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FEDERAL COMMUNICATIONS COMMISSION
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August 17, 2001

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
445-12th St., SW
Washington, DC 20554
TW B204

Re: CS Docket No. 98-120

Dear Ms. Salas:

Please find attached for filing in the above-referenced proceeding a corrected version and eleven copies of the Reply Comments of NAB/MSTV/ALTV. Due to problems caused by last minute computer problems, Appendix A of that document was not included in a number of the copies filed yesterday, August 16, 2001.

Sincerely,

Valerie Schulte

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List A B C D E

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

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Carriage of Digital Television Broadcast Signals	)	CS Docket No. 98-120
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Amendments to Part 76 of the Commission's Rules	)	
	)	
Local Broadcast Signal Carriage Issues	)	CS Docket No. 00-96
	)	
Application of Network Non-Duplication, Syndicated Exclusivity and Sports Blackout Rules to Satellite Retransmissions of Broadcast Signals	)	CS Docket No. 00-2

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August 16, 2001

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Summary

Cable industry commenters have lessened their cries about channel-locked cable systems, as well they must given the explosive growth in cable capacity shown by cable's own data, but they remain intransigent in their position against digital must carry. They consistently avoid Congress' and the Supreme Court's finding that cable operators are monopoly gatekeepers for two-thirds of American households with the incentive, the means and the history of disadvantaging their broadcast competitors. They ignore the fact that a central purpose of the DTV transition is to preserve free over-the-air broadcasting in the digital age, and they deny the obvious truth that cable must carry will "make or break" the broadcast DTV transition.

Cable operators can no longer claim channel-locked capacity. The enormous growth in cable carrying capacity has been revealed by data submitted by the cable operators themselves, in response to a formal survey request by the Commission. NAB/MSTV/ALTV retained the Merrill Weiss Group to summarize and analyze this data. Some specific conclusions of the MWG Report are:

- Overall bandwidth delivered to the average subscriber increases from 622 MHz to **725.2 MHz** over the period from yearend 1999 to **yearend 2003**
- Subscribers receiving **750 MHz or greater total bandwidth** service increase from 56.1 to **86 percent** over the period of the survey
- Calculations show a capacity **range of 261.8 to 295.7 total program services to the average subscriber** at yearend 2003, with capacity continuing to increase as cable completes upgrades currently underway.
- Calculations show a capacity range of **298.7 to 339.9 total program services to** the **86 percent of subscribers** receiving 750 MHz or more total bandwidth service at yearend 2003.

Cable parties suggest the problem is that innovative and diverse program offerings as well as new advanced non-video services would be squeezed out by DTV

must carry. But as is seen in the MWG Report, in 2003 the *average* cable subscriber will have delivered to it 725.2 MHz of bandwidth, with somewhere between 261.8 to 295.7 total program services, *in addition to a full allocation of channels for non-video services.*

The MWG Report includes a chart utilizing the new cable data that shows that the relative burden of carrying both DTV *and* NTSC signals will be *less* than the initial must carry burden (13.42 percent for analog commercial stations in 1993 and 8.43 percent for both DTV and NTSC at yearend 2003).

In response to cable comments questioning the continuing importance of broadcasting, NAB/MSTV/ALTV point out that broadcast television continues to play a vital role in the delivery of video programming to millions of consumers, particularly those with lower incomes. There are approximately 46.5 million television sets in broadcast-only homes. An additional 34.5 million television sets in households subscribing to a MVPD service remain unconnected to the MVPD service. Thus, a total of 81 million television sets (or approximately 30.3% of the 267 million sets in the U.S.) are not connected to any MVPD service and receive their only signals over-the-air.

Cable also claims that must carry is unnecessary because "cable operators have shown that they are willing to negotiate for carriage of digital broadcast programming." These statements seem disingenuous at best. Cable's own responses to the FCC survey show paltry carriage today and minimal carriage agreements for the future. Cable alleges that stations insufficiently popular to secure voluntary carriage will do nothing to sell digital sets and thus their carriage is unimportant to the transition. But the stations that cannot reach voluntary carriage agreements are the ones in the most need of must carry's access to the audience to build their DTV futures. Several broadcasters explain how their

ambitious foreign language plans and other digital options cannot be justified without access to their entire audience. Access to Spanish-language digital broadcasts *is precisely what is needed* for Spanish-speaking viewers to be enticed to buy DTV sets.

