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December 21, 1998

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Ms. Magalie R. Salas, Secretary
Federal Communications Commission
445 12th Street, S.W., TWA325
Washington, D.C. 20554

Re: RM Docket No. 98-201

Dear Ms. Salas:

Transmitted herewith, on behalf of the ABC Television Affiliates Association, CBS Television Network Affiliates Association, Fox Television Affiliates Association, and the NBC Television Affiliates Association, are an original and eleven (11) copies of *Reply Comments of the ABC Television Affiliates Association, CBS Television Affiliates Association, Fox Television Affiliates Association, and the NBC Television Affiliates Association* in the above referenced proceeding.

If any questions should arise during the course of your consideration of this matter, it is respectfully requested that you communicate with this office.

Very truly yours,

BROOKS, PIERCE, McLENDON,
HUMPHREY & LEONARD, L.L.P.

Wade H. Hargrove
Counsel for the ABC Television Affiliates
Association and for the Fox Television Affiliates
Association

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Before the
Federal Communications Commission
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In the Matter of)
)
Satellite Delivery of Network Signals to) CS Docket No. 98-201
Unserved Households for Purposes of the) RM No. 9335
Satellite Home Viewer Act) RM No. 9345
)
)
Part 73 Definition and Measurement of)
Signals of Grade B Intensity)

To: The Commission

**JOINT REPLY COMMENTS OF THE
ABC, CBS, FOX, AND NBC
TELEVISION NETWORK AFFILIATE ASSOCIATIONS**

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December 21, 1998

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CS Docket No. 98-201
RM No. 9335
RM No. 9345

To: The Commission

**JOINT REPLY COMMENTS OF THE
ABC, CBS, FOX, AND NBC
TELEVISION NETWORK AFFILIATE ASSOCIATIONS**

The ABC Television Affiliates Association, the CBS Television Network Affiliates Association, the Fox Television Affiliates Association, and the NBC Television Affiliates Association (collectively, the "Affiliate Associations"), by their attorneys, hereby submit these Reply Comments in response to the Commission's *Notice of Proposed Rule Making* ("Notice"), FCC 98-302, released November 17, 1998, in the above-captioned proceeding. The Affiliate Associations represent more than 800 local television broadcast stations throughout the nation that are affiliated with one of the four major television broadcast networks. In support thereof, it is shown as follows:

**I.
Introduction And Summary**

The comments of the satellite industry describe an America with a hopelessly antiquated and technologically-primitive over-the-air local television service. That is not the America the rest of

the nation knows.

The satellite industry's junk-science theories about the inadequacies of the Commission's television coverage rules suggest that but a handful of Americans could actually see on local television Neil Armstrong's historic moonwalk in the 1960s, Alex Haley's *Roots* in the 1970s, the dismantling of the Berlin Wall in the 1980s, or the impeachment of an American President just last week. We know better. The existing universally-available, over-the-air national network/local television distribution system has been, and continues to be, the envy of every free nation in the world. It has served, and continues to serve, America well.

The satellite industry's attempt to persuade the Commission to spike its technical coverage rules is a transparent effort to enlarge that industry's copyright subsidy. As explained in considerable detail below, the technical theories of the satellite industry's latest set of engineers (Hatfield & Dawson) do not fairly or accurately characterize the signal propagation characteristics of local television service. Given the improvements in television transmission and receiver equipment—improvements the Commission, itself, has expressly acknowledged—the existing Grade B signal intensity values should, if anything, be lowered—not increased—for current viewer expectations. These Reply Comments explain why and include a videotape to demonstrate that the Commission's Grade B field strength values produce a picture (even after factoring in degradation inherent in the recording and playback processes) of truly excellent quality.

The Satellite Home Viewer Act ("Act") is a *copyright* statute. *It is not a telecommunications statute.* Notwithstanding the Commission's expansive authority to administer and enforce the nation's telecommunications laws, we respectfully submit that the Commission is without authority to administer or enforce this Act or any of the nation's other copyright laws. The authorities cited by the satellite industry in support of its argument to the contrary do not, as explained below, stand

for the propositions for which they are cited.

The satellite industry has submitted no factual information—none at all—in support of its claim that unless the Commission bends its television coverage rules, that industry cannot compete with cable. The satellite industry has had a good “political” ride in recent months with that argument, but the Commission’s own findings released last week in its *Fifth Annual Report on Competition in Video Markets*¹ demolish it:

- ▶ In the last year, the number of DBS subscribers increased by 43%, while the number of cable subscribers increased by only 2%.
- ▶ Almost *two-thirds* of new multichannel video subscribers in 1998 chose DBS—not cable.
- ▶ Chairman Kennard observed: “The drop in local cable operator’s dominance of this market is primarily due to continued growth of DBS systems. . . .”²
- ▶ Commissioner Ness added: “[T]he data tell a positive story about the development of multichannel video competition, particularly from Direct Broadcast Satellite Service (‘DBS’). . . . In each of the last four years, DBS has experienced impressive growth.”³
- ▶ Commissioner Furchtgott-Roth noted: “It takes some impressive intellectual gymnastics to try and find a lack of competition among the providers of these choices in video programming for the American consumer. . . . [I]t simply does not follow from the fact that cable has a preponderance of MVPD customers that cable has an unlawful or inefficient hold on the market. . . . DBS is making dramatic gains, presenting mounting competition to cable.” Wall Street, he observed, has characterized DBS as the “fastest growing consumer electronics product in history.”⁴

¹ Commission Adopts Fifth Annual Report on Competition in Video Markets, *News Release*, CS Docket No. 98-102 (released Dec. 17, 1998).

² *Id.*, Separate Statement of Chairman Kennard.

³ *Id.*, Separate Statement of Commissioner Ness.

⁴ *Id.*, Separate Statement of Commissioner Furchtgott-Roth (internal quotation marks and (continued...))

- ▶ Commissioner Powell stated: “DBS clearly is shaping up as the singularly most significant competitive alternative to cable. And it is coming on strong.”⁵
- ▶ And Commissioner Tristani added: “[C]onsumers can look forward to even better times ahead” if, among other things, satellite carriers are allowed to “provide *local* broadcast signals.”⁶

Indeed, the Commission’s proposed solution to the “competition to cable” concern is not that its broadcast television coverage rules should be skewed to enlarge the copyright subsidy for the satellite industry, but, rather, the solution is precisely that which the Affiliate Associations, the National Association of Broadcasters, the broadcast networks, and dozens of local broadcast commenters have suggested: Congress should amend the Satellite Home Viewer Act to facilitate the delivery by satellite of local television stations into their local markets. As Chairman Kennard concluded, “[R]emoving this prohibition would help promote the further growth of DBS.”⁷ No fewer than three companies have publicly committed to providing a satellite-delivered local-into-local service: Local TV, Inc., EchoStar, and Northpoint Technology. The only impediment is the existing copyright law, which only Congress—not the Commission—can change.

The Commission, pursuant to its public interest oversight responsibilities of its licensees, should take immediate steps to stop the satellite industry’s continuing consumer fraud. The Affiliate Associations respectfully urge the Commission to require satellite carriers to disclose prominently

⁴(...continued)
citation omitted).

⁵ *Id.*, Separate Statement of Commissioner Powell.

⁶ *Id.*, Separate Statement of Commissioner Tristani (emphasis added).

⁷ *Id.*, Separate Statement of Chairman Kennard.

and conspicuously in all written and oral promotional and sales presentations the limitations on their statutory copyright license to provide broadcast network programming from distant stations. That, coupled with (1) improvements in and aggressive marketing of over-the-air antennas and (2) enabling legislation to allow satellite carriage of local stations in local markets, will resolve the issues in this proceeding.

Finally, whatever action, if any, the Commission takes in this proceeding, it should not leave behind its longstanding commitment to “localism” and the almost one-third of Americans who depend solely on local television stations for their television service. Commissioner Tristani, in her recent statement on video competition, noted that income in DBS households is 51% greater than the income of the average household.⁸ The nation’s *free*, over-the-air television service should not, by manipulation of the Commission’s television coverage rules, be crippled and destroyed so that General Motors (which owns DirecTV) and other satellite companies can circumvent the nation’s copyright laws for financial gain and the short-term convenience of their affluent DBS subscribers.

II.
The Satellite Industry’s Engineering Proposals
Are Preposterous,
Are Factually-Unsupported,
And Would Mean The Demise Of Local Broadcast Service
For The 21st Century

The satellite industry has mounted a frontal assault on the 50-year old Grade B field strength values and, simultaneously, is engaging in what amounts to a dual rearguard action on those values by attacking, on one flank, the Commission-proposed and recently-endorsed Longley-Rice predictive model and, on the other flank, the probabilistic variability factors that should be utilized in any

⁸ *Id.*, Separate Statement of Commissioner Tristani.

predictive model. The satellite industry's technical proposals are extreme by any standard and are not supportable from any reasonable factual, engineering, or legal viewpoint.

A. If Anything, Grade B Field Strength Values Should Be Revised Downward, Not Upward

Although different members of the satellite industry have proposed different, greatly-exaggerated Grade B field strength values and propagation model characteristics, the satellite industry appears to have coalesced around the proposals contained in the Comments of the Satellite Broadcasting and Communications Association ("SBCA"), the industry's trade association, which, in turn, relies upon the engineering statement prepared by Hatfield & Dawson (hereinafter "SBCA/Hatfield & Dawson Statement").⁹ This discussion, therefore, will concentrate principally upon the proposals contained in the SBCA/Hatfield & Dawson Statement.

The satellite industry, led by SBCA, is touting unconscionably exaggerated planning factors for Grade B field strength values. SBCA would have the Commission believe that field strengths of 70.75 dBu, 76.50 dBu, and 92.75 dBu are necessary in order for the median observer to receive an acceptable quality picture for low VHF, high VHF, and UHF, respectively.¹⁰ This is poppycock on a Brobdingnagian order. Each of these field strength values is greater, and, in some cases, far greater, than its respective current Grade A value, the maximum limit to any conceivable increase in Grade B values as the Commission has already recognized: "[W]e cannot modify Grade B

⁹ See, e.g., Comments of the National Rural Telecommunications Cooperative [hereinafter "NRTC" and "NRTC Comments"] at 19; Comments of DirecTV [hereinafter "DirecTV" and "DirecTV Comments"] at 5; Comments of EchoStar Communications Corp. [hereinafter "EchoStar" and "EchoStar Comments"] at 8; Comments of Primestar Partners, L.P. ("Primestar") at 4; Comments of Superstar/Netlink Group, LLC at 18.

¹⁰ See SBCA Comments, Hatfield & Dawson Statement, Appendix 2.

intensity so much that it effectively equals or exceeds Grade A signal intensity.”¹¹ The Affiliate Associations reiterate that the Commission is without authority to modify the Grade B intensity values for purposes of the SHVA at all, let alone to increase them to the Grade A levels.¹²

The current Grade B values have stood the test of time. In fact, *every* time the Commission or its staff has reviewed the values or considered their revision, it has concluded that *no* alteration in the overall values established in 1952 is warranted. Thus, in 1975, the last time the Commission itself considered redefining Grade B signal strengths for NTSC purposes, it proposed *lowering—not raising*—the field strength values, although ultimately it did not act.¹³

In 1977, the Office of Chief Engineer, as a result of issues raised concerning VHF “drop-ins,” reviewed the planning factors for VHF and ultimately determined that certain median field strength values warranted a *reduction—not an increase*. The Office concluded that the required median field strength for low VHF should be 44 dBu for Zone I and 45 dBu for Zones II and III, a *reduction* of 3 or 2 dB, and for high VHF should be 54 dBu for Zone I and 56 dBu for Zones II and III, a *reduction* in the former instance of 2 dB.¹⁴ No Commission revision was undertaken as a result of

¹¹ Notice ¶ 28.

¹² See, e.g., Affiliate Associations Comments at 51; see also *infra* at part III.A.4.

¹³ See Television and FM Field Strength Curves, *Report and Order*, FCC 75-636, 34 Rad. Reg. 2d (P & F) 361 (1975), ¶ 46 (discussing proposal to lower Grade B field strength values because “equipment refinements occurring since the original Grade B determinations were made” justified “a reduction in estimated receiver noise figures, an upward revision in values for receiving antenna gain, and a reduction in the assessed effect of transmission line losses”). The Commission ultimately did not adopt the new parameters because there was no “urgent need, from an engineering standpoint, to redefine the Grade B contour, and since other considerations d[id] not make such a course of action expedient,” the Commission opted not to pursue it. *Id.* ¶ 49.

¹⁴ See Gary S. Kalagian, *A Review of the Technical Planning Factors for VHF Television Service*, FCC/OCE Bulletin RS 77-01 (Office of Chief Engineer Mar. 1, 1977) [hereinafter (continued...)]

this review.

In 1980, the UHF Comparability Task Force proposed that the Grade B values for low VHF and high VHF remain unchanged but that the Grade B field strength value for UHF be increased by 7 dB to 71 dBu.¹⁵ That change was due principally to a 5 dB increase in the time fading factor. No Commission revision was undertaken as a result of this review.

Finally, just last year, as the culmination of the extensive DTV proceedings, the Commission decided to premise DTV service areas on a *replication* of existing NTSC Grade B service areas. The Commission expressly sought, first, to provide DTV coverage comparable to a station's current coverage area and, second, to provide the best correspondence between the size and shape of the proposed DTV channel's coverage area and the station's existing coverage.¹⁶ Maintaining viewer "access to the stations that *they can now receive over-the-air*" was a critical component of the DTV replication scheme.¹⁷ The Commission, therefore, expressly *reaffirmed* its longstanding Grade B

¹⁴(...continued)
"Technical Planning Factors Review"], at 9 (Table 4B, line 21).

¹⁵ See Philip B. Gieseler *et al.*, *Comparability for UHF Television: Final Report* (Office of Plans and Policy Sept. 1980) [hereinafter "*UHF Comparability Final Report*"], at 252 (Table B-2). The Task Force expressly stated the limitations of its review: "The revised planning factors are suggested for the limited purpose of comparing the coverage of UHF and VHF stations, and any further use, such as incorporation of these contours into FCC rules, would require significant additional technical and policy investigation." *Id.* at 250. In fact, the Task Force contemplated that "[a]s various improvements to the UHF service are made, the particular modified contours suggested here may no longer be appropriate." *Id.* at 250 n.4.

¹⁶ See *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, Sixth Report and Order*, FCC 97-115, 7 Comm. Reg. (P & F) 994 (1997), ¶ 12.

