, then the First Amendment question is narrow or non-existent. The Commission may conclude, as we have, that the statute is clear as to the requirements that cable carry all local broadcast “signals” including those that are digital in format. In this case, there is no First Amendment issue before the Commission because it lacks the authority to question the constitutionality of acts of Congress. See *United States v. Bozarov*, 974 F.2d 1937, 1040 (9th Cir. 1992) (“[A]n agency has no authority to declare its governing statute unconstitutional.”) If, however, the Commission concludes that it is permitted by the statute to tailor the must carry requirements for digital signals, any constitutional analysis it conducts must focus on a specific carriage requirement in light of the government’s interest and the burden on cable given its current and future capacity. See *Time Warner Entertainment Co. v. FCC*, 93 F.3d 957, 966 (D.C. Cir. 1996). The FCC has not yet executed this obligation.

But if the Commission does not adopt this view on reconsideration, it should proceed, nevertheless, as a matter of discretion at this *Further Notice* phase, to enact transitional cable carriage rules consistent with the First Amendment and sound public policy. Public Broadcasters believe it inconceivable that there can be *no* transitional carriage rules that would pass muster under the First Amendment. It cannot be the case, as is the necessary inference of the cable industry's position and the *Further Notice's* tentative conclusion, that it would be unconstitutional for the Commission to require a single cable system in a single community to carry a single additional digital signal. This would be an insupportable conclusion even if the vast majority of cable systems did not already have far more capacity today than they had at the time the analog must-carry rules, whose constitutionality was upheld by the Supreme Court, went into effect. Between this minimalist hypothetical and full and immediate digital must carry during the transition, the Commission can and should find a reasonable and effective carriage requirement that would pass First Amendment scrutiny. Public Broadcasters urge the Commission to work toward such a requirement using the Working Draft as a starting point.

Commercial and noncommercial broadcasters alike have already shown why a transitional carriage requirement would satisfy the relevant First Amendment tests²⁴ — a showing that the *First Report and Order* scarcely addressed. Public Broadcasters will take the opportunity of reply comments to make any additional points that may be needed. In this pleading, however, Public Broadcasters offer these five observations:

²⁴ See Comments and Reply Comments of Public Broadcasters, NAB and MSTV filed in an earlier phase of this proceeding on October 13, 1998 and December 22, 1998 respectively.

1. All of the factual and policy underpinnings of the analog must-carry rules apply with equal or greater force to transitional carriage rules. Cable is still a “gatekeeper.”²⁵ As a provider of digital programming competitive with local stations’ programming and as a purveyor of local advertising time increasingly competitive with local station advertising, cable has even greater incentives and greater capability (because cable penetration has increased) to exclude broadcasters’ DTV signals than it did in 1992 to exclude analog signals.

2. A principal purpose of the analog carriage rules was to preserve the public’s stake in free, local and universal television service. That interest is equally (or more so) in the balance with respect to transitional digital carriage rules. The entire premise of the transition is that digital signals must replace analog broadcast television. If viewers are unable to receive digital signals, digital cannot replace analog, and, under the best scenario, broadcasters will be forced to sustain the operation of two facilities at considerable ongoing expense, without any additional revenue, and with inevitably impaired service. Even assuming that analog television will persist in an otherwise digital world (which is unrealistic), smaller and especially public stations, for whom the energy bills of dual transmissions are overwhelming, will be unable to sustain their dual operations. A post-transition must-carry rule will either never take effect (because the transition will be stuck in limbo) or will come too late for the stations that are the chief intended beneficiaries of the must carry rule.

3. Digital television, with an established base of no more than 50,000 viewers (based on DTV tuner sales), is infinitely more vulnerable to cable’s blocking its access

²⁵ Cable is still the predominant MVPD, serving nearly 70% of American households; it is the “bottleneck” conduit into cable homes because very few households have both cable and a second MVPD service such as DBS.

to consumers than was analog television (with 200 million sets in consumers' households) when the analog carriage rules were adopted. And Congress' findings of actual and threatened injury to the public's television service due to non-carriage in the analog environment apply with far greater force in digital television's fragile infancy.