While primarily repeating prior arguments, cable parties go to great lengths to dispute that digital must carry would serve the substantial government interests identified in *Turner I* and *II* as sufficient to support imposition of must carry obligations. In doing so, however, they ignore the core point that a primary *purpose* of the DTV transition is to preserve free over-the-air broadcasting in the digital age. Many Commission decisions reiterate this basic point. No doubt the cable commenters avoid it because it ties together digital must carry, achieving a successful DTV transition and the Congressional/*Turner* goals. Cable parties, however, assert that broadcasters will retain their analog carriage on cable systems and those revenues will suffice to maintain the broadcasting system. Broadcasters disagree, finding great and even ultimate harm from the lack of additional DTV revenues (without DTV access to the entire audience) and a long drawn out DTV transition (inevitable without digital carriage), accompanied as it would be by dual operating costs over a twenty year plus period, all on top of enormous DTV build-out costs. This scenario would be particularly threatening for stations in smaller markets, many of which already operate on the thinnest margins.

Ignoring the Commission's request that parties not repeat constitutional arguments, the cable comments largely reiterate what they submitted in 1998. To the extent there are new arguments, they rest on two incorrect premises. First, cable claims that a digital must carry requirement would not advance the interests Congress and the Supreme Court recognized supported mandatory carriage rules. In fact, DTV carriage

would advance the same interests as analog must carry – the preservation of a diverse system of universal free broadcasting for all Americans – and would also advance other substantial government and public interests relating to the transition to digital television.

Second, cable assumes that digital must carry would foreclose other programming choices. The rapid and widespread deployment of large-capacity digital cable systems ensures that cable operators will not be prevented from carrying any programming of their choice. And, if DTV carriage has no impact on cable programming, no First Amendment question is presented at all. To the extent that cable now argues that capacity is limited because it is devoted to non-speech services such as internet or telephony, that represents a business choice of cable operators. Cable's own allocation decisions cannot be used to support a First Amendment claim.

The cable comments seek to have it two ways: arguing on the one hand that DTV carriage would be more burdensome than analog carriage because few DTV stations are carried voluntarily, and on the other that DTV stations will be carried if they have programming that meets cable systems' expectations. As the Supreme Court concluded, however, the burden of carrying local stations is "congruent to the benefit it affords," whether cable systems have chosen voluntarily to carry few or many local signals.

Broadcasters and other commenters argued that the transition to digital transmission requires the Commission to expand the narrow and analog-defined concept of what material is program-related and how that material relates to the primary video. The Commission has already found that "the factors set forth in *WGN* do not necessarilyform the exclusive basis for determining program-relatedness." Nor should they, particularly for DTV. Under the *WGN* test, a cable operator could take the position

that a digital broadcaster could not time-shift programming on a second or third channel, produce zone-specific or community specific newscasting, or provide in-depth coverage of breaking news or emergency weather information on a second channel and have 68% of its audience receive these DTV broadcasts. Taking advantage in these ways of the new digital technology should not be precluded by rigid application of concepts inherently rooted in analog technology.

In its Comments, NAB/MSTV/ATLV suggested a sensible middle course for the Commission on the issue of carriage of digital signals by DBS firms: that the Commission should require carriage of all local television stations, whether analog or digital, but should phase in the obligation by DBS carriers to carry digital as well as analog stations. EchoStar's Comments are largely based on the supposed unconstitutionality of the carry-one-carry-all principle adopted by Congress in SHVIA. But the United States District Court for the Eastern District of Virginia has squarely rejected the satellite industry's constitutional attack on the SHVIA. Cable comments proffering in the main a re-hash of previous arguments cannot escape certain obvious conclusions in this proceeding. They are: cable operators, in nearly all markets, are nearing completion of a massive extension of cable system carrying capacity which will accommodate the temporary addition of DTV signals with minimal burden; mandatory must carry of DTV signals is necessary to a swift, successful transition of free, over-the-air broadcasting to digital technology; and, absent an expeditious and successful DTV transition, Congress' goal of preserving the vitality of the free, over-the-air broadcasting system for all viewers will be endangered. The FCC's choice in this regard should be clear: the prompt adoption of a digital must carry rule.

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Reply Comments of NAB/MSTV/ALTV

The National Association of Broadcasters, Maximum Service Television, Inc. and the Association of Local Television Stations ("NAB/MSTV/ALTV")[1] hereby reply to comments filed in this, the second round of comments on the subject of DTV must carry.

Cable industry commenters have lessened their cries about channel-locked cable systems, as well they must given the explosive growth in cable capacity shown by cable's own data, but they remain intransigent in their position against digital must carry. They consistently avoid discussion of the reason and basis for the must carry law. They thus continue to complain that must carry is an unfair preference for undeserving broadcasters, ignoring Congress' and the Supreme Court's finding that cable operators are monopoly

[1] NAB serves and represents the American broadcast industry as a nonprofit, incorporated association of radio and television stations and broadcast networks. MSTV represents nearly 400 local television stations on technical issues relating to analog and digital television services. ALTV is a nonprofit trade association representing local television broadcasters across this country.

gatekeepers for two-thirds of American households with the incentive, the means and the history of disadvantaging their broadcast competitors. To a commenter, they ignore the fact that a central purpose of the DTV transition is to preserve free over-the-air broadcasting in the digital age and they deny the obvious: that cable must carry will "make or break" the broadcast DTV transition. Whether this is because some of them, as cable operator competitors to free broadcasters (or cable-owned programmers), have reason to block the broadcast DTV transition matters little. Their arguments fail, whatever their motivation.