¹⁷ *Id.* ¶ 29 (emphasis added).

rules.¹⁸ As the Affiliate Associations stated in their Comments: “It is ludicrous to suggest that the Commission would have predicated DTV—for which broadcasters are investing millions of dollars—on the existing definition of Grade B service if that service were not, in fact, adequate.”¹⁹

Therefore, it is not as if the satellite industry has stumbled upon some dusty and cobwebbed ancient relic that hasn’t seen the light of day since its creation. In fact, the Commission has carefully examined the adequacy of its Grade B standards on numerous occasions. Each examination was conducted with the view to furthering the aims and benefits of television service, one of the fundamental purposes of the Commission itself. Each time, including just last year, the Commission determined that no change was necessary. Now the satellite industry demands that the Commission jettison this history of thorough review so that in an expedited proceeding the fundamental nature of television service may be changed for the purposes of a *copyright* law—an area of law in which the Commission has no expertise and for which it has no statutory authority. Clearly, the Commission’s own precedent, as well as common sense, suggest that what the satellite industry seeks is foolhardy. A review of each of the technical planning factors that comprise requisite Grade B field strength demonstrates this natural conclusion.²⁰

Thermal Noise and Dipole Factor. Both of these factors are a function of the laws of physics. Neither has changed nor will change. Fortunately, the SBCA/Hatfield & Dawson

¹⁸ Cf. Longley-Rice Methodology for Evaluating TV Coverage and Interference, OET Bulletin No. 69 (FCC July 2, 1997), at 2 (Table 1) (showing the *current* field strength values as defining the area subject to calculation for analog stations in the DTV context).

¹⁹ Affiliate Associations Comments at 39.

²⁰ A table providing the Grade B Planning Factors appears at page 43 of the Affiliate Associations Comments.

Statement recognizes at least this much.²¹

Receiver Noise Figure. The last time VHF receiver noise figures were examined by the Commission's staff, in 1977, the Office of Chief Engineer determined that the average receiver noise figure for low VHF was 6 dB and for high VHF was 7 dB.²² Several years later, in an examination of UHF noise figures for 200 television receiver models meeting the Commission's 14 dB *maximum* receiver noise figure, the UHF Comparability Task Force, and subsequently the Commission itself, stated that "the *average* [UHF] noise figure is about 9 dB."²³ Even in 1980 the Task Force thought that further improvements in the next few years would bring the average UHF receiver noise figure down to 8 dB.²⁴ With the advent of solid-state components and electronic digital tuning, the Affiliate Associations believe that VHF and UHF receiver noise figures have improved a further 1 dB to 2 dB in the past two decades.²⁵

²¹ See SBCA Comments, Hatfield & Dawson Statement, Appendix 2.

²² See *Technical Planning Factors Review* at 9 & 10.

²³ *UHF Comparability Final Report* at 89 (emphasis added); see also *id.* at xv n.3; Improvements to UHF Television Reception, *Report and Order*, FCC 82-333, 90 F.C.C.2d 1121, 51 Rad. Reg. 2d (P & F) 1628 (1982), ¶ 62 n.69 (stating that the "receiver manufacturing industry has achieved an improvement in the average UHF noise figure of 3 dB, from 12 dB to 9 dB"); Television Receiver Equipment Grading, *Report and Order*, FCC 82-334, 47 Fed. Reg. 35,014 (Aug. 12, 1982), ¶ 10 (stating that "[o]ur analysis indicates that most individual receiver models have an average noise figure that is within 1 dB of [9 dB], which is generally not a perceptible difference); UHF Television Receiver Noise Figures, *Notice of Proposed Rule Making*, FCC 82-507, 47 Fed. Reg. 55,251 (Dec. 8, 1982), ¶¶ 9, 12 (stating that the "average UHF noise figure is now 9 dB"); Improvements to UHF Television Reception, *Further Notice of Inquiry*, FCC 80-543, 45 Fed. Reg. 70,023, at 70,026 (Oct. 22, 1980) (same).

²⁴ See *UHF Comparability Final Report* at 89.

²⁵ It is apparent that the receiver noise figures provided in the SBCA/Hatfield & Dawson Statement for the "high" estimate are therefore woefully outdated and, even for the "low" estimate, the UHF receiver noise figure is too high by at least 3 dB. See SBCA Comments, Hatfield & (continued...)

Signal-to-Noise Ratio. In the 1951 *Third Notice*, the Commission determined that a signal-to-noise (“S/N”) ratio of 30 dB would be necessary to provide an acceptable picture to the median observer.²⁶ Subsequently, the Television Allocations Study Organization (“TASO”), based on an analysis of 38,000 observations made by 200 observers, determined that the median observer found a picture with a S/N ratio of 27.5 dB to be of acceptable quality. A picture with a S/N ratio of 30 dB was found acceptable by 70% of the viewers.²⁷ Both ratios fall within the standard defined as “passable” or TASO Grade 3: “The picture is of acceptable quality. Interference is not objectionable.”²⁸ Thus, the Commission’s theoretical determination of an appropriate S/N ratio actually overshot the empirical confirmation by a few decibels.²⁹ Because the Commission’s intention was to provide for an acceptable quality picture for the *median* observer, the 30 dB S/N figure actually provides a margin of safety. There has never been any warrant to increase the percentage of viewers who would find the picture acceptable to the 90th percentile, as the

²⁵(...continued)

Dawson Statement, Appendix 2.

²⁶ See Television Broadcast Service, *Third Notice of Further Proposed Rule Making*, FCC 51-244, 16 Fed. Reg. 3072, 3080 (Appendix B) (Apr. 7, 1951).

²⁷ See Engineering Aspects of Television Allocations, *Report of the Television Allocation Study Organization to the Federal Communications Commission* (Mar. 16, 1959); Comments of the National Association of Broadcasters [hereinafter “NAB” and “NAB Comments”], Exhibit C (Engineering Statement of Jules Cohen) [hereinafter Cohen Engineering Statement], at 2-3; Affiliate Associations Comments, Engineering Statement [hereinafter “Affiliate Associations Engineering Statement”] at 2-3; Robert A. O’Connor, *Understanding Television’s Grade A and Grade B Service Contours*, IEEE Transactions 137, 140-41 (Dec. 1968) [hereinafter “*Understanding Service Contours*”].

²⁸ See Affiliate Associations Engineering Statement at 3.

²⁹ See Further Engineering Statement of William R. Meintel [hereinafter “Further Engineering Statement”] (attached hereto as Exhibit A) at 2.

SBCA/Hatfield & Dawson Statement seeks to do.³⁰

The last two times the Commission's staff reviewed the technical planning factors for NTSC purposes, in 1977 and 1980, the staff has maintained the 30 dB S/N ratio.³¹ In fact, the UHF Comparability Task Force expressly stated that "[f]or a passable television picture, the signal-to-noise ratio required continues to be about 30 dB."³² Even the SBCA/Hatfield & Dawson Statement admits that the Task Force determined that the signal-to-noise ratio did not need to be revised.³³

The satellite industry's reliance on the 43 dB carrier-to-noise ("C/N") ratio required of cable systems is misplaced.³⁴ Obviously, an amplitude modulation system such as that utilized for over-the-air broadcast television is significantly different than transmission through cable. As the Commission itself has stated, "[O]ur rules and guidelines set a C/N standard of 36 dB, approximating a Television Allocation[s] Study Organization [TASO] Grade 3 picture: a passable picture, indicating acceptable quality with perceptible but not objectionable impairment."³⁵ The initial adoption of a 36 dB C/N ratio was therefore predicated on replicating the TASO Grade 3

³⁰ See SBCA Comments, Hatfield & Dawson Statement, at 4.

³¹ See *Technical Planning Factors Review* at 9 & 10; *UHF Comparability Final Report* at 252 (Table B-2).

³² *UHF Comparability Final Report* at 248 (citing Archer S. Taylor and Robert E. Welch, Jr., *TV Picture Interference Study*, Draft Report Prepared Under National Science Foundation Grant No. APR-76-01246A (May 20, 1977)).

³³ See SBCA Comments, Hatfield & Dawson Statement, at 4.

³⁴ See, e.g., *id.* at Appendix 2.

³⁵ Cable Television Technical and Operational Requirements, *Report and Order*, FCC 92-61, 70 Rad. Reg. 2d 679 (1992), ¶ 38.

standard that the Commission's original television service planning factors matched.³⁶ The Commission has "recognize[d] that requiring a C/N of 36 dB does not necessarily mean that all of a system's subscribers would receive this type of . . . picture. Generally, subscribers closer to the headend of the cable plant will receive better quality pictures by virtue of being exposed to less system-generated or other introduced noise in the cable."³⁷ The Commission, when it originally adopted its rule for cable in 1972, adopted the higher 36 dB C/N ratio for cable, rather than the 30 dB S/N ratio appropriate for broadcast, because it recognized that there would be *additional* degradation of the signal, not otherwise accounted for, as a result of losses in the transmission line and cable converter box, as well as additional noise generated in the converter box itself, before the signal was delivered to the television set. Thus, the only way to replicate broadcast's TASO Grade 3 "acceptable" picture standard for cable was to increase the carrier-to-noise ratio by 6 dB.³⁸

In 1992, the Commission expressly sought, in the cable context only and with a factual predicate of cable industry system design, to increase the C/N ratio by one TASO grade, from TASO Grade 3 to TASO Grade 2, which represents a "fine picture." The goal of the Commission was clearly stated: "This single augmentation of our standards would contribute vastly toward improving

³⁶ See, e.g., Signal Strength Contours for Purposes of Cable Television Systems Regulations, *Report and Order*, FCC 77-480, 41 Rad. Reg. 2d (P & F) 121 (1977), ¶ 8 (noting that when the Commission adopted the rule implementing the 36 dB C/N ratio the "picture quality" would not be "inferior to that of a Grade B signal"); see also Cable Television Rules, *Report and Order*, FCC 72-108, 24 Rad. Reg. 2d (P & F) 1501 (1972), ¶ 159 (adopting rule).

³⁷ Cable Television Technical and Operational Requirements, *Notice of Proposed Rule Making*, FCC 91-183, 6 FCC Rcd 3673 (1991), ¶ 24.

³⁸ It is simply incorrect for the satellite industry to assume and imply that the Commission was somehow "redefining" what an acceptable quality picture meant. That the Commission was not doing this is obviously confirmed by the fact that, subsequent to the 1972 adoption of the cable rule, the Commission's staff twice, in 1977 and 1980, as explained above, concluded that a S/N ratio of 30 dB remained appropriate in the broadcast context.

the quality of signal delivery by a cable operator, and should reduce significantly subscriber signal quality complaints.”³⁹ There is simply no suggestion in the Commission’s Order that it believed that the over-the-air broadcast television system needed to be revamped so that a median observer at the *perimeter* of a local station’s Grade B service area would receive a picture meeting a TASO Grade 2 standard. The Commission was rectifying the signal quality complaints of *paying* cable subscribers, not complaints from viewers of *free*, over-the-air television service.

Furthermore, the median observer would view a picture with an S/N of 41 dB as a TASO Grade 1 “excellent” picture, the highest possible rating.⁴⁰ A S/N ratio of 43 dB in the over-the-air broadcast context would mean that 65% of the observers would rate the picture as TASO Grade 1.⁴¹ If that were the standard broadcasters had to meet, the nation’s free, local analog television service would have never become the success that it is today.

In short, although the median observer would rate a picture with a S/N ratio of 27.5 dB as acceptable, the Commission’s original S/N ratio of 30 dB should be retained as the basis upon which to predicate analog television service.

Transmission Line Loss. The SBCA/Hatfield & Dawson Statement proposes transmission line loss figures that are simply outdated or incorrect.⁴² The SBCA/Hatfield & Dawson Statement relies, in the first instance, on values contained in an appendix to the *UHF Comparability Final*

³⁹ Cable Television Technical and Operational Requirements, *Report and Order*, FCC 92-61, 70 Rad. Reg. 2d 679 (1992), ¶ 38 (quoting Cable Television Technical and Operational Requirements, *Notice of Proposed Rule Making*, FCC 91-183, 6 FCC Rcd 3673 (1991), ¶ 24).

⁴⁰ See *Understanding Service Contours* at 141 (Figure 3).

⁴¹ See *id.*

⁴² See SBCA Comments, Hatfield & Dawson Statement, at 3 & Appendix 2.

Report. Those values, however, in turn rely upon figures previously determined by the Office of Chief Engineer,⁴³ which average losses for 50 feet of new, dry twinlead line and for 50 feet of old, wet twinlead line.⁴⁴ The text of the *UHF Comparability Final Report*, however, recommends the use of RG-6 coaxial cable,⁴⁵ a shielded cable for which “wetness and metal proximity ma[k]e no change in the attenuation characteristics.”⁴⁶

RG-6 coax cable is commonly available. Based on current specifications for RG-6, attenuation for 50 feet is as follows⁴⁷:

Low VHF	0.80 dB to 0.94 dB
High VHF	1.30 dB to 1.43 dB
UHF	2.20 dB to 2.90 dB

where the range provides the loss from the lowest to the highest channel in each band. Based on these current data, it is plain that transmission line loss occurring in 50 feet of recommended RG-6 coaxial cable is, for low VHF, less than 1 dB; for high VHF, less than 2 dB; and for UHF, less than 3 dB.

These transmission line loss figures are essentially identical to the downlead line loss used

⁴³ See *UHF Comparability Final Report* at 248.

⁴⁴ See, e.g., *Technical Planning Factors Review* at 10.

⁴⁵ See *UHF Comparability Final Report* at 69 (stating that “RG-6 coax offers very good performance” and that “an RG-6 system is a good value because the coaxial systems offer even less performance variability than shielded twin-lead; and coax is much easier to manipulate than shielded twin-lead, and, therefore, presents fewer installation problems”).

⁴⁶ *Id.* at 60. See also *Improvements to UHF Television Reception, Report and Order*, FCC 82-333, 90 F.C.C.2d 1121, 51 Rad. Reg. 2d (P & F) 1628 (1982), ¶ 50 (noting that RG-6 is a good quality cable).