4. The public's interest in completing the transition — to realize digital's potential for heightened and broadened services, to use spectrum efficiently, to avoid the waste of dual digital and analog operations and to reclaim the give-back spectrum so that it can be auctioned for other wireless applications — is an additional and powerful government interest that would be served by transitional carriage obligations.

5. Transitional carriage rules will not impose an undue burden on cable, even when added to analog carriage requirements. This is because cable capacity has increased dramatically since the analog must-carry rules were put in place, and DTV signals can be carried very efficiently.²⁶ Moreover, the Working Draft, described in Part Two above, raises the possibility that the cap on cable capacity devoted to carriage of analog broadcast signals could be somewhat reduced (with certain exceptions) to some lower proportion for analog *and* digital signals during the transition. Alternatively, it suggests that the transitional cap for commercial stations could be tied, system-by-system, to the percentage of capacity devoted to analog signals when the analog carriage requirement went into effect, and that similar limits on analog and digital noncommercial stations carried during the transition could be developed.

²⁶ See Capacity Study at 6-7, 9.

IV. PROGRAM-RELATED DEFINITION

The *First Report and Order* provides that the digital carriage requirement — now limited to post-transition — would include “program-related” material. The *Further Notice* asks for comment on the proper scope of this concept in the digital context. The application of the analog definition of what is program-related for noncommercial stations in the digital context could significantly moderate (but not completely alleviate) the damage caused by the *First Report and Order*’s narrow reading of the term “primary video” — an interpretation that Public Broadcasters seek to have reconsidered. Section 615(g)(1), which applies only to noncommercial stations, includes within the definition of “program-related” material which “may be necessary for receipt of programming by handicapped persons or for educational or language purposes.”²⁷ This expanded definition of “program-related” for public stations is a help but falls far short of a complete solution. It will not necessarily ensure that the broad range of noncommercial multicast services are carried; it will be difficult to administer because each program stream will have to be judged for program-relatedness to some other stream; and, as currently interpreted (but subject to reconsideration), it will not take effect until after the transition is completed.

* * *

Public television stations are reaching out to their viewers, their communities and states and their underwriters to ask for help with the daunting expense of building digital facilities and providing path-breaking digital services. They are asking these constituencies to do their part, as the stations do theirs, to bring the exciting possibilities of digital, free over-the-air

²⁷ See 47 U.S.C. § 535(g)(1). Section 614(b)(3)(A), which applies to commercial stations, appears to be more narrowly drawn.

television into the home. Some argue that the government should have no further role in effectuating this transition. But this is a prescription for a long-term, languishing transition, inefficient frequency use, lost opportunities for enhanced benefits to the public from its television broadcast service, squandered resources and what will turn out to be a case study of misguided spectrum management. Instead, the government can and should play an important, appropriately limited, role in bringing the digital television transition to a successful conclusion for the benefit of public television and all television viewers.

WHEREFORE, the Commission should promptly:

- (i) launch work on a comprehensive plan for the transition, using, if it believes it to be helpful, the attached Working Draft;
- (ii) bring all relevant parties to the table for this purpose;
- (iii) establish an appropriate task force within the Commission to develop a comprehensive transition plan under the oversight of a designated Commissioner;
- (iv) conclude that the Cable Act of 1992 requires it to adopt for transitional digital operations a version of the analog carriage rules suitably adjusted to reflect the different circumstances of the transitional period;
- (v) whether or not it reaches the conclusion urged in (iv), promulgate reasonable and moderate cable carriage rules along the lines described in the Working Draft and
- (vi) determine that these rules require, both during and after the transition, cable carriage of all multicast services (except those for which consumers pay a fee) as "primary video."

Respectfully submitted,

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ATTACHMENT A

PUBLIC TELEVISION'S PLANS FOR DIGITAL BROADCASTING

Public broadcasters historically have been leaders in using new technologies for education and public service. For well over a decade, public television has helped guide the development, testing and implementation of digital broadcasting. In a single digital channel, stations can transmit either a high definition program stream or multicast four or more channels of standard definition program streams simultaneously. Concurrent with these video streams, stations can broadcast substantial amounts of program-related data, text, graphics, audio and visual information in seconds. The data can be used interactively to enhance the learning experience of the program, by providing, for instance, course materials, teacher and student guides, and teacher training materials associated with particular programs.