They fail, first and foremost, because DTV must carry serves precisely the same interests advanced by Congress in enacting must carry and then endorsed by the Supreme Court: preservation of free over-the-air broadcasting for all consumers, particularly for those in non-cable homes. And they fail, as a constitutional matter, not only because the same substantial government interests are served by application of must carry to DTV signals, but because the temporary "burden" on cable of DTV *and* analog must carry will be less than was the burden of initial analog carriage alone, and still remains far below the cap set by Congress. And they fail because, without cable must carry, there will be no swift and successful DTV transition as intended by Congress and the FCC and no reclamation of spectrum for other worthy public uses.

The cable industry may ignore all this. The FCC cannot.

I. As Predicted, Cable Capacity Has Exploded and Will Easily Accommodate the Temporary Addition of DTV Signals Without Loss of Cable Programming.

In 1998 comments to the Commission in this proceeding, the cable industry predicted devastating consequences to cable operators, cable programmers and cable consumers from the imposition of DTV must carry.[2] They did so by painting a picture of predominantly channel-locked cable systems that would have to drop significant numbers of cable networks and services in order to accommodate the gradual addition of local DTV signals.[3] They made these predictions even as they were in the midst of a massive upgrading of cable bandwidth and were anticipating the addition of digital capabilities, which have produced exponential growth in cable capacity. As NAB, MSTV and ALTV showed before, cable's predictions of severe programming losses from DTV must carry and strained cable capacity were inherently unbelievable,[4] as their earlier claims of devastating harm from analog must carry proved to be.[5]

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[2] *See e.g.,* Comments of A&E Television Networks, CS Docket No. 98-120, Oct. 13, 1998 at 24; Comments of C-SPAN Networks, CS Docket No. 98-120, Oct. 13, 1998; Comments of NCTA, CS Docket No. 98-120, Oct. 13, 1998 at 30; Comment of Home & Garden Television and Television Food Network, CS Docket No. 98-120, Oct. 13, 1998 at 9-21; Comments of Armstrong Holdings, *et al.*, CS Docket No. 98-120, Oct. 13, 1998 at 22.

[3] *See e.g.,* Comments of C-SPAN Networks, CS Docket No. 98-120, Oct. 13, 1998.

[4] Reply Comments of NAB, CS Docket No. 98-120, Dec. 22, 1998 at 5-24; Reply Comments of MSTV, CS Docket No. 98-120, Dec. 22, 1998 at 39; Reply Comments of ALTV, CS Docket No. 98-120, Dec. 22, 1998 at 57.

[5] *See* Reply Comments of NAB, CS Docket No. 98-120, Dec. 22, 1998 at 3-5.

Today, cable operators can no longer claim channel-locked capacity. For as NAB/MSTV/ALTV showed in initial comments, cable capacity *has* exploded.[6] And, now, this enormous growth in cable carrying capacity has been revealed by data submitted by the cable operators themselves, in response to a formal survey request by the Commission.[7]

A. Cable Survey Results Show Enormous Carrying Capacity

Due to the delayed receipt of data, the FCC has not yet released a summary of the survey data. NAB/MSTV/ALTV retained the Merrill Weiss Group to summarize and analyze the data from twelve multiple system cable operators. This report, "Analysis of Cable Operator Responses to FCC Survey of Cable MSOs," ("MWG Report") is appended as Appendix A.

MWG developed a statistical analysis of the survey responses and evaluated system bandwidth capacity and technology affecting that capacity available over time.[8] It calculated the carrying capacity available, over time, to the average cable subscriber.[9] The MWG Report evaluated the capacity required to carry analog and digital broadcast signals, as indicated by cable operators themselves, and presented carriage of digital and analog broadcast signals as a percentage of cable capacity available to the average subscriber.[10] It then calculated and evaluated cable industry capacity in terms of the number of program services that can be carried to the average subscriber, utilizing cable

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[6] *See* Comments of NAB/MSTV/ALTV, CS Docket Nos. 98-120, 00-96, 00-2, June 11, 2001 at 29-35 and Appendix D.

[7] *Further Notice of Proposed Rule Making*, CS Docket Nos. 98-120, 00-96, 00-2 (rel. Jan. 23, 2001) at ¶¶ 115-116.

operators' responses to calculate the services per channel under different modulation techniques, for analog and digital channel plans, for carriage of HDTV and for the amount of spectrum to be devoted to non-video uses.