⁴⁷ See *Winegard Amp & Accessories Catalog, Cable* (visited Nov. 26, 1998) <<http://www.winegard.com/cable.html>> (providing cable attenuation values at various frequencies).

as a planning factor in the DTV proceedings just last year. Obviously, line loss will be the same in either the analog or digital context. Line loss in the planning factors for DTV reception is assumed to be 1 dB for low VHF, 2 dB for high VHF, and 4 dB for UHF.⁴⁸

Not only does the satellite industry use out-of-date figures for degraded lines, but it also attempts to jack-up those figures by including an additional 3 dB to account for splitters.⁴⁹ The SHVA has absolutely nothing to do with the number of television sets a household owns and operates. The unserved household restriction is based on measuring the ambient field strength *outdoors* where a conventional rooftop antenna would be placed. Splitters are irrelevant to that determination.⁵⁰

The most recent, official line loss figures are those utilized by the Commission in its DTV proceedings just last year.

Receiving Antenna Gain. When the Commission initially established receiving antenna gain figures in 1952 for purposes of its planning factors, television receiving antenna technology was relatively new. Since that time there have been notable improvements in design and manufacture.

As the Commission has previously noted:

[T]he maturation of home rooftop antenna technology to provide a more consistently high quality antenna means that today rural viewers are now more likely to employ a receiving antenna superior to their

⁴⁸ See *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, OET Bulletin No. 69 (FCC July 2, 1997), at 4 (Table 3). Although the DTV planning factor figures for line loss are conservative, the Affiliate Associations will rely on them since they are FCC-sanctioned.

⁴⁹ See, e.g., SBCA Comments, Hatfield & Dawson Statement, at 3 & Appendix 2.

⁵⁰ See Further Engineering Statement at 2-3.

1952 counterpart. Furthermore, recent advances in television reception technology may result in the availability of even better reception systems⁵¹

The Commission itself has also recommended that consumers use “[s]eparate UHF and VHF outdoor antennas” because separate antennas will “provide better performance on UHF than can a combination UHF/VHF antenna, at little or no extra cost.”⁵² Therefore, in determining appropriate gain figures, what is relevant are the results of analyses of separate VHF and UHF antennas.

The Commission and its staff have recognized that the best UHF antenna, considering both performance and value, is an eight-bay bowtie-with-screen antenna.⁵³ An FCC-sponsored study in 1980 determined that the average gain for such an antenna is 13.4 dB.⁵⁴ In fact, the Electronics Technicians Association—the group that actually installs and works in the field with antennas on a day-to-day basis—stated in its Comments that the eight-bay and four-bay bowtie-with-screen antennas “are *the* conventional UHF antennas for fringe rural areas.”⁵⁵ Antennas with higher average

⁵¹ Table of Television Channel Allotments, *Notice of Proposed Rule Making*, FCC 80-545, 83 F.C.C.2d 51 (1980), ¶ 77.

⁵² Improvements to UHF Television Reception, *Report and Order*, FCC 82-333, 90 F.C.C.2d 1121, 51 Rad. Reg. 2d (P & F) 1628 (1982), ¶ 50; *see also UHF Comparability Final Report* at xiii, 52, 83.

⁵³ *See* Improvements to UHF Television Reception, *Report and Order*, FCC 82-333, 90 F.C.C.2d 1121, 51 Rad. Reg. 2d (P & F) 1628 (1982), ¶¶ 47-51 & Appendix B; *UHF Comparability Final Report* at xiii, 50 n.8, 51, 83.

⁵⁴ *See* Improvements to UHF Television Reception, *Report and Order*, FCC 82-333, 90 F.C.C.2d 1121, 51 Rad. Reg. 2d (P & F) 1628 (1982), at Appendix B; *UHF Comparability Final Report* at 51; W.R. Free *et al.*, *Final Report, Program to Improve UHF Television Reception*, Project No. FCC-0315 (Georgia Inst. of Tech., Eng’g Experiment Station, Sept. 1980) [hereinafter “*UHF Antenna Report*”].

⁵⁵ Comments of the Electronics Technicians Association, International, Inc. [hereinafter “*Electronics Technicians Association*” and “*Electronics Technicians Association Comments*”], at (continued...)

UHF gains are available, although they are slightly more expensive. For example, one parabolic UHF antenna possessed an average gain of 14.6 dB.⁵⁶ The UHF Comparability Task Force used an average UHF antenna gain of 14.3 dB in one part of its analysis.⁵⁷ Currently, Channel Master, a leading manufacturer of antennas, offers one UHF antenna, Model No. 4251, with an average gain of 15.6 dB.⁵⁸ In short, the Commission's original planning factor for UHF antenna gain, 13 dB, appears to be slightly conservative but generally sound.

The most recent study of VHF antennas of which the Affiliate Associations are aware was conducted by the Institute for Telecommunications Sciences ("ITS"), an arm of the Department of Commerce, in 1979. That study indicates that the average gain in the low VHF band is 4.43 dB and in the high VHF band is 8.34 dB.⁵⁹ Despite considering that data, as well as data from numerous other studies, the UHF Comparability Task Force ultimately concluded that "the planning factor

⁵⁵(...continued)
23 (emphasis added).

⁵⁶ See *Improvements to UHF Television Reception, Report and Order*, FCC 82-333, 90 F.C.C.2d 1121, 51 Rad. Reg. 2d (P & F) 1628 (1982), at Appendix B (citing *UHF Antenna Report*).

⁵⁷ See *UHF Comparability Final Report* at 76 (Table 3-10) (citing *UHF Antenna Report*).

⁵⁸ Information provided by Channel Master Sales on Dec. 16, 1998.

⁵⁹ See R.G. FitzGerrell *et al.*, *Television Receiving Antenna System Component Measurements*, Report No. 79-22 (NTIA June 1979) [hereinafter "*Receiving Antenna System Report*"] (cited in Philip B. Gieseler *et al.*, *Comparability for UHF Television: A Preliminary Analysis* (Office of Plans and Policy Sept. 1979) [hereinafter "*UHF Comparability Preliminary Analysis*"], at 45 (Table 3-1)). The VHF antenna gain figures relied upon in the SBCA/Hatfield & Dawson Statement reflect gains averaged over several different studies, at least one going back to the 1950s. Compare SBCA Comments, Hatfield & Dawson Statement, Appendix 2 with *UHF Comparability Preliminary Analysis* at 45 (Table 3-1) (indicating that the 3.5 dB gain for low VHF and 7.5 dB gain for high VHF reflect an average across various studies, as reported in the *Receiving Antenna System Report*). Such historical averages necessarily diminish the advances made in antenna design and manufacture over those two decades. Thus, they are not reflective of the most recent data and should be rejected.

value selected by the FCC for VHF receiving system gain is correct. *If anything, it understates system performance.*⁶⁰ In other words, all things considered, the Task Force believed that the 6 dB gain figures for both low VHF and high VHF originally determined by the Commission in 1951 should be utilized, although receiving antenna systems would likely perform better than allowed for in the VHF bands, especially in the high VHF band. In fact, Channel Master currently offers one VHF antenna, the Crossfire Model No. 3617, with average gains of 5.9 dB in the low VHF band and 11.9 dB in the high VHF band.⁶¹ Such a gain in the high VHF band is nearly *double* the original planning factor and represents one full TASO Grade of improvement in picture quality. The Task Force's statement that the Commission's VHF planning factor for receiving antenna gain "understates system performance" is itself an understatement.

Time Fading Factor. The Commission's original time fading factors were based on a propagation model that was subsequently revised in the 1960s.⁶² With the adoption of new propagation curves, new values for the time fading factors are necessary to assure that, at the Grade B contour, the best 50% of locations will receive an acceptable quality picture at least 90% of the time. Because television stations are more closely spaced in Zone I, time fading, which is proportional with distance from the transmitter, is slightly less severe in Zone I than in Zones II and III. A 1977 report from the Office of Chief Engineer indicates that, for the low VHF band, the time fading factor in Zone I should be 8 dB and in Zones II and III should be 9 dB; for the high VHF

⁶⁰ *UHF Comparability Final Report* at 81 (emphasis added).

⁶¹ Information provided by Channel Master Sales on Dec. 16, 1998.

⁶² See J.W. Damelin *et al.*, *Development of VHF and UHF Propagation Curves for TV and FM Broadcasting*, Report R-6602 (FCC Sept. 1966).

band, the time fading factor in Zone I should be 7 dB and in Zones II and III should be 9 dB.⁶³ Instead of averaging these values, as 8.5 dB for low VHF and 8 dB for high VHF, the UHF Comparability Task Force used the higher value, 9 dB in both cases, as the more conservative estimate.⁶⁴ The Task Force also relied on an unpublished draft by the same author for a time fading factor of 9 dB for the UHF band.⁶⁵ Again, no differentiation was made by the Task Force for Zone I vis-à-vis Zones II and III.⁶⁶ It is also worth noting that, although new propagation curves were adopted, the “corrected” time fading factors are theoretically valid only at “great distances from the transmitter, distances that are, in reality, beyond the traditionally-predicted Grade B contour of almost all stations.”⁶⁷

* * *

Compiling the above data that constitutes the most recent FCC-sanctioned data that the Affiliate Associations could obtain results in the following planning factors for Grade B median field intensity:

⁶³ See *Technical Planning Factors Review* at 9 (Table 4B, line 16).

⁶⁴ See *UHF Comparability Final Report* at 252 (Table B-2).

⁶⁵ See *UHF Comparability Preliminary Analysis* at 183 n.4 (citing Gary S. Kalagian, “UHF Television Planning Factors,” unpublished draft (FCC 1979)).

⁶⁶ Although the Affiliate Associations do not have access to the Task Force’s source, it is likely that the average time fading factor for the UHF band across all zones is equal to or less than that for the high VHF band. A fair assumption is that the average is 7 or 7.5 dB.

⁶⁷ Further Engineering Statement at 3.

Revised Grade B Factors

<i>Parameter</i>	Channels 2 to 6	Channels 7 to 13	Channels 14 to 83
Thermal Noise (@ 300 ohms)	7	7	7
Receiver Noise Figure	12 6	12 7	15 9
Signal-to-Noise Ratio	30	30	30
Transmission Line Loss	1	2	5 4
Receiving Antenna Gain	(6)	(6)	(13)
Dipole Factor	(3)	6	16
Local Field Intensity	41 35	51 46	60 53
50% Terrain Factor	0	0	0
90% Time Fading Factor	6 9	5 9	4 9
Median Field Intensity	47 44 dBu	56 55 dBu	64 62 dBu

These data clearly show that, in each band, a small *decrease* in the Grade B values is warranted (3 dB in the low VHF, 1 dB in the high VHF band, and 2 dB in the UHF band), such that, if the median field intensity were 44 dBu for low VHF, 55 dBu for high VHF, and 62 dBu for UHF, then the median observer, at the best 50% of locations along the Grade B contour, would receive an acceptable quality picture at least 90% of time. Thus, the ridiculously high Grade B values that the satellite industry advocates, higher than the Grade A values, are revealed to be the sham they really are.

The Affiliate Associations submit that, all things considered, and notwithstanding the Commission's lack of authority to act specifically for purposes of the SHVA, the Commission should now affirm the conclusion it reached in 1975. At that time, in discussing a proposal to lower Grade B field strength values because "equipment refinements occurring since the original Grade B determinations were made" justified "a reduction in estimated receiver noise figures, an upward revision in values for receiving antenna gain, and a reduction in the assessed effect of transmission

line losses”—in other words, the same refinements largely at play now—the Commission ultimately concluded that it would not adopt the new parameters because there was no “urgent need, from an engineering standpoint, to redefine the Grade B contour.”⁶⁸ The Affiliate Associations again contend that there is still no urgent need, *from an engineering standpoint*, to redefine the Grade B contour or the Grade B intensity levels. And, in any event, as the Affiliate Associations have carefully explained, the Commission is without authority to alter in any way its Grade B standards for purposes of the Act. But, should the Commission determine that it has any authority to act, then its action should be to reduce the Grade B field strength values, not increase them.

In fact, were the Commission inclined to act—which it should not be in an expedited proceeding that is considering altering the fundamental premises of television broadcast service for the purposes of a copyright law—then the Affiliate Associations urge that, to promote localism and the expansion of local television service generally—for which there is no question of the Commission’s mandate—the Commission should consider revised planning factors reflecting data most favorable to assisting those long-established aims. Such data, all of which is discussed and referenced above and is the most recent, sound engineering data upon which the Commission could act in such a short timeframe, would result in the following suggested Grade B planning factors:

⁶⁸ Television and FM Field Strength Curves, *Report and Order*, FCC 75-636, 34 Rad. Reg. 2d (P & F) 361 (1975), ¶ 46 (first two quotes), ¶ 49 (third quote).

Suggested Grade B Factors

<i>Parameter</i>	Channels 2 to 6	Channels 7 to 13	Channels 14 to 83
Thermal Noise (@ 300 ohms)	7	7	7
Receiver Noise Figure	6	7	8
Signal-to-Noise Ratio	27.5	27.5	27.5
Transmission Line Loss	0.9	1.4	2.6
Receiving Antenna Gain	(6)	(11.9)	(15.6)
Dipole Factor	(3)	6	16
Local Field Intensity	32.4	37	45.5
50% Terrain Factor	0	0	0
90% Time Fading Factor	8.5	8	7.5
Median Field Intensity	40.9 dBu	45 dBu	53 dBu

These planning factors do not consider probable improvements in receiver noise figures in the last two decades. Even so, they indicate that the current Grade B values are too high by more than 6 dB for low VHF, 11 dB for high VHF, and 11 dB for UHF.⁶⁹ If the Commission were to act to duplicate its intention in 1952 that the median observer, at the best 50% of the locations along the Grade B contour, receive an acceptable quality picture at least 90% of the time, then the median field intensity for low VHF should be 41 dBu; for high VHF, 45 dBu; and for UHF, 53 dBu. Because the Affiliate Associations do not recommend that the Commission act at all to change its longstanding Grade B intensity values, what these figures really indicate is that television viewers, at a local station's predicted Grade B contour, are actually receiving a picture with a quality of one to two TASO Grades better than they are theoretically predicted to receive.

⁶⁹ This is why in our Comments the Affiliate Associations suggested that "the median Grade B field strength values could be reduced, conservatively, at least 6 dB." Affiliate Associations Comments at 45.