With 31 DTV stations now covering more than 40% of U.S. households, public television is committed to use digital technologies to transform the way we learn – by providing the American public with interactive educational services how they want them, when they want them and where they want them – in homes, schools, childcare facilities, and workplaces across America. Virtually every public station:

- has developed bold service plans that call for the delivery of multiple educational services to their local communities;
- plans to deliver one if not more multicast digital channels of formal educational services; and,
- is engaging in exciting new partnerships with local community institutions to develop new digital content.

For public television stations, the promise of digital broadcasting, and its multicasting plans in particular, has been to provide Americans with a more interactive and

locally-oriented educational service; to enhance civic and cultural participation in local communities; and to address the needs of minority and other underserved audiences that commercial media outlets do not address. The following facts illustrate public television's commitment to develop these DTV services.

- More than 95 percent of stations plan on carrying at least one formal educational multicast service, including, for example, adult continuing education, K-12 instructional programming, workforce development & job training, or college/university telecourses.
- Three out of every four PTV stations plan to carry at least two formal education multicast services.
- Approximately 85 percent of PTV stations plan to multicast a children's channel; 78 percent intend to broadcast university-level or post-secondary telecourses; and 66 percent plan to multicast an instructional programming channel for students in grades K-12.
- Others plan to multicast channels that focus on local public affairs, teacher training, foreign language programming, and programming aimed at minority and underserved audiences.

A. Locally-Oriented, Formal Interactive Educational Services

The centerpiece of virtually every public television digital service plan is the delivery of multicast services with a strong focus on education.¹ Indeed, as a measure of its commitment, public television stations have made a collective and historical commitment to

¹ See Jim Rutenberg, *A Digital Divide Threatens Public TV: Some Have-Not Stations Wonder How to Pay for Required Technology*, N.Y. Times, Apr. 15, 2001, § 3 at 1 ("PBS has long-term plans for digital broadcasting that are ambitious enough to put a strain on even the best-endowed stations Aside from offering high-definition and interactive programming, the system's member stations have generally agreed to use their digital spectrum to spin out additional channels of PBS programming when possible."); Aaron Heffron & Daniel Odenwald, *Multicasting Breaks Down 24-Hour Limit on a Day*, Current, Mar. 28, 2001, at 18 ("Virtually every PTV station plans to multicast diverse streams of educational programming during daytime hours and then consolidate those streams during primetime to broadcast high definition programming."), available at: <http://www.current.org/dtv/dtv0106multicast.html>.

reserve the equivalent of 4.5 megabits per second for formal educational services.² Virtually every public television station plans to deliver formal educational services over one or more multicast channels. These educational services are tailored to meet local community needs and state educational standards. The following are some examples.

- Florida public television stations have promised the state legislature that they will collectively devote a multicasting stream to the Florida Knowledge Network in return for digital funding. This statewide educational network will serve as a teacher training resource, linking Florida's classrooms with direct access to the highest quality programming, electronic field trips, and distance learning. Originating from the Florida State Department of Education and school systems in 17 counties, the network will tailor programming schedules and curriculum (e.g., GED, math, science, English, art, music, and foreign language) for localized use.
- New York's public television stations plan to dedicate one of their multicast streams to an educational service called the Empire State Channel. Developed with the state Department of Education, the Empire State Channel will feature teacher training, vocational instruction and public affairs programming. Among the goals of the Empire Channel are to support such state initiatives as meeting New York's scholastic standards and goals, expanding GED on TV and other lifelong learning programs, and developing job skills for the transition from welfare to work.
- Kansas, Missouri and Illinois public television stations, in partnership with 350 school districts, have developed "Chalkwaves," an Internet-based educational service designed to meet three critical needs of the teachers in those states: high-quality, standards-linked instructional aids, the training needed to use these aids effectively and the professional development needed to earn required state credits. Chalkwaves, which currently serves more than 30,000 teachers and over 350,000 students through the Internet, is laying the foundation for a digital multicast service.