The MWG Report reaches many conclusions about cable system capacity, over time, as revealed by the data supplied by the cable operators, and represented in terms of bandwidth capacity and program service capacity.[11] Many of these conclusions can be

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[8] Data on capacity was submitted in response to the FCC survey from twelve mostly large and some smaller cable operators. The number of subscribers represented in the survey overall is about 88.1 percent of the total number of subscribers. Although responses for the last two years considered (2002-2003) represent only 77.4 percent of all cable subscribers the MWG Report explains, at 15, why the information available for the 77.4 percent of subscribers can be conservatively applied to the remaining 22.6 percent.

[9] The "average subscriber" receives the average bandwidth and the average number of program services of all subscribers of all cable systems nationally.

[10] The court in *Turner II* relied on national averages as an appropriate way to evaluate cable claims of undue burden, rejecting cable arguments that these average figures were "useless." *Turner Broadcasting System, Inc. v. FCC*, 520 U.S. 180, 215 (1997) ("Turner II").

[11] The bandwidth projections calculated and the estimates of program services available are likely to be conservative, for several reasons. One, recent advances in technology enable extension of the bandwidth of infrastructure equipment (unhampered by already deployed set-top boxes) from 750 MHz to 860 or 870 MHz at no increase in capital cost to the operator or need to adjust existing amplifiers. Two, one system reported to be exclusively utilizing this new capability, Adelphia, provided no data for year-ends beyond 2000 and was thus excluded from the averages for those years. Had the 65.5 percent of Adelphia's systems being upgraded after 2000 been added to the averages calculated in the MWG Report, the bandwidth delivered to the average subscriber and the percentage of subscribers receiving service at or above 750 MHz both would have increased. Three, the Report's calculations of program services available allowed four channels for non-video uses, where the cable operator responses indicated allocation of three or four channels for these uses. Four, the MWG Report based the estimated number of cable HDTV services on two cable HDTV services per 6 MHz channel, whereas some cable survey responses indicated fitting three cable HDTV services into each channel. And, five, the number of program services ascribed to 256 QAM is additionally conservative because cable operators' estimates of 18% additional capacity for 256 QAM

seen graphically in the charts included in the MWG Report. Some specific conclusions[12] are:

Cable Industry Bandwidth Capacity

- Overall bandwidth delivered to the average subscriber increases from 622 MHz to **725.2 MHz** over the period from yearend 1999 to **yearend 2003**
- Subscribers receiving **750 MHz or greater total bandwidth** service increase from 56.1 to **86 percent** over the period
- Subscribers receiving greater than 750 MHz service (typically 860 or 870 MHz service) increase from 0.9 percent to 11.8 percent over the period
- Subscribers receiving 550 MHz service or less decline to 14 percent by the end of the period
- The downstream bandwidth *to the average* subscriber is sufficient to carry all the commercial television stations *in the very largest markets* in both analog and digital form within the one-third bandwidth cap set by Congress *over the entire period*
- The "burden" on downstream bandwidth *to the average* subscriber to carry both the analog and digital signals of the commercial television stations in the average television market declines from 9.38 to 8.43 percent over the period

Cable Industry Program Service Capacity

- Calculations show a capacity **range of 261.8 to 295.7 total program services to the average subscriber**, when cable operators' expectations for program services per channel are weighted by the numbers of their subscribers[13]

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were used, whereas the bit rate of 256 QAM is actually 40% greater than that of 64 QAM. *See* MWG Report at 16-17, 20-21.

[12] MWG Report at 24-27.

[13] The weighted value for the number of program services per 6 MHz channel is more representative of the services available to the average subscriber than is the unweighted value because it considers the number of subscribers of each of the operators indicating their expectations of the number of services per channel. In fact, the difference is minimal between the weighted and unweighted values, indicating a significant level of consistency among various operators' expectations of the number of services per channel.

- Calculations show a capacity range of 261.8 to 329.6 total program services to the average subscriber, when cable operators' expectations for program services per channel are weighted by the numbers of their subscribers for 64-QAM and when 256-QAM capacity is fully utilized[14]

- Calculations show a capacity range of **298.7 to 339.9 total program services to** the **86 percent of subscribers** receiving 750 MHz or more total bandwidth service at the end of the period, when cable operators' expectations for program services per channel are weighted by the numbers of their subscribers

There are as well discernible trends to be gleaned from the MWG Report's examination of the submitted cable data and commentary as to cable capacity going forward over time beyond the 2003 time period covered in the survey. Two specific trends are:

- Following the survey period, bandwidth delivered to the average subscriber will continue to increase through completion of the upgrades currently known to be under way, at which point downstream bandwidth is projected to reach 717.6 MHz, with total bandwidth delivered exceeding 771 MHz.