As the Commission has itself acknowledged:

A television station's usable signal does not end abruptly at its predicted Grade B contour. Reception at a significant distance beyond the contour is possible for a variety of reasons including, for example, . . . the use by consumers of higher gain antennas, lower loss transmission lines, receivers with a lower noise figure (increasingly likely with recently produced receivers), [and] higher antenna locations⁷⁰

These revised median field intensity values demonstrate why more viewers actually receive an acceptable picture at distances farther from the transmitter than ever before. Just as in the cable context the Commission has refused to "ignore the marketplace evidence" of the existence of viewers located outside a station's predicted Grade B contour,⁷¹ so, too, in the SHVA context, should the Commission recognize the economic and public policy aspects of maintaining artificially high Grade B intensity values: Many more viewers are being permitted to subscribe to distant network service than should lawfully be entitled to receive it. As the Affiliate Associations stated in their Comments: "[T]he real issue the Commission should be considering in this proceeding is not relief for the satellite industry, but rather relief for the broadcasting industry. . . . In effect, the networks' and affiliates' intellectual property rights are being abused even more widely than generally perceived."⁷²

⁷⁰ Cable Communications Policy Act Rules, *Second Report and Order*, FCC 88-128, 64 Rad. Reg. 2d (P & F) 1276 (1988), ¶ 19 n.22.

⁷¹ *Id.* ¶ 19.

⁷² Affiliate Associations Comments at 46-47.

B. Contrary To The Factually-Unsupported Argument Of The Satellite Industry, The Commission's Existing Grade B Field Strength Values Do Result In A Television Picture That Meets Current Viewer Expectations

As demonstrated by the foregoing argument, the satellite industry has presented no factual or empirical data or information to support its argument that the Commission's existing Grade B field strength values do not result in a television picture that meets current viewer expectations. Accordingly, the Commission may base no factual finding on the satellite industry's conclusory, factually-unsupported argument in this regard. Indeed, as the above discussion demonstrates, from a theoretical and engineering standpoint, the Commission's current Grade B field strength values will produce more than an acceptable quality picture for the median viewer. In addition, the empirical data *proves* this to be the case.

Exhibit D consists of a videotape that shows what television pictures actually look like at various field strength levels, ranging from 40.5 dBu up to 71.4 dBu. This videotape confirms that existing Grade B field strength values do, in fact, produce an excellent picture and one consistent with current viewer expectations.

As explained in the affidavit of telecommunications consultant, Mr. Lawrence V. Behr, in Exhibit C, these recordings were made earlier this year in connection with the copyright infringement case initiated by ABC, Inc. against PrimeTime 24⁷³ on behalf of WTVD-TV, Durham, North Carolina. Mr. Behr, an experienced and respected telecommunications technical consultant, was asked by ABC to verify certain field strength readings taken and video recordings made by an engineer retained by PrimeTime 24 at twelve PrimeTime 24 satellite subscriber households located

⁷³ See *ABC, Inc. v. PrimeTime 24, Joint Venture*, 17 F. Supp. 2d 467 (M.D.N.C. 1998) (“ABC First Order”); *ABC, Inc. v. PrimeTime 24, Joint Venture*, 17 F. Supp. 2d 478 (M.D.N.C. 1998) (“ABC Second Order”).

within WTVD's predicted Grade B contour. These households were located at various distances, from 21.4 miles to 71.8 miles, from WTVD's transmitter site. The videotape compares, side by side, WTVD's transmissions recorded by PrimeTime 24's engineer and those recorded by Mr. Behr. The difference in the quality of the pictures recorded by PrimeTime 24's engineer and those by Mr. Behr are dramatic.

Attachment A to Mr. Behr's affidavit is a list of the twelve sites tested. Column 1 of Attachment A provides the location of each site and the name of the homeowner; Column 2 contains the field strength reading taken by Mr. Behr; and Column 3 indicates the distance of each site from WTVD's transmitter. Attachment B to Mr. Behr's affidavit is a map (prepared by PrimeTime 24's engineer) depicting each site in relationship to WTVD's transmitter and WTVD's predicted Grade B contour.

The pictures recorded by PrimeTime 24's engineer were made with each homeowner's existing television antenna, transmission line, and television set. Mr. Behr states that he used a conventional mid-range price Yagi antenna purchased from Radio Shack for less than \$80.00, a conventional Panasonic VCR tuner, and a Panasonic S-VHS Camcorder with a NEC video monitor. Field intensity measurements were taken using a Sencore SL750A TV signal analyzer. Mr. Behr raised the antenna 30 feet and placed it as close to the home as practical. Mr. Behr utilized the Commission's "cluster method" for taking field strength readings as specified in 47 C.F.R. § 73.686. No pre-amplifier or other booster equipment was used, although the reception and picture quality in each case could be readily improved by use of a simple, inexpensive antenna-mounted pre-amplifier.

Television Station WTVD operates on Channel 11, and a field strength reading of 56 dBu constitutes a Grade B signal for WTVD under 47 C.F.R. § 73.683. The field strength readings taken

by Mr. Behr were less than 56 dBu at only two of the twelve sites (Site 15 and Site 2).

Mr. Behr's affidavit and accompanying videotape confirm the following:

- ▶ The Commission's existing field strength values produce an excellent picture and one that more than meets current viewer expectations. This is, perhaps, best evidenced by the pictures recorded at Site 14 in Buffalo Junction, Virginia, located 70.1 miles from WTVD's transmitter. That site yielded a field strength value of 56.9 dBu, which is just above the minimum 56 dBu level required for Grade B. The quality of WTVD's reception as reflected in the videotape recording taken by Mr. Behr at Site 14—even after considering picture degradation resulting from the recording and playback processes—is excellent, and as Mr. Behr notes, the picture is “vastly superior” to that observed in many cable households. As Mr. Behr further notes, the quality of the picture at Site 14 is comparable, if not superior, to the quality of the picture at Site 13 located only 21.4 miles from WTVD's tower and which was the result of a much greater (70.7 dBu) field strength value.
- ▶ It would be imprudent as a matter of policy and law to base any legal standard or measurement methodology on readings or recordings made using a homeowner's existing (often defective) equipment. Mr. Behr states that in “home after home the antenna cable and related components were defective, corroded, and often not properly connected to the TV set or antenna.” That—plus the fact the homeowner's antenna was often pointed the wrong way—accounts for the startling contrast between the video recordings made by PrimeTime 24's engineer and those made by Mr. Behr. These recordings confirm that it would be silly to base any legal standard or requirement on a homeowner's existing—and, in many cases, defective—equipment.
- ▶ The video recordings also confirm the wisdom of the Commission's longstanding requirement that legal determinations about television reception must be based on proper antenna orientation. Mr. Behr points out that he was told by several homeowners (as confirmed by the field notes of PrimeTime 24's engineer) that PrimeTime 24's engineer did not orient the homeowner's antenna toward WTVD's tower for his video recording. Mr. Behr says that fact explains much of the difference in the quality of reception. The contrast between the recordings by PrimeTime 24's engineer and those made by Mr. Behr confirm that improper antenna orientation will result in dramatically inferior reception.
- ▶ The measurements taken by Mr. Behr further confirm the Act's prudent requirement that actual site measurements be conducted as the legal arbiter of eligibility. Compare, for example, the fact that Site 4—located 71.8 miles from WTVD's transmitter—received a signal of 65.6 dBu, while

Site 2—located just 36.7 miles from WTVD’s transmitter—received a signal of only 55.4 dBu.

Mr. Behr concludes with the observation that, for there to be any integrity in the signal measurement process, uniform standards must be specified for all equipment used in the testing process.

In short, these recordings provide empirical confirmation that the Commission’s existing Grade B field strength values produce an excellent picture and one that meets current viewer expectations.⁷⁴ PrimeTime 24’s shoddy engineering practices and junk science arguments are exposed by this videotape for the professionally-embarrassing sham they are. The simple fact is that the satellite industry has not and cannot make the technical case—either theoretically or empirically—that the Commission’s existing Grade B field strength values should or need to be spiked upward to reflect an acceptable television picture for today’s viewer.

C. External Noise Is Not A Relevant Factor For Grade B Considerations, And The Conventional Use Of Pre-Amplifiers Provides For The Reception Of Excellent Quality Pictures

Notwithstanding the utter lack of theoretical and empirical support for their extreme proposals, the satellite industry further attempts to pad its proposed Grade B signal intensity values with so-called “impairment attenuation factors” for vegetation, “clutter,” and other external noise.⁷⁵

⁷⁴ The satellite industry’s unsupported claim that current viewer expectations are substantially higher than expectations in the 1950s when televisions were black and white is belied by a report relied upon the satellite industry itself: “[T]here is seldom a serious statistical difference between monochrome and color quality ratings.” Neil M. Smith, *Relationship of Television Picture Quality to Field Intensity*, unpublished paper (Mar. 30, 1971) [hereinafter “PrimeTime 24/Smith Paper”], at 19 (attached to Comments of PrimeTime 24 Joint Venture [hereinafter “PrimeTime 24” and “PrimeTime 24 Comments”]).

⁷⁵ See SBCA Comments, Hatfield & Dawson Statement, Appendix 4; PrimeTime 24 (continued...)

The simple rejoinder to this secondary assault is that, although the Grade B planning factors have never *expressly* incorporated factors for buildings and vegetation, the empirical data upon which they are based did, in fact, account for the buildings and vegetation as they existed at the time the empirical measurements were collected. Predictive models such as Longley-Rice, therefore, already account for such factors to some extent without the need for altering either the Grade B intensity values themselves or the standard location, time, and confidence variability inputs.⁷⁶ Although Longley-Rice is flexible enough to take further account of these factors, such a course is not advisable. Because of the empirical foundation of Longley-Rice incorporating such factors, it would be extremely difficult to “back out” the inherent building and vegetation data and then add in only the new data. But if that original data were not subtracted, and the new building and vegetation data were included in addition, then it would be “double-counted,” and the resulting predictions of field strength would be very unreliable.⁷⁷

Furthermore, the Commission has already examined the issue of external noise, and, based upon the laws of physics, determined that the effects of external noise are significant only for low band VHF frequencies, i.e., channels 2 to 6.⁷⁸ External environmental noise does not adversely affect the picture quality of UHF stations because of their frequencies. Man-made noise is less

⁷⁵(...continued)

Comments, Declaration of William H. Hassinger [hereinafter “PrimeTime 24/Hassinger Statement”], at 9-10.

⁷⁶ See Further Engineering Statement at 6-7.

⁷⁷ See *id.*

⁷⁸ See Television and FM Field Strength Curves, *Report and Order*, FCC 75-636, 34 Rad. Reg. 2d (P & F) 361 (1975), ¶ 46. See also *UHF Comparability Preliminary Analysis* at 70 (stating that “UHF receivers can be expected to receive very little noise from *any* external source (emphasis in original)).

prevalent in rural areas as a general matter and is likely to be a factor for VHF stations only in populated urban areas. However, the median ambient signal strength of a local station in such areas is likely to be far in excess of the Grade B level, indeed at Grade A or even city grade level, and thus more than sufficient to overcome the adverse effects of the noise on picture quality. As succinctly stated in a report relied upon by PrimeTime 24 and attached to its comments: “A substantial factor for the effects of urban noise on low-band VHF reception is [already] included in the City Grade specification, but such noise is only significant in the more industrialized portions of a city and has little effect in the outlying residential areas.”⁷⁹

Despite this refreshingly candid acknowledgment by PrimeTime 24, the satellite industry relies heavily on an aside in the 1977 report of the Office of Chief Engineer that the “assumption of 0 dB to overcome rural noise in these ‘rural areas’ is *probably* no longer valid because of the increased number of high voltage power lines and motor vehicle traffic volume.”⁸⁰ What the satellite industry neglects to mention is that the report ultimately concluded that the rural noise factor should remain 0 dB.⁸¹ In addition, the UHF Comparability Task Force, in 1980, which was also engaged in deriving modified Grade B values, also ultimately concluded that no account need be taken of

⁷⁹ PrimeTime 24/Smith Paper at 17.

⁸⁰ *Technical Planning Factors Review* at 11 (emphasis added). High voltage power lines sound more ominous than they really are. First, over the past several decades, as the utility industries have become aware of the electrical noise their systems generate, they have made vast improvements in technology that reduces or shields that noise. Second, in many parts of the country, new subdivisions in what were once “rural areas” require that utility lines be buried underground. Thus, the likely increase, if any, in “rural noise” due to high voltage power lines is negligible.

⁸¹ *See id.* at 9 (Table 4B, line 19).

rural noise for Grade B purposes.⁸²

But more important than the “impairment attenuation factors” by which the satellite industry erroneously attempts to degrade the median ambient field strength that can actually be measured throughout a local station’s predicted Grade B service area is the principal factor that significantly boosts the likelihood that a viewer within that predicted Grade B service area will get not just an acceptable picture but a truly excellent picture. To wit, the common use of high-gain pre-amplifiers:

A radio frequency (RF) preamplifier is a device that is utilized in a receiving antenna system to increase the RF power of the desired signal delivered to the receiver. In a television receiving system, a preamplifier can improve overall system performance by both compensating for the decrease in signal strength (attenuation) caused by the transmission line and components, and by lowering the amount of noise, or snow, the receiving antenna system contributes to the displayed image. The degree to which the preamplifier affects the transmission line attenuation and system noise depends on its own gain and the amount of noise internally generated by the preamplifier (which to a certain extent are a function of its cost) and where in the receiving antenna system the preamplifier is installed. If the preamplifier is located at the antenna, the overall amount of noise in the picture will be established by the noise characteristic of the preamplifier, because its gain can then compensate for most, if not all, of the signal attenuation due to the transmission line and components. . . . When mounted at the terminals of an outdoor antenna, a preamplifier can provide its maximum degree of picture quality improvement.⁸³

The UHF Comparability Task Force itself noted that “[p]reamplifiers have historically been utilized in ‘fringe’ reception areas.”⁸⁴ The Electronics Technicians Association—again, the group

⁸² See *UHF Comparability Final Report* at 252 (Table B-2). In fact, the UHF Comparability Task Force did not even find it necessary to alter the longstanding urban noise factors for Grade A purposes. See *id.* at 254 (Table B-4).

⁸³ *UHF Comparability Final Report* at 73-74.

⁸⁴ *Id.* at 78.

that installs antennas—states in its Comments that, in its home county, “*virtually all* rooftop antenna systems include a pre-amplifier.”⁸⁵ Thus, the record evidence suggests that a conventional rooftop antenna system “typical of outlying or near-fringe areas”⁸⁶ contains a pre-amplifier.⁸⁷

The gains achievable with a pre-amplifier are amazing. The pre-amplifier the UHF Comparability Task Force used in one study, which was chosen because of its good performance characteristics and relatively low price, possessed a gain of 16 dB and an internal noise figure of 3.7 dB, for an aggregate advantage of 12.3 dB.⁸⁸ The Electronics Technicians Association states that typical gains with current pre-amplifiers are 17 dB to 24 dB.⁸⁹ The current Radio Shack catalog offers four antenna-mounted amplifiers ranging in price from \$17.99 to \$59.99 with gains ranging from 10 dB to 30 dB.⁹⁰ In fact, Radio Shack’s best antenna-mounted amplifier provides gains of 20 dB to 30 dB for VHF and UHF.⁹¹ The Winegard Company currently offers 14 different pre-amplifiers with gains ranging from 17 dB to 29 dB. One of their pre-amplifiers, Model AP-8275, provides an average gain of 29 dB for VHF and 28 dB for UHF with internal noise of only

⁸⁵ Electronics Technicians Association Comments at 6 (emphasis added).