B. Enhanced Civic and Cultural Participation in Local Communities

Even when not broadcasting formal educational services, the hallmark of public television's digital planning is localism. Public television stations are locally owned and locally operated. Accordingly, several public television stations are planning local multicast channels,

² The dedication of 4.5 Mbps of wireless, high-speed data capacity for educational services would provide the equivalent of three T-1 lines to every school in America. At current market rates, this capacity is conservatively valued at \$2.4 billion per year.

focusing on unmet community needs in order to enhance political participation and social awareness. For instance on their digital channels, several public television stations -- such as Mississippi Public Television; South Carolina Educational Television; WUNC-TV, North Carolina; New Jersey Network Public Television; and WBRA, Roanoke, Virginia -- are planning to provide gavel-to-gavel coverage of state legislatures, and the ability to download the texts of proposed bills. Other public television stations, such as KUAT, Tucson, and Louisiana Public Television plan to devote one of four digital channels to cover local, city and county government meetings. The following are some additional examples.

- Vermont Public Television plans a Vermont Public Service Channel, which would provide regular coverage of the state legislature, important legislative committee hearings and other statehouse-related programs, as well as local government town meetings and debates. Additional programming might include call-in programs with the Vermont congressional delegation, travel and tourism information, and other local news and public affairs programming.
- Twin Cities Public Television in St. Paul/Minneapolis, Minn., plans to participate in a statewide Special Services Channel. Programming for this channel would be originated by the state itself. It would include live feeds from the state House and Senate for a Minnesota-styled “C-SPAN.” The channel would also feature programs from the Minnesota Department of Education for schoolchildren, the Department of Natural Resources for staff training, and the Department of Administration, which serves the state’s telecommunications needs. In addition, the Special Services Channel would carry existing high quality Web pages, produced by local institutions, that could be converted to digital format and broadcast to the entire community for maximum reach and impact.
- KEET in Eureka, California, plans to partner with local non-profits, arts organizations and social service agencies to develop and broadcast programming for a North Coast Channel. This programming would include documentaries and history specials specific to that region of the state. The North Coast Channel will also feature collaborations with hospitals, arts councils, employment agencies, and the chamber of commerce. These partnerships would yield shows focusing on health care, arts performances, employment opportunities, and highlights of tourist attractions.
- WTTW, Chicago will be using its digital multicasting capabilities to develop a comprehensive, local information, news and entertainment network called “Network Chicago.” It also plans to engage in multicasting partnerships with the Ravinia Jazz

Festival and the Art Institute of Chicago to enhance cultural awareness and participation in local activities.

C. Addressing the Needs of Minorities and Other Underserved Citizens

As Congress has recognized, the purpose of public television is to develop programming that takes “creative risks and that addresses the needs of unserved and underserved audiences.”³ It has also praised the unique connection public television stations possess with their local communities by stating that such stations “constitute valuable local community resources for utilizing electronic media to address national concerns and solve local problems through community programs and outreach programs.”⁴ Accordingly, Congress has concluded that it furthers the general welfare to encourage the development of public television nationwide, because such stations are “responsive to the interests of all people both in particular localities and throughout the United States,” and strive to attain an ideal of “diversity and excellence.”⁵

Consistent with its statutory mission, public television stations are using their multicast capability to serve those citizens, including minorities and the elderly, that are underserved by commercial media outlets.

- KBDI in Denver plans to launch a Latino Initiative Channel. This channel would feature programming for Denver’s Spanish-speaking and bilingual community and will emphasize news, public affairs, and social and cultural events. Potential partners include local community service organizations, schools, commercial Spanish-language broadcasters, and public service agencies.
- WNYE in Brooklyn and WYBE in Philadelphia plan to provide multicast foreign language and international channels to serve the international residents in their

³ 47 U.S.C. § 396(a)(6).

⁴ 47 U.S.C. § 396(a)(8).