- Following the survey period, the "burden" on downstream bandwidth to the average subscriber to carry both the analog and digital signals of the commercial television stations in the average television market declines to 7.88 percent as the upgrades currently known to be under way reach completion.[15]

Thus cable capacity, measured by raw bandwidth delivered to the average subscriber will increase dramatically over the period 1999 through 2003, from 622 MHz to 725 MHz.[16] By yearend 2003, the number of program services available to the average subscriber, weighted by the number of subscribers, is 261.8 programs with 64 QAM and 295.7 programs with 256 QAM. *Id.* at 22. Based on use of 64 QAM alone, the number of program services to the average subscriber will have increased by 83.5% from the end of 1999 to the end of 2003. *Id.* At 27. Since it is unlikely that a cable system in 2003 would use exclusively 64 QAM or 256 QAM, but rather a mix of the two

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[14] See fn.16 *infra.*

[15] MWG Report at 25.

[16] MWG Report at 6.

modulation modes, the number of program services can be considered as a range of the number of available services, and the increase in available programs over this time period will be even greater. In fact, at least between 261.8 and 295.7 program services will be available to the *average* subscriber in 2003.

Not only are these calculated numbers which demonstrate substantial capacity derived from the cable operators' own estimates, they are conservative.[17] Moreover, the use throughout the MWG Report of bandwidth delivered to the "average subscriber" in and of itself is conservative, when one considers that fully 86% of cable subscribers will receive at yearend 2003 *at least* 25 MHz (more than four 6 MHz channels) greater bandwidth than the average subscriber. *Id.* at 5. This 750 MHz or greater bandwidth will deliver between 298.7 and 339.9 program services to 86% of subscribers at the end of 2003. *Id.*at 24. So, for 86% of subscribers, capacity and program services delivered will be substantially more than the "average subscriber" discussed throughout the MWG Report.

Thus, the cable industry itself has finally produced data from which a realistic picture of the growth of cable carrying capacity can be seen for the years when broadcast DTV signals will be coming on air. While cable can no longer claim a dearth of

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[17] *See* fn.10 *supra.* There is the potential for even more program services to be delivered within the bandwidth reported being deployed, as many if not most cable operators will avail themselves of the greater bit capacity available with 256 QAM than was indicated in their responses to the survey. That is, there is 40 percent more bit rate to be utilized with 256 QAM for digital SDTV services than was calculated in the MWG Report averages in this regard. Were 256 QAM capacity to be fully utilized, bandwidth capacity to the average subscriber would deliver between 261.8 (for 64 QAM) and 329.6 (for 256 QAM) program services, weighted by the number of subscribers. These kinds of improvements in capacity can be expected going forward as a result of improvements coming in compression and multiplexing technology and the lower bit rates required for the preponderance of film-originated material that will be carried on PPV and VOD services. *See* MWG Report at 22.

capacity,[18] cable commenters, not valuing the broadcast DTV transition, continue to complain of capacity "constraints

B. Despite Cable Complaints, There is Plentiful Capacity for New Programs and Services

Now that vast new stretches of cable capacity are nearing completion,[19] cable MSOs are finally acknowledging the greatly upgraded capacity in the industry.[20] Thus, they now suggest that that "the focus in the *Notice* on whether cable operators have the capacity to carry both analog and digital broadcast signals during the transition period is misplaced."[21] Instead, they now proffer as the problem that innovative and diverse

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[18] Cable commenters in the 1998 phase of this proceeding claimed that cable capacity was full, stagnant and limited, relying on outdated numbers and ignoring the massive upgrades in capacity and the advances in digital compression and multiplexing technology that were at the time underway. *See, e.g.*, Comments of NCTA, CS Docket No. 98-120, Oct. 13, 1998 at 40-43; Comments of CATA, CS Docket No. 98-120, Oct. 13, 1998 at 22; Comments of Time Warner Cable, CS Docket No. 98-120, Oct. 13, 1998 at 8-9; Comments of Tele-Communications, Inc., CS Docket No. 98-120, Oct. 13, 1998 at 19-22; Comments of C-SPAN, CS Docket No. 98-120, Oct. 13, 1998 at 6; Comments of A&E Networks, CS Docket No. 98-120, Oct. 13, 1998 at Appendix II.

[19] Publicly held cable companies of course have had to report these upgrades to the SEC, which formed the basis for most of the information in the chart "System Capacity of Top Nine Cable MSOs" compiled and included in NAB/MSTV/ALTV Comments, CS Docket Nos. 98-120, 00-96, 00-2, June 11, 2001 at Appendix D. Until now, however, cable commenters in this proceeding have resisted acknowledging the extent of their upgrades in carrying capacity.

[20] Comments of AT&T, CS Docket Nos. 98-120, 00-96, 00-2, June 11, 2001 at 5, 10; Comments of Time Warner Cable, CS Docket Nos. 98-120, 00-96, 00-2, June 11, 2001 at 21; Comments of Insight, CS Docket Nos. 98-120, 00-96, 00-2, June 11, 2001 at 5; Comments of Cablevision, CS Docket Nos. 98-120, 00-96, 00-2, June 11, 2001 at 3. *See also* Comments of A&E Networks, CS Docket Nos. 98-120, 00-96, 00-2, June 11, 2001 at 14 ("Even if the [cable capacity] survey garnered some evidence in support of a dual carriage requirement . . . .).