⁸⁶ *Notice* ¶ 4.

⁸⁷ Electronics Technicians Association Comments at 7 (stating that, given the conventionality of pre-amplifiers in fringe areas, “[i]t is not likely that [by ‘conventional antenna’] Congress meant a simple, non-amplified antenna”).

⁸⁸ *See UHF Comparability Final Report* at 75 n.18, 76 (Table 3-10 n.3).

⁸⁹ *See* Electronics Technicians Association Comments at 14-15.

⁹⁰ *See* Radio Shack, *1999 Answers Catalog*, at 152.

⁹¹ *See id.*

2.9 dB and 2.8 dB in those respective bands.⁹²

Pre-amplifier gains on this order are alone sufficient to overcome even the highly spurious Grade B “planning” factors that the satellite industry proposes—and without even taking into account the improvements in receiver noise figures and antenna gains documented above. Even with the very modest gain achievement of the pre-amplifier used by the UHF Comparability Task Force in its 1980 study, the Task Force found that picture quality with the pre-amplifier improved *two or three* TASO grades.⁹³ Its little wonder then that in a typical “rural” or near-fringe area such as Putnam County, Indiana, where “virtually all rooftop antenna systems include a pre-amplifier,” Grade B contour households “receive eighteen *excellent* quality channels in stormy, cloudy, snowy, and clear weather.”⁹⁴

The conventional use of pre-amplifiers in outlying and near-fringe areas, when considered in combination with the reduced median Grade B field intensities discussed above, further demonstrates that significantly more households can, and, in fact, do, receive an acceptable quality picture than that for which local broadcasters have been credited. As the Affiliate Associations and other commenters such as Hearst-Argyle Television, Inc. (“Hearst-Argyle”) demonstrated in their Comments, the network “white area” problem is very small, estimated at less than 0.5% of all television households.⁹⁵ Given these new considerations, it may even be smaller. The scope of the

⁹² See Winegard Amp & Accessories Catalog, *Preamps—AP Series Specifications* (visited Dec. 16, 1998) <<http://www.winegard.com/ampspec1.html>>.

⁹³ See *UHF Comparability Final Report* at 76 (Table 3-10).

⁹⁴ Electronics Technicians Association Comments at 6 (first quote), 15 (second quote) (emphasis added).

⁹⁵ See Affiliate Associations Comments at 10-12; Comments of Hearst-Argyle Television, (continued...)

compulsory copyright license granted by the SHVA should, if anything, be reduced—not enlarged.

D. A Conventional Outdoor Rooftop Antenna Contains A Rotor And Must Be Installed In The Best Receiving Location

In addition to the record establishing that a “conventional” outdoor antenna installation “typical of outlying or near-fringe areas”⁹⁶ includes a pre-amplifier, the Commission has always expected and recognized that

persons living in areas located in the outer reaches of the service areas of broadcast stations (for example, at the edge of a predicted Grade B contour) can, and generally do, take relatively simple measures such as installation of an improved roof-top antenna and careful location and orientation of that antenna to enhance their off-the-air reception.⁹⁷

In fact, the Commission expressly advised that “[a]ntennas should be installed by ‘probing’ for the best receiving location; signal strength can vary significantly over a very short distance; thus, the antenna should be installed at the location that provides good picture quality for the channels desired.”⁹⁸

The satellite industry’s claim that a “conventional rooftop antenna does not include a[]

⁹⁵(...continued)

Inc. at 5-6. *See also* Comments of Decisionmark Corp. at 13 & Exhibit 5 (showing the extent of the nation’s “white areas” under Longley-Rice with standard input parameters of 50%/50%/50%). The Decisionmark map virtually proves that network “white areas” exist principally in areas where very few people live.

⁹⁶ *Notice* ¶ 4.

⁹⁷ Cable Communications Policy Act Rules, *Second Report and Order*, FCC 88-128, 64 Rad. Reg. 2d (P & F) 1276 (1988), ¶ 18.

⁹⁸ Improvements to UHF Television Reception, *Report and Order*, FCC 82-333, 90 F.C.C.2d 1121, 51 Rad. Reg. 2d (P & F) 1628 (1982), ¶ 50.

rotor”⁹⁹ is simply not supported by any evidence whatsoever. Instead, as the Electronics Technicians Association shows, the majority of home antenna systems in Putnam County, Indiana, a location representative of outlying or near-fringe areas, contain a rotor (in addition to a pre-amplifier)—and this is true, as the Electronics Technicians Association further remarks, even though homeowners in Putnam County can receive network programming from each of the four major networks from affiliates all located in Indianapolis.¹⁰⁰

In fact, as the Electronics Technicians Association correctly points out:

Rotors are as important in many areas as steering wheels are in automobiles. Because a household needs to reverse the antenna to get a signal 180 degrees from another should not be an excuse to pay \$600 over ten years to receive the signal via satellite instead of installing the proper antenna system.¹⁰¹

Rotors are economical (\$60-\$75) and they do not require constant rotation. . . . To circumvent the intent of the SHVA because the homeowner prefers to not invest in a rotor where needed[] is not right.¹⁰²

The record evidence in this proceeding thus demonstrates that a conventional rooftop antenna system typical of outlying or near-fringe areas in the vicinity of a station’s predicted Grade B contour will consist of an antenna or antennas of appropriate size and design for the distance from transmitter sites, will have been installed at the location providing optimum signal strength, contains a rotor so that the antenna may be oriented to receive maximum gain from the desired channel, and contains an antenna-mounted pre-amplifier to boost weak signals or enhance moderate signals (or

⁹⁹ PrimeTime 24 Comments at 25.

¹⁰⁰ Electronics Technicians Association Comments at 6.

¹⁰¹ *Id.* at 21

¹⁰² *Id.* at 24.

even to counteract the degradation of splitters) so that excellent quality pictures are received. This evidence therefore further demonstrates that any household with a properly installed conventional rooftop antenna system that can receive over-the-air a signal of Grade B intensity as currently defined will, in fact, receive a more than acceptable picture from its local affiliate and thus must be ineligible for delivery via satellite of distant network programming.

E. The Longley-Rice Model In Point-to-Point Mode, With Input Parameters Of 50%/50%, Is The Best Current Means Of Predicting Grade B Service At An Individual Household

In addition to attacking the Grade B signal intensity values themselves, the satellite industry has also launched a two-pronged assault on the Longley-Rice methodology.¹⁰³ The first prong attacks Longley-Rice itself; the second prong attacks the standard 50%/50% time and confidence factors utilized in the model. Both prongs of the assault are misguided, and the second, in particular, reflects a fundamental misunderstanding of the model's probabilistic variability factors.

1. It Is Inappropriate For Longley-Rice, Or Any Predictive Model, To Take Account Of Buildings, Vegetation, And Interference

The satellite industry complains that the Longley-Rice model cannot take account of vegetation, interference, and clutter, such as development.¹⁰⁴ This is simply false. The Longley-Rice model can take account of each of these factors, and already does take account of vegetation and

¹⁰³ In the *Notice*, the Commission itself “propose[d] that the Longley-Rice propagation model, as implemented for DTV, be used to refine the Grade B service prediction for the purpose of SHVA determinations.” *Notice* ¶ 34. In our Comments, the Affiliate Associations endorsed this proposal (subject to one particular) to the extent the Commission wishes to advise Congress. *See* Affiliate Associations Comments at 60-65. The Affiliate Associations reiterate that the Commission cannot substitute a predictive model—any predictive model—for the Act’s actual site measurement requirement.

¹⁰⁴ *See, e.g.*, SBCA Comments at 16-17; *id.*, Hatfield & Dawson Statement, at 6-7.

buildings as part of its empirical foundation, as explained above.¹⁰⁵ Any implementation of the model should not attempt to take *further* account of these factors, for the following reasons.

Buildings and Clutter. There is no complete and reliable database in existence for buildings on a national basis. Structures are built and demolished all the time. Land use and land clutter change constantly. It is not possible to newly implement *any* predictive model that could accurately and reliably utilize a buildings/clutter factor on a nationwide basis given the current lack of empirical data.

Much more important, however—and why the Commission need not even concern itself with this factor—is the basic fact that most buildings exist where most of the people are—in cities and towns. Fundamental to television broadcast service is the Commission’s requirement that a certain *minimum* field strength, known as city grade, be provided “over the entire principal community to be served.”¹⁰⁶ Thus the minimum ambient field strength over each broadcaster’s city of license is far in excess of the ambient field strength located at the perimeter of a station’s predicted Grade B contour.¹⁰⁷ Yet it is only this latter, significantly lesser, field strength that is relevant to determining the eligibility status of households located in “typically rural” America,¹⁰⁸ where Congress contemplated unserved households would exist for purposes of the compulsory license granted by

¹⁰⁵ See *supra* at text accompanying notes 76-77.

¹⁰⁶ 47 C.F.R. § 73.685(a).

¹⁰⁷ See *id.* (requiring a *minimum* field strength of 74 dBu for low VHF, 77 dBu for high VHF, and 80 dBu for UHF).

¹⁰⁸ H.R. Rep. No. 100-887, pt.2, at 19 (1988).

the Act.¹⁰⁹ Television towers, at heights up to 2000 feet, are the tallest structures in the world, far taller than the buildings concentrated in the cities and towns that might impede radio frequency propagation.

In short, buildings are simply not a factor that can, or should, be further considered in predicting Grade B signal strength pursuant to the Act, beyond the empirical bases for this factor already inherent in the Commission's propagation models and the Longley-Rice model.

Vegetation. There is no accepted industry practice for considering vegetation for purposes of predicting radio frequency propagation. As with buildings, there is no complete and detailed database containing vegetation data on a nationwide basis. The Affiliate Associations understand that the Department of Agriculture may possess a vegetation database but that the data contained in it is "rough," i.e., it is not in sufficient detail to be of use in predicting signal strength at individual households.

There are serious limitations to considering vegetation at all, which is why there is no accepted industry practice on this matter. Vegetation changes with the seasons and with development. Half the year deciduous trees contain foliage, the other half they do not. One month there is a forest, the next it is pastureland or a new subdivision. The SHVA did not contemplate, nor was it so designed, that one individual who receives a satellite dish as a Christmas present should be deemed a "served" household (due to lack of foliage) but that his neighbor, who receives her satellite dish as a birthday present in June, should be deemed "unserved" (due to foliage). The

¹⁰⁹ Cf. Comments of Pegasus Communications Corp. at 2 (recognizing, as a *satellite carrier*, that "rural America" is the "market that is the focal point of the Satellite Home Viewer Act of 1988, as amended in 1994"); *id.* at 4 (quoting legislative history confirming "that the SHVA was enacted to stimulate the delivery of network television to households in *rural areas* of the country that cannot receive adequate signals" (emphasis added)).

unserved household restriction must be applied uniformly. Attempting to take account of vegetation will simply increase compliance difficulties.

Notwithstanding these difficulties with accounting for buildings and vegetation as a general matter, empirical data demonstrate that the Longley-Rice model, without further considering buildings or vegetation beyond that built into its empirical foundations, does a remarkably accurate job of predicting Grade B field strength. In connection with the *CBS v. PrimeTime 24* lawsuit, Jules Cohen, an eminent broadcasting engineer with decades of experience, supervised signal intensity measurements at more than 500 households. In analyzing the data collected, he determined that Longley-Rice successfully predicted the presence or absence of a signal of Grade B intensity, as verified by actual measurement, at 100% of the locations in Miami, 99% of the locations in Charlotte, 94% of the locations in Baltimore, 73% of the locations in Pittsburgh, and 99% of the locations in Raleigh-Durham.¹¹⁰ This empirical confirmation of the predictive success of Longley-Rice proves that the Longley-Rice methodology should not be weakened by the inclusion of additional, untested factors that rely on potentially spurious data. These empirical, factual data cannot legally be ignored by the Commission in favor of the conclusory, factually-unsupported claims and arguments of the satellite industry.

Interference. Interference is not a matter of signal intensity.¹¹¹ The Act refers only to “an over-the-air *signal of grade B intensity*.”¹¹² The Commission plainly has no authority to ignore the

¹¹⁰ See Cohen Engineering Statement at 14-17.

¹¹¹ Nor, for that matter, is ghosting or multipath. See PrimeTime 24/Smith Paper at 10 (stating that “ghosting is independent of signal strength”).

¹¹² 17 U.S.C. § 119(d)(10) (emphasis added). In fact, as the Smith Paper recognizes, “once a particular level of signal is reached, picture quality is affected predominantly by other factors.”
(continued...)

language in, or to rewrite, any congressional act, let alone a copyright act.¹¹³

2. Longley-Rice, Or Any Imperfect Predictive Model, Must Err On The Side Of Protecting The Copyrights Of Networks And Their Affiliates

In addition to their misguided criticisms concerning extraneous factors, the satellite industry also complains that the Longley-Rice model will return error codes and thus predict service where none exists.¹¹⁴ This criticism is also misguided, especially in the context of the Act.

When a calculation is considered outside certain preset limits on reliability, the Longley-Rice model does not actually predict service but instead sets a flag that the prediction may not be reliable. In the DTV implementation of Longley-Rice, these flagged values were ignored and service was assumed at that point. That treatment of the flags was a policy decision, not something built into, or inherent in, the Longley-Rice model itself.¹¹⁵

Further analysis of those flagged Longley-Rice field strength values has shown that, in most instances, the flags were false alarms. In these cases, the flagged values have been found to be in reasonable agreement with other non-flagged, reliable predictions in the immediate area surrounding the point in question.¹¹⁶

The Affiliate Associations stress that a predictive model is not a substitute for an actual

¹¹²(...continued)
PrimeTime 24/Smith Paper at 10; *see also id.* at 14 (stating that “field intensity is vastly the most important factor in picture quality”). This is why the Act specifies an objective signal intensity standard, not a subjective picture quality standard.

¹¹³ *See, e.g., Southwestern Bell Corp. v. FCC*, 43 F.3d 1515, 1520 (D.C. Cir. 1995).