⁵ 47 U.S.C. § 396(a)(5).

respective cities. The WNYE multicast channel will feature programming in at least 12 different languages, including Japanese, Chinese, Italian, Greek, Polish, and Eastern European languages. Digital multicast will allow WYBE, which currently serves more than ten ethnic communities in Philadelphia, to further expand the reach of its ethnic language programming. Both stations will offer public affairs, local news, international news and cultural programming from countries around the world.

- To meet the needs of elderly viewers, WHYY in Philadelphia plans to create a Home Companion Service aimed at the growing population of aging Americans. Although designed to appeal to all members of the senior community, it will be directed primarily toward the homebound for whom activities and contact with the outside world are limited.

D. Conclusion

Public television's multicasting plans promise to provide great gains for the public interest. Through multicasting, public television will enhance education in homes, schools, childcare facilities and workplaces across the nation, making education more interactive while also responding to local needs and state educational standards of accountability. Public television multicasting services also promise to bring citizens closer to their local government through the broadcast of local and state political processes as they occur. In addition, locally-oriented interactive multicast programming on public television will also help enhance citizen participation in the cultural life of their communities. Lastly, consistent with its statutory mission to address the needs of underserved audiences, public television stations' multicasting services will provide minority-perspective programming, foreign-language programming and services directed toward the interests of our senior citizens – needs that might otherwise not be served.

Table 1: Digital Multicasting Services Planned by Public Television Stations

Channel Concept	Percentage of Licensees
Children's programming	85%
Post secondary educational	78%
K-12 Instructional programming	66%
Local public affairs	55%
Workforce development or teacher training	48%
Regional collaboratives or partnerships	28%
Leased or subscription services	11%
Non English language programming	10%

Table 2: Licensees Planning to Offer Formal Educational Multicast Services

Formal Educational Services	Percentage of Licensees
Stations offering at least one educational services	96%
Stations offering at least two educational services	75%
Stations offering at least three educational services	34%

ATTACHMENT B

**WORKING DRAFT:
COMPREHENSIVE PLAN
FOR DIGITAL TRANSITION**

I. STATION BUILD-OUT AND CARRIAGE REQUIREMENTS

Stage One: Revitalizing the Transition Where Stations Are Already On the Air

In those markets (predominantly, but not exclusively, in large markets) where broadcasters have constructed DTV facilities and are broadcasting digital signals, cable operators with upgraded systems would be required, within a reasonable period (*e.g.*, 60 days) and subject to a suitable cap, to carry all local digital signals. These carriage and build-out requirements would be accompanied and supported by the parallel receiver and receiver/cable interface requirements or commitments described in Part II below.

1. *Carriage Requirements Tied to Market Size and DTV Activation* A requirement that upgraded cable systems carry all local digital signals on the air (up to the capacity cap) would apply to:
 - a) the top 30 television markets *plus*
 - b) any additional markets with two or more digital stations on the air, except any one station in the case of one or two-station markets (“the two-station test”).
2. *Carriage Requirements Tied to Cable Capacity*
 - a) Within the markets described above, only those cable systems with 750 MHz would be immediately subject to the carriage requirement.
 - b) Cable systems in these markets that have not upgraded to 750 MHz must carry local digital broadcast signals when they upgrade to 750 MHz *or* within one year of the carriage requirement’s effective date, whichever is earlier.¹
 - c) As in the analog context, “small cable systems” satisfying the FCC’s definition (which the FCC could adjust for the duration of the transition) would be exempt from carriage requirements until such time as they surpass the subscriber limit for a “small cable system.”

¹ This principle would discourage cable systems from delaying (or scaling back) system upgrades to avoid digital carriage obligations.