[21] Comments of AT&T, CS Docket Nos. 98-120, 00-96, 00-2, June 11, 2001 at 9.

program offerings as well as new advanced non-video services would be squeezed out by DTV must carry.[22] NCTA in fact alleges that DTV carriage "would stymie cable's efforts to introduce new non-video services"[23] and "would come at the expense of other, more valuable uses."[24]

The facts are however that DTV must carry would occupy, for a temporary period, only a small amount of cable bandwidth, in a sea of new capacity, and would hardly "stymie" non-video services or be the cause for non-carriage of "innovative and diverse" programs. As is seen in the MWG Report, in 2003 the *average* cable subscriber will have delivered to it 725.2 MHz of bandwidth, with somewhere between 261.8 to 295.7 total program services, *in addition to a full allocation of channels for non-video services* as indicated by cable operators themselves.[25] In fact, the spectrum the cable operators say they will need for non-video services (primarily telephony and data services to cable modems) is only three or four channels, and the capacity needed to carry the average market's DTV signals is 3.1 channels.[26] There remains available to the average subscriber a plethora of new channels for multitudinous new innovative and diverse

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[22] *Id.* at 9; Comments of Time Warner Cable, CS Docket Nos. 98-120, 00-96, 00-2, June 11, 2001 at 23; Comments of NCTA, CS Docket Nos. 98-120, 00-96, 00-2, June 11, 2001 at 18-19.

[23] Comments of NCTA at 16.

[24] *Id.* It is certainly not surprising that cable operators would conclude that their services are more valuable than competing local signals. Cable operators similarly believed that "why should we help UHF." H.R.Rep. 102-628 (1992).

[25] MWG Report at 20-24.

[26] *Id.* at 21.

program offerings, if that is what the cable operator chooses to present.[27]

Instead, however, cable operators choose to offer on their new digital capacity many multiplexed offerings of MSO-owned/invested-in cable networks, multiple premium services and many pay-per-view (PPV) selections, all to the financial benefit of the operators.[28] The Consumer Electronics Association notes "cable operators use much of the extra channel capacity afforded by digital systems for redundant premium channels and additional pay-per-view channels" and points in example to the digital system in Montgomery County, Maryland.[29] In fact, there appears to be an enormous number of multiplexed and cable-owned premium services available in even medium and smaller markets. NAB/MSTV/ALTV randomly selected a sampling of digital channel line-up listings from the top cable MSOs, looking only for a mix of market sizes, and listed the basic and premium offerings for each. This compilation is contained in Appendix B. It seems that there is capacity for multiple offerings of many types of programming, particularly of the premium or PPV variety, but it is said by cable that there is little room for the temporary addition of DTV signals.

To make the point that there is scant room for DTV signals on cable systems, NCTA points to the fact that "the average cable system has 65 channels of capacity," and "the number of national cable program networks has risen from 79 networks in 1990 to

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[27] And to the *86% of cable subscribers* who will receive *at least* 25 MHz more cable capacity than the "average" subscriber, cable operators can present another 36.9 to 44.2 program offerings. MWG Report at 22.

[28] *See* Comments of AT&T at fn. 15; Comments of CEA, CS Docket Nos. 98-120, 00-96,00-2, June 11, 2001 at fn. 8.

[29] Comments of CEA at fn.8.

231 networks in 2000."[30] But, as we have seen from cable operators' own data submitted to the FCC, in even 2000, the *average cable subscriber* had over 650 MHz of total cable bandwidth, with over 600 MHz of "downstream" bandwidth, which equals 100 channels, before any digitization or compression is applied.[31] And 2000, of course, was a relatively early stage in cable system capacity upgrading, with the *average cable subscriber* to receive 725 MHz in overall bandwidth by yearend 2003. MWG Report at 24.

As to the increased number of cable program networks, it is hardly surprising that the number of networks would grow dramatically in anticipation of the tremendous increase in cable channel capacity.[32] Of course, much of the growth in cable program networks has come from multiplexed versions of existing networks (basic, premium and PPV), many of which are MSO-owned,[33] seeking to occupy new channel capacity as it comes on line. But, as is indicated above, the 725 MHz bandwidth delivered *to the average cable subscriber* in 2003 will yield (conservatively) somewhere between 261 to 295 total program services, *after* subtracting spectrum to be used for two-way non-video

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[30] Comments of NCTA at 19. While there is no citation, presumably NCTA means the average cable system of 2000.

[31] MWG Report at Chart 6.