¹¹⁴ *See, e.g.,* SBCA Comments, Hatfield & Dawson Statement, at 7.

¹¹⁵ *See* Further Engineering Statement at 5-6.

¹¹⁶ *See id.* at 6.

measurement. Longley-Rice is but a *tool* that can be used within its recognized limitations. The bases of such limitations are critical in a complex area such as radio frequency propagation.

The satellite industry further criticizes the Longley-Rice model because it is not “conservative” like the satellite industry’s preferred model, the Terrain Integrated Rough Earth Model (“TIREM”).¹¹⁷ By “conservative,” the SBCA/Hatfield & Dawson Statement means nothing more than *underpredictive*, i.e., it is designed to err on the side of understating actual service. This criticism is nothing but yet another example of the satellite industry attempting to undermine the fundamental nature of local broadcast service and all of the principles of copyright protection and localism that Congress intended to protect.

As discussed above, Longley-Rice is neither over- nor under- predictive. Where outside its preset reliability limits, the model will flag the returned field strength values. Because most of these flags are false alarms, one possibility is to ignore the flags and use the returned field strength values.¹¹⁸ The better course of action for purposes of the Act, however, and the one the Affiliate Associations recommend, is to make a policy decision similar to the one the Commission made in the DTV implementation of Longley-Rice, which was to treat all flagged points as served. In the SHVA context, flagged values should be evaluated with respect to a threshold level *below* Grade B service. Where returned values are flagged that exceed the threshold, the location should be treated as served; flagged values below the threshold would be ignored, indicating the location is unserved. The reason for this policy, and for setting the threshold below current Grade B service levels, is

¹¹⁷ See, e.g., SBCA Comments, Hatfield & Dawson Statement, at 5, 8 (emphasizing the “conservative” aspects of TIREM).

¹¹⁸ This is the course of action recommended by Hammett & Edison, Inc. See Comments of Hammett & Edison, Inc. (“Hammett & Edison Comments”) at 7.

clear: To promote localism and preserve the network/affiliate relationship, a principal goal of the Act, the Commission must act to protect the copyrights and copyright licenses held by networks and their local affiliates. Compulsory licenses must be construed narrowly.¹¹⁹ If the Commission is to err, it must err on the side of predicting service. That, we submit, is what is “conservative” in the context of the Act.

Finally, the satellite industry devotes considerable effort to trashing the Longley-Rice model and promoting TIREM. The Commission went through this debate earlier this year in the DTV proceedings, and it expressly concluded that the Longley-Rice model should be preferred and utilized over TIREM. Longley-Rice bashers have merely returned to refight a technical battle they previously lost.¹²⁰ The Commission’s earlier conclusion should be applied in full force in this proceeding:

The methodology for calculating service and interference,¹²¹ including the use of the Longley-Rice propagation model and the presumption of service, was developed by our Advisory Committee. We note that this was a public process and that the development of this methodology underwent considerable debate. In their deliberations, the Advisory Committee considered and rejected a number of alternative propagation models, including the TIREM model. While we recognize that the Longley-Rice model may have certain limitations, as do all propagation models, we continue to believe that it provides a sufficiently accurate measure of service and interference. Furthermore, the Longley-Rice model is in the public domain and has been extensively documented, thereby ensuring that all parties using this model will be able to achieve the same results.

¹¹⁹ See, e.g., *Fame Publ’g Co. v. Alabama Custom Tape, Inc.*, 507 F.2d 667, 670 (5th Cir.), cert. denied, 423 U.S. 841 (1975).

¹²⁰ See, e.g., Hammett & Edison Comments at 4-7.

¹²¹ Although interference considerations were appropriate in the DTV context, the Affiliate Associations reiterate that in the SHVA context they are inappropriate because interference is unrelated to signal strength.

We further note that other models, such as TIREM, are proprietary and can yield very different results, depending upon their implementation. Accordingly, we are reaffirming our decision to use the Longley-Rice model.¹²²

Given (1) this reasoning from the Commission just ten months ago; (2) the empirical data discussed above that demonstrate the great accuracy of the Longley-Rice model, version 1.2.2; and (3) the recognition by independent engineers that the Longley-Rice “model is a clear *de facto* standard within the country,”¹²³ it is remarkable that the TIREM proponents have provided absolutely no data to support their speculations about the superiority of TIREM to Longley-Rice. But what is unremarkable is how tiring TIREM has become.

The satellite industry has provided no factual basis upon which the Commission could rationally recommend TIREM in this expedited proceeding. To the extent the Commission wishes to recommend any predictive model to Congress, then it should recommend the Longley-Rice model, version 1.2.2, in point-to-point mode with time and confidence inputs of 50%/50%.

3. The Longley-Rice Model Must Be Used With 50%/50% Input Parameters For Time Variability And Confidence

The satellite industry is confused and conflicted about the proper inputs that should be utilized in Longley-Rice, or any predictive model. On the one hand, PrimeTime 24 advocates a 95%

¹²² Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, *Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order*, FCC 98-24, 11 Comm. Reg. (P & F) 634 (1998), ¶ 181 (emphasis added).

¹²³ Comments of Biby Engineering Services, PC at 3. *See also id.* (“While the merits of any propagation model are subject to dispute, the Longley-Rice model has clear precedent within the FCC. The Longley-Rice model is currently used for the allocation of digital television stations and for some land-mobile applications. The model is a clear *de facto* standard within the country. This engineering firm has used this model for some time and *is very satisfied with the model’s performance in the UHF and VHF frequencies, especially in comparison with other models in use.* (emphasis added)).

location probability factor,¹²⁴ whereas, on the other hand, the SBCA/Hatfield & Dawson Statement finally recognizes that “location variability is eliminated . . . when a well-engineered path is being treated in the point-to-point mode.”¹²⁵ On the one hand, the SBCA/Hatfield & Dawson Statement repeatedly seeks a 90% time variability input,¹²⁶ whereas, on the other hand, PrimeTime 24 finally understands that the use of any input but 50% results in “double counting.”¹²⁷ And, finally, on the one hand, PrimeTime 24 and SBCA want a 90% to 95% confidence factor,¹²⁸ whereas, on the other hand, EchoStar finally acknowledged that the only proper confidence factor is 50%.¹²⁹ Despite satellite industry confusion, the fact of the matter is clear: In each case, the “other hand” is correct.

The Affiliate Associations and other commenters have already explained why the probabilistic variables in Longley-Rice need to be set at 50% for time and 50% for confidence.¹³⁰

¹²⁴ See PrimeTime 24 Comments at 21.

¹²⁵ SBCA Comments, Hatfield & Dawson Statement, at 10 (internal quotation marks and citation omitted).

¹²⁶ See *id.* at 10, 13, Appendix 4.

¹²⁷ PrimeTime 24 Comments at 21. See also *id.* (stating that PrimeTime 24 “accepts the use of a 50% parameter [for time probability]. The reason is that there already is built into the planning factors in the definition of Grade B a factor to ensure that an acceptable picture will be present 90% of the time, if the Grade B signal intensity is present 50% of the time. Bearing in mind that the underlying purpose of defining a signal of Grade B intensity for SHVA purposes is to ensure the receipt of an acceptable quality picture, it would be ‘double counting’ to require that the signal be present 95% of the time; PrimeTime 24 therefore accepts the use of a 50% parameter for the temporal probability.”).

¹²⁸ See *id.* at 20 (seeking a 95% confidence factor); SBCA Comments, Hatfield & Dawson Statement, at 10 (seeking a 90% to 95% confidence factor).

¹²⁹ See *EchoStar Communications Corp. v. CBS Broadcasting, Inc.*, Plaintiff’s Original Complaint and Request for Declaratory Judgment, Civ. Action No. 98-B-2285 (D. Colo. filed Oct. 19, 1998), ¶ 57.

¹³⁰ See, e.g., Affiliate Association Comments at 60-65; Hearst-Argyle Comments at 13-14.

For 50 years, the Commission has always been concerned with the *median* field strength. As the SBCA/Hatfield & Dawson Statement concedes: “The Commission prefers to use calculations that are ‘median’ (50% values) for *all* of its prediction techniques, probably *because determination of median values of any random data is the most reliable statistical parameter.*”¹³¹

Location. In point-to-point mode, location variability is not a factor. As Hearst-Argyle explains: “Although in point-to-point mode it is *possible* to vary the location variability factor, there is absolutely no reason to do so since the field strength is being plotted to a specified, known location.”¹³²

Time. The current Grade B field strength values already incorporate a time fading factor to achieve the desired level of statistical reliability, viz. that the best 50% of locations at the contour receive an acceptable picture at least 90% of the time, as the Commission is well aware.¹³³ The Longley-Rice time variability input should only be changed to 90% if the time fading factor is subtracted from the median field strength values, i.e., if Longley-Rice were set to predict a field strength of 41 dBu for low VHF, 51 dBu for high VHF, and 60 dBu for UHF.

Confidence. A 50% confidence factor is essential to ensure that what Longley-Rice predicts is the true Grade B field strength at an individual receive location. Any different value would not result in the prediction of Grade B service at an individual location but the prediction of some different level of service.¹³⁴ The satellite industry has presented no mathematical or empirical

¹³¹ SBCA Comments, Hatfield & Dawson Statement, at 3 (emphases added).

¹³² Hearst-Argyle Comments at 13 n.28 (emphasis in original).

¹³³ See Notice ¶ 32; *id.* ¶ 4 n.16.

¹³⁴ See Further Engineering Statement at 7.

evidence that would warrant an increased confidence factor. The fact of the matter is that it cannot, as the following (necessarily) technical—but (mercifully) brief—discussion demonstrates.

As the SBCA/Hatfield & Dawson Statement correctly observes, “[f]or the individual path, specific location, ‘unserved household’ case,” the variability mode for Longley-Rice should be the individual mode.¹³⁵ In that mode, reliability is given by time availability, and *confidence* is a combination of location and situation variability.¹³⁶ In the typical case in which location variability and situation variability are *not* combined, the statistical description, referred to as quantiles of quantiles, produces a phrase such as “In z % of like situations there will be at least y % of the locations where the field strength will exceed 47 dBu for at least x % of the time.”¹³⁷ This is why in broadcast area mode the Commission’s standard Grade B service requirement for low VHF, for example, must be modeled with input factors of 50%/50%/50% so that “In 50% of like situations there will be at least 50% of the locations where the field strength will equal or exceed 47 dBu for at least 50% of the time.”¹³⁸ However, as the Longley-Rice Manual explains:

[F]rom the point of view of an individual receiver [of broadcast service,] [t]hat individual will want to know *only* the probability at that one location of receiving adequate service—that is, of receiving an adequate signal level for an adequate fraction of the time. The

¹³⁵ SBCA Comments, Hatfield & Dawson Statement, at 10.

¹³⁶ See G.A. Hufford *et al.*, *A Guide to the Use of the ITS Irregular Terrain Model in the Area Prediction Mode*, NTIA Report 82-100 (U.S. Dep’t of Commerce Apr. 1982) [hereinafter “Longley-Rice Manual”], at 71.

¹³⁷ See *id.* at 31. Situation variability normally accounts for observed changes in location variability if like-appearing situations are used, i.e., if operations are changed from one area to another very similar area. See *id.* at 30.

¹³⁸ As noted above, time variability could be set at 90%, but only if the field strength were lowered to 41 dBu to reflect the elimination of the time fading factor, which already boosts time availability to 90%.

distinction between location variability and situation variability will be of no concern and should not enter into our considerations.¹³⁹

Because, in individual mode, confidence is expressed as a merged or combined location/situation variability for which there is no distinction between the two, it is thus plain to see that the confidence factor must be set at 50% if Longley-Rice is to predict Grade B service. This is the only way Longley-Rice can produce a prediction that duplicates the Commission's standard formulation of Grade B service.¹⁴⁰

As the Affiliate Associations and other commenters, such as Hearst-Argyle, graphically and empirically demonstrated with signal area maps and data in their Comments, any change from input factors of 50%/50%/50% is nothing but a backdoor way to alter the definition of Grade B service.¹⁴¹ The satellite industry is now attempting to add insult to injury by proposing—without legal, engineering, or empirical support—that both the Grade B intensity values themselves and the Longley-Rice variability inputs be raised to ridiculous levels. Consequently, the Affiliate Associations have had a calculation performed utilizing the satellite industry's newest absurd proposals. This calculation shows that, running Longley-Rice in point-to-point mode to predict

¹³⁹ Longley-Rice Manual at 36 (emphasis added).

¹⁴⁰ Again, that standard formulation seeks to provide, at the best 50% of locations along the Grade B contour, that the median observer will receive an acceptable picture at least 90% of the time. *See, e.g., Notice* ¶ 32, ¶ 4 n.16. In Longley-Rice terms, that formulation, for the low VHF band, can be statistically stated—in quantiles of quantiles—in one of two ways: (1) in this situation there will be 50% of the path locations along the Grade B contour where the field strength equals or exceeds 41 dBu for at least 90% of the time; or (2) in this situation there will be 50% of the path locations along the Grade B contour where the field strength equals or exceeds 47 dBu for at least 50% of the time. *Cf. Longley-Rice Manual* at 30.

¹⁴¹ *See, e.g., Affiliate Associations Comments* at 47-57; *Hearst-Argyle Comments* at 14-23. *See also Signal Area Maps of Representative Network Affiliate Stations* <<http://www.shva.com/jointaffiliates>>.

grossly exaggerated “Grade B” field strength values of 70.75 dBu for low VHF, 76.5 dBu for high VHF, and 92.75 dBu for UHF, with a 90% time variability factor and a 95% confidence factor, *on a nationwide basis*, the predicted Grade B service areas of all of the country’s local broadcasters would, in the aggregate, be shrunk by more than 80% and the size of the predicted served populations would be reduced by nearly 60%!¹⁴² Under this charade, nearly 60 million television households would be deemed unserved by local broadcasters.

Is this what Congress intended when it granted satellite carriers the special privilege of a narrow compulsory license to serve *rural* Americans who live in network “white areas” with distant network service? No rational, disinterested person could countenance the thought. Accordingly, only two explanations present themselves: Either satellite carriers haven’t the faintest clue about what their proposals really mean for the future of *free*, over-the-air local broadcast service, or, less charitably, the satellite carriers are blinded by corporate greed and possess an arrogant indifference to the law and the unmistakable will of Congress. Either way, the Commission must reject the satellite industry’s extreme, preposterous proposals in order to protect the principles of localism upon which the nation’s *free*, over-the-air local broadcast service is based.