3. Reduced Cable Capacity Cap
- a) Option 1: Once a cable system has upgraded to 750 MHz and incurred transitional carriage obligations, the proportion of usable activated channels² subject to carriage obligations might be reduced to a percentage somewhat lower than the analog commercial carriage cap of 33%, with both commercial *analog and DTV* stations counting toward the cap.³
 - b) Option 2: The Commission might adopt a carriage cap for commercial *analog and DTV* signals combined based on the percentage of capacity that each cable system devoted to carriage of analog signals at the time the analog carriage rules went into effect.⁴
 - c) Public Broadcasters will work with the Commission and others to develop reasonable provisions for carriage of analog and digital noncommercial stations during the transition that would generally limit the proportion of cable capacity devoted to noncommercial stations consistent with the analog rules.
 - d) If a cable system becomes obligated to carry DTV signals because a year has transpired since the two-station test was met (and not because the system has upgraded to 750 MHz), it would not be entitled to the lower transition-period cap, which is intended to provide incentives and reward systems that add capacity.

Stage Two: Market-Triggered Build-out and Carriage Requirements For Other Stations and Other Markets

For Stage II, the Commission should tie obligations to construct digital broadcast stations and carry digital signals to some proxy reflecting market developments. Phasing in future cable carriage requirements will not run afoul of the Commission's statutory mandate to assure cable carriage for DTV signals because the timing would be linked to build-out deadlines for broadcast stations in those markets.

The Commission should use DTV receiver penetration at the *national* level to trigger regulatory obligations at the *local* level because (1) momentum at the national level (*i.e.*,

² Usable activated channels must be determined on the basis of *all* capacity available to the cable operator that could be used for video programming, not just capacity the operator chooses to dedicate to video programming.

³ Because the one-third analog commercial channel cap is statutory, Congress may need to amend the statute in order to lower the cap. However, given the Commission's discretion, albeit limited, to adapt the carriage rules for the digital environment, *see* 47 U.S.C. § 614(b)(4)(B), it might be able, without legislation, to limit the total burden a transitional carriage requirement would place on a cable operator's capacity.

⁴ Such a requirement would, by definition, impose no greater burden on cable systems than did the analog carriage rules that were upheld in *Turner II*.

in the larger markets and in smaller markets where broadcasters are pioneering) will have an impact on demand for DTV products and services in smaller markets; and (2) DTV receiver penetration at the national level brought on by the Stage I carriage requirements will create economies of scale that will bring down prices and make DTV transmission equipment and receivers more affordable.

1. Broadcast Build-Out Deadlines

- a) The Commission should tie build-out requirements – for public stations, for commercial stations in the top 30 markets that are not affiliated with a major network, and for commercial stations below the top 30 – to a market-defined milepost, such as national DTV receiver penetration levels.⁵
- b) After the milepost is reached, stations would have one year to construct and become operational, unless they were entitled to waivers.
- c) Stations not affiliated with a major network should be given an additional year beyond the build-out deadline for major network affiliates, and noncommercial stations should be given two years beyond the build-out deadlines for major networks.

Proposed Build-Out Matrix

<u>Affected Markets/Stations</u>	<u>National Penetration Trigger*</u>
Markets 31-100 (plus stations in top 30 markets that are not affiliated with a major network)	X%
Markets 101-150	Y%
Markets below 150	Z%

* Major network affiliates would have one year after the trigger is reached to complete construction and begin DTV operations. Commercial stations not affiliated with a major network would have an additional year, and noncommercial stations would be given two additional years to become operational.⁶

⁵ The level of DTV receiver penetration would be determined by comparing the number of DTV receivers with DTV tuners sold against the number of national television households.

⁶ Dates for choosing a post-transition channel, replicating analog Grade B service areas, providing a stronger signal over cities of license and various simulcast deadlines would also need to be adjusted accordingly.

2. *Future Cable Carriage Obligations* As national progress in the DTV transition stimulates DTV activation by additional stations, cable carriage obligations would be triggered in their markets.
 - a) Cable carriage obligations would be triggered as the above-described thresholds are met. Thus, cable systems would be required to carry the new DTV signal within 60 days after it goes on the air in each of the following three situations:
 - (i) when at least two DTV stations are already being carried,
 - (ii) in a three or more station market when the new DTV signal is the second DTV signal to be broadcast in the market, and
 - (iii) in a one or two-station market whenever the new DTV signal goes on the air.
 - b) This requirement would apply only to systems that have upgraded to 750 MHz capacity. A non-upgraded system would have to carry those signals within a year *or* after it upgrades to 750 MHz capacity, whichever is earlier.
 - c) As described above, systems that become obligated to carry DTV signals because a year has expired but that have failed to upgrade could not take advantage of the lower transition capacity cap.