[32] As the FCC told the Supreme Court in the *Turner* litigation, the significant growth in the number of cable networks since must-carry was enacted "reflects the judgment of the market that available capacity is sufficiently plentiful to launch commercially successful new networks, notwithstanding the must-carry rules." Brief for Federal Appellees at 39, *Turner Broadcasting System v. FCC,* 520 U.S. 180 (1997) (No. 95-992). Similarly today, the growth in the number of cable networks is the logical result of the anticipated explosion of cable capacity and deployment of digital capabilities, *notwithstanding* the potential for digital must carry obligations.

[33] *See Seventh Annual Report*, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Docket No. 00-132, rel. Jan. 8, 2001, at Appendix D.

services.[34]

But cable programmers seeking carriage for all their multiplexed offerings, quite naturally argue against allocation of channel space to other uses, most particularly to broadcasters who they view as competitors.[35] They point to the increased number of cable networks as still putting pressure on capacity.[36] But with between 261 and 295 program services available to the average subscriber in 2003 (and between 299 to 340 programs available to the 86% of subscribers with 750 MHz cable capacity in 2003), MWG Report at 23, cable operators have significant capacity to carry their choice of the

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[34] MWG Report at 24, 26. Cable capacity continues to expand after 2003, with the MSOs' completing their typical build-out to at least 750 MHz. MWG Report at 13. Top cable engineers have said "750 [MHz] is plenty." Jim Barthold, *Bandwidth Debate: Just How Much Will Be Enough* (last modified Aug. 10, 1998) http://www.mediacentral.com/Magazines/ CableWorld/News98/1998081003.html. Cable commenters, in seeking to represent cable as having scarce channel capacity, often refer to the "average cable system" or the "percentage of cable systems" (*see* Comments of NCTA at 19; Joint Comments of The Filipino Channel, *et al.* at 21, 22). But this measure says little about what is available to the "average subscriber" or to percentages of subscribers (which are the more representative measures) because the vast number of small cable systems skews the average cable system carrying capacity down to much smaller numbers.

[35] *See e.g.,* Comments of A&E, C-SPAN, Joint Comments of The Filipino Channel, *et al.* Courtroom Television Network, Discovery Communications, International Cable Channel Partnership.

[36] *See e.g.,* Joint Comments of The Filipino Channel, *et al.* at 18-21; Comments of AT&T at 6; Comments of TWC at 22-23. As the FCC told the Supreme Court about earlier similar cable claims, "the excess of demand over supply is not the result of must-carry; since 1992, the cable industry's capacity has increased by 15 times the number of added must-carry stations." Brief for Federal Appellees at 38, *Turner Broadcasting System v. FCC,* 520 U.S. 180 (1999) (No. 95-992). Today, cable capacity has grown at a *much* steeper rate than it was growing then. *See* MWG Report.

231 cable networks[37] vying for carriage.[38] Those choices come down to business decisions for the cable operator, made according to many factors, including consumers' desires, profitability, ownership, etc. Given the plethora of program capacity available today with increased bandwidth and technological advances, the minimal capacity that would be devoted to DTV must carry likely matters very little to decisions about carriage of cable networks. Notwithstanding digital must carry obligations, cable networks and their offshoots will continue to respond to and compete within the new cable marketplace.

C-SPAN, nonetheless, continues to complain of the "myth of ample capacity" in explanation of its lack of success in achieving carriage for its new multiplexed network, even without digital must carry. Comments of C-SPAN at 3-4. C-SPAN says that its efforts to achieve wide distribution of C-SPAN3 are being frustrated by capacity limits and that this "gives lie to the myth that cable operators can easily accommodate all of even most of those who seek digital distribution." *Id.* It points to its inability to gain carriage for C-SPAN3 on AT&T's HITS distribution system because it is "nearly fully committed" and its slow growth because of strong competition from other programmers for system capacity. *Id.* It claims that if dual must carry becomes law C-SPAN3 will

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[37] Comments of NCTA at 19. NCTA notes that there are 280 national or regional cable program networks either launched today or expected to be launched soon. *Id.* *See also* Comments of AT&T at fn. 15.

[38] Joint Programmers complain of the tightness of competition for analog channels (at 22-23), seeing all cable networks as competitors for that tier. They do, however, in computing available channels, count as unavailable a full one-third of downstream analog capacity which "could" be occupied by must carry broadcast stations. Carriage of broadcasters rarely if ever approached the one-third cap and, with the huge new capacity now being deployed, would be highly unlikely to do so. In any event, competition among cable networks for analog carriage has little to do with digital must carry and is what it is: marketplace competition.

"certainly be left out (again)" and "C-SPAN and C-SPAN2 will also face carriage pressures." *Id.* at 4-5.