¹⁴² See Further Engineering Statement at 4. This calculation included all full-service television stations in the country, but it did not take account of translators. In its Reply Comments, the National Association of Broadcasters reports that a similar calculation for all stations affiliated with the CBS television network, but including translators and utilizing a 90% confidence factor, shows a loss in served households of 33%. These two calculations therefore show that the satellite industry’s newest, factually-unsupported proposals would result in a phantom decrease in served households on the order of one-third to more than one-half of those currently predicted to be served. This range serves as a *minimum* decrease because these calculations do not take account of the satellite industry’s further spurious proposals to double-count buildings and vegetation and to further underpredict service with a model such as TIREM.

III.
The Satellite Industry’s Legal Arguments Are
Misleading,
Unsupported,
And Erroneous As A Matter Of Law

A. The Commission Is Without Authority To Redefine The Meaning Of The Term “Unserved Household” For Purposes Of The Act

As discussed in detail in the Affiliate Associations’ Comments, the Satellite Home Viewer Act is a copyright statute—not a telecommunications statute. Congress has entrusted the interpretation and enforcement of the nation’s copyright laws, not to this Commission, but rather to the federal courts.¹⁴³ Notwithstanding the Commission’s lack of authority to interpret or enforce the Act, the satellite industry persists in the argument that the Commission has the authority to revise its definition of Grade B intensity for purposes of the Act.¹⁴⁴ The carriers have advanced little in the way of new legal argument in support of that notion. Accordingly, in large part, we rely on the argument made in our Comments, as well as argument made in the Comments filed by the National Association of Broadcasters (“NAB”).¹⁴⁵ However, to the extent that new arguments have been raised by the satellite carriers, we address them below.

1. The Commission Has Been Given No Authority By Congress To Interpret Or Enforce The Act

With all due respect to the telecommunications expertise of the Commission, it has no expertise in matters of copyright, and the Commission, accordingly, has not been delegated any

¹⁴³ See Affiliate Associations Comments at 2-7. See also NAB Comments at 10-12.

¹⁴⁴ See, e.g., DirecTV Comments at 1-17; EchoStar Comments at 3-5; PrimeTime 24 Comments at 6-8; SBCA Comments at 5-9.

¹⁴⁵ See Affiliate Associations Comments at 26-104; NAB Comments at 10-19, 26-52, 63-68. See also Comments of the Walt Disney Company at 7-18.

authority by Congress to interpret or enforce the copyright laws.¹⁴⁶ For the most part, the satellite industry ignores and glosses over the undisputed fact that the Act is a copyright statute. Not once in the Comments of EchoStar, DirecTV, or PrimeTime 24 is it even mentioned that the Act was enacted as an amendment to the Copyright Act.¹⁴⁷ The SBCA recognizes this obvious fact but simply asserts that it is irrelevant.¹⁴⁸ In support of this assertion, the SBCA claims that “[t]he Copyright Office itself has recognized, and deferred to, the Commission’s expertise regarding the unserved household restriction.” That is simply not true. The Copyright Office has tacitly acknowledged that the Commission has no existing authority to interpret the Act and has recommended to Congress that “the unserved household restriction be *removed from the copyright law and placed in the communications law.*”¹⁴⁹

The satellite industry asserts that, with use of the phrase “signal of grade B intensity (as defined by the Federal Communications Commission),” Congress intended to delegate authority to the Commission to interpret the Act’s “unserved household” provision. For example, DirecTV states that “Congress’s direct deference to the FCC can fairly be characterized as an explicit delegation of authority to the Commission with respect to the term ‘signal of Grade B intensity.’ At a minimum

¹⁴⁶ For a more detailed discussion of this point, see Affiliate Associations Comments at 2-7; NAB Comments at 10-12.

¹⁴⁷ See generally EchoStar Comments; DirecTV Comments; PrimeTime 24 Comments.

¹⁴⁸ See SBCA Comments at 8 (stating that “[t]he fact that the SHVA is a copyright statute does not mean that the Commission lacks jurisdiction to adopt a Grade B standard for purposes of that statute”).

¹⁴⁹ See U.S. Copyright Office, *A Review of the Copyright Licensing Regimes Covering Retransmissions of Broadcast Signals* (Aug. 1, 1997), at 138 (emphasis added).

it qualifies as an implicit delegation of authority to the Commission to define that term.”¹⁵⁰ As explained in our Comments, and for the additional reasons set forth below, it is evident that the Commission *has not* been delegated that authority.

A careful reading of the Act confirms that Congress did not intend to delegate authority to the Commission to redefine and rewrite the Act’s “unserved household” provision. When Congress did intend to defer to the Commission’s expertise, it did so explicitly. As the NAB notes in its Comments,¹⁵¹ the Commerce Committee’s Report accompanying the Act contains the following express directives to the Commission delineating the specific actions Congress intended for the Commission to take in connection with the Act:

Section 712(1) Syndicated Exclusivity

*The bill directs the Federal Communications Commission (FCC), within 120 days after the date of enactment, to undertake a combined inquiry and rulemaking proceeding regarding the feasibility of imposing syndicated exclusivity rules for private home viewing. . . .*¹⁵²

Section 713 Discrimination

*The bill directs the FCC within a year of the enactment of this Act, to prepare and submit a report to the Senate Committee on Commerce, Science and Transportation and the House Committee on Energy and Commerce on whether, and the extent to which, there exists unlawful discrimination against distributors of secondary transmissions from satellite carriers. . . .*¹⁵³

¹⁵⁰ DirecTV Comments at 8.

¹⁵¹ See NAB Comments at 31.

¹⁵² H.R. Rep. No. 100-887, pt. 2, at 26 (1988) (emphases added).

¹⁵³ *Id.* at 27 (emphases added).

Section 4. Inquiry on Encryption Standard

*This section amends section 705 of the Communications Act to require the FCC, within six months after the date of enactment of this legislation, to initiate an inquiry concerning the need for a universal encryption standard. . . .*¹⁵⁴

* * *

*If the Commission finds, as a result of the information gathered from the Inquiry and from other information before the Commission, that a universal encryption standard is in the public interest, the Committee intends for the Commission to move immediately to initiate a rulemaking to establish such a standard.*¹⁵⁵

It is evident from these examples that when Congress intended to delegate authority to the Commission to take any action pursuant to the Act, it did so explicitly by directing the Commission to prepare a report, to undertake a specific inquiry, or to initiate a rulemaking proceeding.¹⁵⁶

Nor is it plausible to assert that Congress intended to delegate authority *implicitly* to the Commission to rewrite the Act. Congress does not delegate authority by mere *implication* to a regulatory agency to interpret a statute not entrusted to that agency's administration.¹⁵⁷ As shown by the above examples, when Congress intends to authorize a non-administering regulatory agency to act, it says so explicitly and with specificity.

2. The Chevron Doctrine Is Inapplicable

DirecTV and others suggest that the Commission has authority to redefine the term "signal

¹⁵⁴ *Id.* (emphases added).

¹⁵⁵ *Id.* at 28 (emphasis added).

¹⁵⁶ *See id.*

¹⁵⁷ *See* Affiliate Associations Comments at 2-7, 27-29.

of Grade B intensity” pursuant to the *Chevron* doctrine.¹⁵⁸ DirecTV cites *Chevron* in support of its assertion that the Commission is authorized to fill in gaps or ambiguities in the Act.¹⁵⁹ In *Chevron*, the Supreme Court noted that agencies have a unique understanding of the policies underlying statutes that have been *entrusted to their administration*.¹⁶⁰ Accordingly, *Chevron* and its progeny stand for the proposition that courts should defer to an agency’s interpretation of ambiguous provisions in a statute where—and only where—Congress has expressly authorized that agency to administer or enforce the statute.¹⁶¹

The *Chevron* doctrine is facially inapplicable here. *Chevron* applies only to “an agency’s construction of a statute which it administers. . . .”¹⁶² The Supreme Court has expressly held—a point ignored and brushed aside by all the commenting satellite carriers—that “a *precondition to deference under Chevron is a congressional delegation of administrative authority*,”¹⁶³ and courts have repeatedly held that when an agency interprets a statute not entrusted to its administration, that interpretation is not entitled to any judicial deference.¹⁶⁴ Thus, because the Commission does not

¹⁵⁸ This doctrine is set forth in *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984).

¹⁵⁹ See DirecTV Comments at 8. DirecTV also cites *National Fuel Gas Supply Corp. v. FERC*, 811 F.2d 1563 (D.C. Cir.), *cert. denied*, 484 U.S. 869 (1987), as support for the same position. As *National Fuel* follows *Chevron*, the same analysis applies.

¹⁶⁰ See *Chevron*, 494 U.S. at 844.

¹⁶¹ See *id.*

¹⁶² *Id.* at 842.

¹⁶³ *Adams Fruit Co., Inc. v. Barrett*, 494 U.S. 638, 649 (1990) (emphasis added).

¹⁶⁴ See, e.g., *id.*; *Crandon v. United States*, 494 U.S. 152, 177 (1990); *NLRB v. Food and Commercial Workers*, 484 U.S. 112, 123 (1987) (holding that *Chevron* review of agency interpretation of statutes applies only to regulations “promulgated pursuant to Congressional (continued...)”).

administer the Act, *Chevron*, obviously, is inapposite.

Moreover, the Supreme Court has expressly held that when an agency interprets a statute whose enforcement Congress entrusted to the courts—and not the agency—courts *should not* defer to the agency’s interpretation. In *Adams Fruit*, the Supreme Court declined to defer to the Secretary of Labor’s interpretation of the Agricultural Worker Protection Act because the federal courts, and not the Department of Labor, were charged with the Act’s enforcement.¹⁶⁵ As the Court held, “[W]e need not defer to the Secretary of Labor’s view of the scope of [the statute] because Congress has expressly established the Judiciary and not the Department of Labor as the adjudicator of private rights of action arising under the statute.”¹⁶⁶ Similarly, in *Crandon v. United States*, the Court declined to defer to any agency’s interpretation of a criminal statute because “the law in question . . . is not administered by any agency but by the courts.”¹⁶⁷ Thus, DirecTV is flatly wrong, as a matter of law, in its assertion that the Commission has the authority to “fill any gap” left by Congress in the Act. It is patently clear under *Adams Fruit* and *Crandon* that the Commission is without authority to interpret or redefine the Act’s “unserved household” provision.

¹⁶⁴(...continued)

authority”); *Department of the Navy, Military Sealift Command v. FLRA*, 836 F.2d 1409, 1410 (3d Cir. 1988) (holding that “an agency decision is not entitled to . . . deference when it interprets another agency’s statute”); *Cheney R.R. Co. v. Railroad Retirement Bd.*, 50 F.3d 1071, 1073 (D.C. Cir. 1995) (same); *Jones v. Department of Labor*, 977 F.2d 1106, 1110 (7th Cir. 1992) (same); *Johnson v. Railroad Retirement Bd.*, 969 F.2d 1082, 1088-89 (D.C. Cir. 1992) (same), *cert. denied*, 507 U.S. 1029 (1993); *Department of Energy v. FLRA*, 880 F.2d 1163, 1166 (10th Cir. 1989) (same); *West Point Elementary School Teachers Ass’n v. FLRA*, 855 F.2d 936, 940 (2d Cir. 1988) (same); *Shanty Town Assocs. v. EPA*, 843 F.2d 782, 790 n.12 (4th Cir. 1988) (same).

¹⁶⁵ See *Adams Fruit*, 494 U.S. at 649.

¹⁶⁶ *Id.*

¹⁶⁷ *Crandon*, 494 U.S. at 177.

Even if the Commission were authorized to interpret the Act, the satellite industry's reliance on *Chevron* would still be misplaced. *Chevron* is applicable only where there is an "ambiguity" or "gap" deliberately left in the statute by Congress which, in turn, requires interpretation or completion by the agency that is authorized to administer or enforce the statute.¹⁶⁸ If there is no "gap," an interpretation by the expert agency is not permitted—and certainly not an interpretation that is contrary to the legislative goals and intent of the statute. As the Supreme Court has stated, "If the intent of Congress is clear, that is the end of the matter, for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress."¹⁶⁹

The phrase "signal of Grade B intensity (as defined by the Federal Communications Commission)" is not in any way ambiguous. Two federal courts have understood it and applied it with *no* difficulty.¹⁷⁰ The Commission has defined Grade B intensity with mathematical precision in Section 73.683 of its Rules.¹⁷¹ This definition has remained constant for more than forty years, and the Commission recently ratified this definition by using its existing field strength values to establish nationwide digital television service for the 21st century. The Act's legislative history demonstrates that Congress plainly had the Commission's existing Grade B signal intensity levels in mind when it wrote the Act.¹⁷² And as we noted in our Comments, although it could have,

¹⁶⁸ See *Chevron*, 467 U.S. at 842.

¹⁶⁹ *Id.*

¹⁷⁰ See *ABC First Order* at 472; *CBS, Inc. v. PrimeTime 24 Joint Venture*, 9 F. Supp. 2d 1333, 1339 (S.D. Fla. 1998).

¹⁷¹ See 47 C.F.R. § 73.683.

¹⁷² See H.R. Rep. No. 100-887, pt. 2, at 26 (1988) (defining "unserved household" as "a household that receives, with a conventional outdoor antenna, a signal of Grade B intensity as (continued...)

Congress chose not to authorize the Commission to amend the definition of a Grade B signal when it incorporated the Act into the Cable Act in 1992, or when it amended the Act in 1994, or when it held extensive hearings earlier this year and declined to amend the Act or authorize the Commission to take any action under the Act.¹⁷³ Thus, there is no “gap” or “ambiguity” in the statute with respect to the definition of an “unserved household” for the Commission to fill or interpret.

PrimeTime 24 fallaciously asserts that the Commission must revise its definition of Grade B intensity because “the Commission has never defined an ‘over-the-air signal of grade B intensity’ as received ‘through the use of a conventional outdoor rooftop receiving antenna.’”¹⁷⁴ Accordingly, PrimeTime 24 claims that “harmonizing the concepts of grade B intensity signal and reception of such a signal through the use of an over-the-air conventional outdoor rooftop antenna requires the Commission to adopt a definition for SHVA purposes.”¹⁷⁵ We disagree. Two federal courts, the *only* authorities authorized by Congress to interpret the Act, have examined the Act, and both have held that the term “grade B intensity” refers to the Commission’s existing Grade B signal strength levels set forth in 47 C.F.R. § 73.683.¹⁷⁶ Even if the Commission should disagree with those courts—and we believe it does not—the Commission has no authority to overturn or overrule their decisions.