Stage Three: Possible Sunset of Transitional Carriage Requirement

If the Commission believes it necessary to further moderate the transitional carriage requirement, it could provide for a possible sunset of the requirement. Under such an approach, cable systems' obligation to carry both analog and digital signals would terminate at a point when market stimuli were thought to be sufficient to propel the DTV transition forward to completion. The Commission could take up this issue at some defined point in the future, such as when national DTV receiver penetration reaches 60%. Two sample sunset provisions are described below. In either case, the sunset would be available only where the cable operator has confirmed with the affected broadcaster that the broadcaster's digital signal substantially duplicates the content carried on the station's analog signal.

1. One sunset regimen might allow a cable system to drop the analog signal of a local station for which it is carrying a digital signal once:
 - a) [75%] of its subscribers own DTV receivers *and*
 - b) set-top boxes capable of down-converting DTV signals delivered over the cable system for reception on an analog set are commercially available in the local market at a reasonable price and are fully functional with the conditional access POD provided by the cable system.

2. A second sunset option would allow a cable system to drop the analog signal of a local station for which it is carrying a digital signal, *provided that* the digital signal could be viewed by all the cable system's subscribers (either because a down-converted analog signal, in addition to the digital signal, is transmitted from the cable headend or because subscribers owning only an analog receiver are provided with a set-top box that can output an analog signal).

II. RECEIVER AND RECEIVER/CABLE INTERFACE COMMITMENTS OR REQUIREMENTS

The following three sets of commitments or requirements are necessary to serve the public's stake in an effective digital transition. They are also strongly justified by the need to protect consumers who are being counted on to make large outlays for new digital receivers.

DTV Tuners

Developments to date demonstrate that market-based incentives for equipment manufacturers to make effectively performing DTV sets available to consumers have not been enough.

1. Of the 32 million sets sold in 2000, fewer than a million were DTV sets and fewer than 1% were equipped with DTV tuners.
2. Testimony before Congress shows that the transition will not progress effectively without DTV receiver penetration, which will not happen absent at least a commitment that equipment manufacturers will include DTV receivers/tuners in all television sets sold after a date certain.
3. The Commission should:⁷
 - a) Seek to secure voluntary commitments to immediate or phased-in requirements that television sets manufactured after a date certain (beginning with either large sets or a portion of all sets sold) include DTV tuners.
 - b) Make phased-in tuner requirements fully effective within four years.
 - c) If voluntary commitments are not forthcoming, the FCC should adopt requirements to the same end.

⁷ See MSTV/NAB/ALTV comments and replies in the *DTV Biennial Review FNPRM* (MM Docket No. 00-39).

DTV Receiver Performance Thresholds

Unless the receiver industry promptly adopts voluntary receiver performance thresholds, the Commission should enact suitable threshold requirements, because actual market performance to date has been insufficient.

1. The thresholds should not be rigid specifications but should be based on the technical performance assumptions on which the DTV table of allotments/assignments was premised.
2. ATSC is developing a multipath performance threshold that should be adopted in a matter of months. It, too, should become a performance threshold.

Cable/Receiver Interface

The third issue that needs to be resolved is receiver/cable interoperability.

1. In the summer of 1998⁸ the Senate Commerce Committee expressed sharp concern that, 18 months after the DTV standard had been adopted, DTV receivers could not plug into cable facilities. Two years later, though progress has been made (an agreement between receiver manufacturers and cable was entered into in March), effective interoperability solutions are not being implemented generally and, therefore, DTV sets currently on the market are not fully compatible with existing cable equipment.
2. Unless remaining disputes are promptly resolved, the Commission should adopt requirements (or, if it feels it is necessary, ask Congress to give it the authority to adopt requirements) assuring full, convenient, effective and prompt cable/receiver interoperability.

⁸ The version of this outline attached to a letter to Chairman Powell, also filed today, listed this date as 1999.