To demonstrate the plenitude of cable capacity, NAB/MSTV/ALTV here updates the picture of cable capacity (and the effect of DTV must carry on cable programmers) C-SPAN still presents on its web site, despite the debunking of it in earlier comments in this proceeding.[39] In its chart entitled "Anytown, USA Cable Television Channel Program Lineup C-SPAN" depicts a fictional but "typical" 59 channel cable system and asks the rhetorical question of "which 10 channels would you take away from your customers." NAB/MSTV/ALTV has reproduced C-SPAN's "Anytown, USA' channel lineup, and updated it for average subscriber cable capacity as of yearend 2003. It is included with these comments as Appendix C.

With "typical" 2003 cable system capacity to the average subscriber of 262 to 295 program services, and with carriage of ten DTV signals and C-SPAN's 59 channels, there still is *room for 170-205 additional cable networks.*[40] That could include, for example, *all* the cable programmers filing comments in this proceeding, all their multiplexed networks, and many additional networks, premium channels and/or pay-per-view programs. After listing all of those services *and* many other typically carried networks, there is still space for scores more program services. Cable operators indeed have the capacity to include C-SPAN3 or other program networks in their channel lineups, if

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[39] *See* Reply Comments of NAB, CS Docket No. 98-120, Dec. 22, 1998.

[40] For purposes of re-constructing this chart, we have adjusted the number of program services calculated in the MWG Report (262-295) to account for including 10 DTV signals on the chart, rather than the average 6.2 DTV signals used in the MWG Report calculations, which yields 170 program services using 64 QAM and 205 program services using 256 QAM.

consumers and cable operators desire them, along with temporary carriage of all DTV signals.

The depiction of abundant cable capacity shown in the MWG Report is the response to the assertion of A&E Networks that the channel capacity survey fails to address the negative impact dual carriage would have on cable programmers. Comments of A&E at 14. That is precisely what the showing of enormous new capacity in the cable industry does: it points A&E and others who similarly complain about DTV must carry to the business decisions of the cable operators as to what *new* programming (multiplexed versions of existing cable networks, multiplexed and time-shifted versions of premium offerings, multiplexed cable-owned networks, large numbers of PPV programs, etc.) and other services to provide to their subscribers, in addition to the temporary carriage of DTV signals. What A&E, C-SPAN and other cable programmers seem to argue is that *any* carriage can squeeze them and their new multiplexed versions out of channel lineups. This is a natural reaction for marketplace competitors, but it is also natural for such competitors to not value the public interest served by other public interests, if they require even relatively small amounts of capacity to be devoted to other uses.

What can be said about C-SPAN in particular[41] and about cable networks (including A&E) in general is that, since must carry, they have continued to gain carriage

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[41] The future carriage prospects for C-SPAN and C-SPAN 2 are indeed secure, for another important reason in addition to expanding cable capacity. TCI, now AT&T Broadband, the largest cable operator, according to the NCTA web site (www.ncta.com), pledged in 1997 to carry C-SPAN and C-SPAN 2 on *all* of its cable systems for the next 15 years. *See TCI Signs Deal To Carry C-SPAN*, Pittsburgh Post-Gazette, May 5, 1997, at D-6. As then-TCI President Leo Hindrey stated at the time of the TCI/C-SPAN agreement, "this should erase, once and for all, any doubts about the future of this great network." *Big Cable Company Cuts Deal to Carry C-SPAN*, Roll Call, May 5, 1997.

on hundreds of systems serving millions of subscribers. Must carry has not deterred dramatic gains in carriage for cable programmers, including C-SPAN. As the FCC told the *Turner II* Court, "because of past and future increases in channel capacity, must-carry's already marginal impact on cable systems and programmers has waned and will continue to do so."[42] Even a brief glimpse at Charts 6 and 7 in the MWG Report shows that the rate of growth in cable bandwidth and in the capacity for program services has rapidly increased over that of the 1992-1996 period the FCC described to the Supreme Court.

C. The Burden of DTV *and* NTSC Must Carry Will be Less Than the Initial Burden of Carry Only Analog Signals.

In response to the *Further Notice*, NAB/MSTV/ALTV constructed a bar chart, entitled "Relative Burden Chart: Local Commercial Broadcast Stations as a Percentage of Cable System Capacity" NAB/MSTV/ALTV Comments at Appendix F showing, for the years from 1993 when must carry came into effect through 2008, carriage of local commercial broadcast stations as a percentage of average cable carrying capacity. That chart was constructed using available projections and forecasts. Now that cable has submitted actual data showing the growth in cable capacity over time, the MWG Report includes a chart utilizing that actual data entitled "Broadcast 'Burden' on Cable Capacity with Growth of DTV." MWG Report at Chart 7.

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[42] Brief for Federal Appellees, at n.31 and accompanying text, *Turner Broadcasting System v. FCC,* 520 U.S. 180 (1997) (No. 95-992). The FCC continued that (as of June 1996) "[t]otal carriage of virtually all the appellants' networks has increased since 1992 by hundreds of systems, enlarging their subscriber bases by millions of cable households." *Id.*