¹⁷²(...continued)
defined by the Commission currently in Section 73.683(a)”).

¹⁷³ See *Affiliate Associations Comments* at v.

¹⁷⁴ *PrimeTime 24 Comments* at 6.

¹⁷⁵ *Id.*

¹⁷⁶ See *ABC v. PrimeTime 24 Joint Venture*, 17 F. Supp.2d 467, 472 (M.D.N.C. 1998); *CBS, Inc. v. PrimeTime 24 Joint Venture*, 9 F. Supp.2d 1333, 1339 (S.D. Fla. 1998).

3. The Cases Cited By The Satellite Carriers Are Inapposite

The satellite industry relies on two cases, *Lukhard v. Reed*, 481 U.S. 368 (1987), and *Helvering v. Wilshire Oil*, 308 U.S. 90 (1939), to support its assertion that Congress did not intend to incorporate into the Act the Commission's current Grade B intensity values. We distinguished those cases in our Comments and, therefore, do not do so here.¹⁷⁷ DirecTV, however, relies on two new cases, *AFL/CIO v. Brock*, 835 F. 2d 912 (D.C. Cir. 1987), and *Society of Plastics Industry, Inc. v. FCC*, 955 F. 2d 722 (D.C. Cir. 1992).¹⁷⁸ These cases follow the same reasoning as *Helvering* and *Lukhard*, and, thus, are similarly distinguishable, and, accordingly, inapposite.

In *AFL/CIO v. Brock*, Congress amended the Immigration Reform and Control Act ("IRCA"), to prohibit the Department of Labor from approving the importation of foreign workers, unless such employment "will not adversely affect the wages and working conditions of workers in the United States similarly employed."¹⁷⁹ Contemporaneous with passage of the IRCA, the Department of Labor issued new rules for measuring "adverse effect wage rates" ("AEWRs"). Parties challenged the change in the Department of Labor's regulations arguing that, although "the IRCA does not define 'adverse effect,'" the Act, by implication, incorporated those regulations, and, therefore, the regulations were not subject to change.¹⁸⁰ The court found that the Department of Labor was entitled to reinterpret the statute, but it remanded the case to the agency so that it could

¹⁷⁷ See Affiliate Associations Comments at 32-37.

¹⁷⁸ DirecTV Comments at 10-11 & 11 n.27.

¹⁷⁹ *AFL/CIO v. Brock*, 835 F.2d at 914.

¹⁸⁰ *Id.* at 915-16.

support its decision to alter its rules through reasoned explanation.¹⁸¹ Similarly, in *Society of Plastics*, the Interstate Commerce Commission (“ICC”) redefined the term “joint rate” used in the Interstate Commerce Act, and parties challenged its authority to do so. The court upheld the ICC’s new interpretation, finding it to be consistent with the purpose of the Act.¹⁸²

As with *Helvering* and *Lukhard*, both of these cases are inapposite. First, and most importantly, in both of these cases the courts only faced the issue of whether an agency could interpret the terms of a statute that Congress authorized the agency to administer. The appellate courts allowed the agencies’ interpretations in those cases because, in each case, the agency was charged with *administering* the statute and, therefore, had the requisite expertise to clarify its terms. For example, in *Society of Plastics*, the court stated that “[o]ur review of the Commission’s interpretation of the Act is governed by *Chevron*.”¹⁸³ Similarly, in *AFL/CIO v. Brock*, the court noted that “[i]n determining whether the Department’s new AEW regulations are consistent with the statutory mandate, we look to the principles announced by the Supreme Court in *Chevron*.”¹⁸⁴ However, when an agency is interpreting a statute it is not entrusted to administer, courts have uniformly held, as noted above, that *Chevron* is inapplicable and the agency’s interpretation is not entitled to *any* judicial deference.¹⁸⁵

Second, the terms in issue both in *Society v. Plastics* and in *AFL/CIO v. Brock* were

¹⁸¹ *See id.* at 919.

¹⁸² *Society of Plastics*, 955 F.2d at 730.

¹⁸³ *Id.* at 727.

¹⁸⁴ *AFL/CIO v. Brock*, 835 F. 2d at 914-15.

¹⁸⁵ *See supra* at note 164.

ambiguous and were purposely left *undefined* by Congress. In those cases, Congress did not refer to any specific administrative interpretation of the terms “joint rate” or “adverse effect” when it used those terms in the statute. By contrast, Congress specifically defined the term Grade B intensity in the Act by making specific reference to the Commission’s rules. As the federal court in *ABC v. PrimeTime 24* has held, “Congress can clearly adopt by reference, in whole or in part, any portion of the Code of Federal Regulations which it considers relevant to defining a new statutory term. . . . It is apparent that Congress has done so here.”¹⁸⁶

Finally, in both *Society of Plastics* and *AFL/CIO v. Brock*, the courts only allowed the agency’s interpretations because those interpretations were consistent with the intent of Congress when it enacted the statutes. In *Society of Plastics*, the court stated that “[w]e find the Commission’s conclusion clearly reasonable in light of Congress’s expressed intent in [the statute].”¹⁸⁷ In *AFL/CIO v. Brock*, the court remanded the case back to the agency for an explanation of how the new interpretation was *consistent with the purposes of the Act*.¹⁸⁸ The purpose, goals, and legislative history of the SHVA are discussed at length in our Comments.¹⁸⁹ Suffice it to say, Congress clearly—as the Commission recognized in its *Notice*—intended by adopting the Act to respect and preserve the integrity of the non-statutory copyright that local network affiliates had acquired in a free, competitive market for broadcast of their programs. It was *not* the intent of Congress to allow the Commission to shrink, diminish, or weaken those copyrights in order to enlarge the limited

¹⁸⁶ *ABC First Order*, 17 F. Supp. 2d at 472.

¹⁸⁷ *Society of Plastics*, 955 F. 2d at 729.

¹⁸⁸ *See AFL/CIO v. Brock*, 835 F. 2d at 918-19.

¹⁸⁹ *See Affiliate Associations Comments* at 7-12.

corporate copyright subsidy afforded to the satellite industry. The increase in the Grade B signal intensity values proposed by the satellite industry would be inconsistent both with the goals and copyright objectives of the Act and with the principles of localism.

4. The “Interpretation” Of “Grade B Intensity” Proposed By The Satellite Industry Is Contrary To The Plain Meaning Of The Act

The satellite industry argues the Commission is authorized to spike the signal intensity values to create an entirely new definition of Grade B solely for purposes of interpreting the Act.¹⁹⁰ Most of the comments filed by satellite carriers support the signal strength levels proposed by the SBCA.¹⁹¹ The SBCA argues that the Commission should redefine the term “signal of Grade B intensity” for purposes of the Act as 70.75 dBu for low-band VHF stations, 76.5 dBu for high-band VHF stations, and 92.75 dBu for UHF stations—levels *well in excess of the Grade A signal values* set forth in the Commission’s Rules.¹⁹² The suggestion by the satellite industry that the Commission can manipulate its definition of Grade B solely for purposes of the Act is contrary to fundamental principles of statutory interpretation and is unsupported by existing case law.

Even if the Commission had the authority—which it does not—to interpret the term “signal of Grade B intensity” as it appears in the Act, it cannot interpret the term in a manner that is contrary to the statute’s plain and obvious meaning as well as the clearly-stated legislative purpose and goals

¹⁹⁰ See, e.g., DirecTV Comments at 12-15; SBCA Comments at 7-9; PrimeTime 24 Comments at 6-8.

¹⁹¹ See, e.g., EchoStar Comments at ii; DirecTV Comments at 5.

¹⁹² See SBCA Comments at 13.

of the Act.¹⁹³ When Congress drafted the Act, it deliberately chose the term “a signal of Grade B intensity” to protect the *existing* copyrights local stations had in their network programming. Those copyrights—acquired in a competitive marketplace—give local stations the right to televise network programs within a station’s local service area—not a subset of the station’s service area. The geographical area contained within a station’s existing “Grade B” service area is, and has always been, conceived by the Commission as the station’s local or “primary” service area. There is absolutely nothing in the Act to suggest that Congress intended for the Commission to shrink each local station’s “primary service area” to hand over to the satellite industry a bigger copyright subsidy. In fact, if Congress had intended to give an expansive scope to the copyright subsidy granted to satellite carriers in the Act, then it would have defined the “unserved household” provision with reference to the Commission’s Grade A signal intensity levels. Congress deliberately did not choose a Grade A standard, and the Commission has no authority to override this policy decision.

Moreover, as two federal courts have held, the term “signal of grade B intensity” is already defined in the Commission’s rules at 47 C.F.R. § 73.683. Therefore, if the Commission were to create any new or different signal intensity level solely for purposes of interpreting the Act, then that new signal intensity would, by definition, not be “Grade B.” As Congress expressly tied the “unserved household” provision to the Commission’s existing Grade B standards, the Commission cannot develop new standards for purposes of the Act. As we have pointed out repeatedly, “Administrative constructions of a statute . . . that are inconsistent with the statutory mandate” must

¹⁹³ See, e.g., *Caminetti v. United States*, 242 U.S. 470 (1917).

be “reject[ed].”¹⁹⁴

The satellite carriers claim that the Commission is authorized to create a new definition of Grade B solely for purposes of the Act because the Commission has tailored its various rules for specific purposes in the past.¹⁹⁵ The Commission, indeed, has tailored different rules for different *communications related* purposes. However, the Commission has never created a new rule for purposes of interpreting a statute that it does not administer. In fact, we are unaware of any instance, and the satellite carriers have offered no examples, where an agency modified its rules solely for purposes of interpreting a statute *it is not entrusted to administer*.

EchoStar fallaciously asserts that “[n]owhere in the [Act] is the Commission instructed that it must adopt new definitions of ‘Grade B intensity’ throughout its rules . . . [n]or can such a far-reaching instruction be found in any of SHVA’s legislative history.”¹⁹⁶ Once again, EchoStar’s assertions miss the point. Congress correctly assumes that the Commission cannot exceed its delegated authority. Therefore, there was no need for Congress expressly to prohibit the Commission from enacting rules in order to administer the Act because the Commission never had the authority to do so in the first place.

B. The Commission Has No Authority To Engraft A Predictive Standard Onto The Act

Without citation to any authority, the satellite carriers cavalierly assert that the Commission has the authority to create a new predictive Grade B signal standard and engraft it onto the Act. As

¹⁹⁴ *FEC v. Democratic Senatorial Campaign Comm.*, 454 U.S. 27, 32 (1981).

¹⁹⁵ *See, e.g.*, EchoStar Comments at 3. *See also Notice* ¶ 22.

¹⁹⁶ EchoStar Comments at 4.

explained in our Comments, because the federal courts—not the Commission—are charged with enforcing the Act, the Commission has no authority to create a predictive standard to facilitate compliance with the Act.¹⁹⁷ In fact, any presumption the Commission may create to enforce the Act may be ignored and would be entitled to no deference by any federal court called upon to enforce it.¹⁹⁸

Moreover, the predictive methodology proposed by the satellite carriers is at odds with the Act and, for that additional reason, it would not withstand judicial scrutiny. The satellite industry has proposed that the Commission create a new predictive methodology that dramatically under-predicts actual service and thereby over-predicts the number of “unserved households.”¹⁹⁹ This predictive methodology is to be used as a “presumption” of compliance. Thus, as long as a satellite carrier serves only those households that are predicted to be “unserved,” the carrier would be presumed to be in compliance with the Act. To overcome the “presumption,” local stations would be forced to conduct signal strength tests at millions of households that are, in fact, “served,” but which would be “presumed” to be unserved. Accordingly, the “presumption” crafted by the satellite industry would effectively shift the burden of proving household eligibility onto local stations and away from satellite carriers. Such a shift is directly contrary to Congress’s 1994 amendment to the Act.

Congress amended the Act in 1994 for the purpose of clarifying and reinforcing its intent that

¹⁹⁷ See Affiliate Associations Comments at 57-60; NAB Comments at 38-43.

¹⁹⁸ See 17 U.S.C. § 119(a)(5)(A) (incorporating the general enforcement mechanisms of 17 U.S.C. §§ 501, 502-06, 509).

¹⁹⁹ The shortcoming of the satellite carriers’ originally-proposed methodologies are discussed at length in the Affiliate Associations Comments at 57-75, and their new, equally absurd, proposals are discussed *supra* at part II.

the burden of proving subscriber eligibility under the Act is on satellite carriers—not local stations.²⁰⁰ When Congress amended the Act in 1994, it expressly provided that “[i]n any action brought under this paragraph, *the satellite carrier shall have the burden of proving* that its secondary transmission of a primary transmission by a network station is for private home viewing to an unserved household.”²⁰¹ The presumptive methodology proposed by the satellite carriers is flatly inconsistent with this amendment. It would shift the burden of measurement and, in turn, the burden of proof from satellite carriers to local stations. This result would be contrary to the express will of Congress and the plain meaning of the Act.

The Act’s burden of proof provision is consistent with basic principles of civil procedure. In a copyright infringement action, a satellite carrier would raise the Act’s compulsory license as an affirmative defense. Having asserted the affirmative defense, the defendant satellite carrier would have the burden of *proving* the defense.²⁰² Thus, the presumptive scheme suggested by the satellite industry is contrary not only to the express language of the Act, but it is contrary, as well, to fundamental notions of civil procedure. This is yet another instance in which the satellite industry would have the Commission run roughshod over the law.

In short, the Commission has no authority to amend or rewrite the Act by creating any kind of presumption or predictive standard that would shift the burden of measurement or the burden of proof of subscriber eligibility.

²⁰⁰ See 17 U.S.C. § 119(a)(5)(D).

²⁰¹ *Id.* (emphasis added).

²⁰² See, e.g., *NLRB v. Fluor Daniel, Inc.*, 1998 WL 789050 at *13 (6th Cir., Nov. 16, 1998) (holding that a party raising an affirmative defense has the burden of proof with respect to that defense).

C. The Commission Has No Authority To Adopt The Measurement Methodology Proposed By The Satellite Carriers

The satellite carriers have proposed a variety of new procedures to be used for testing signal strength at individual households. We pointed out in our Comments the shortcomings of most of these proposals and have demonstrated that the procedures are inconsistent with the plain language of the Act.²⁰³ To those previous Comments we add the following.

Many of the satellite carriers propose that signal intensity measurements be conducted with the test antenna raised only to the height of the homeowner's roof.²⁰⁴ This proposal is blatantly inconsistent with the language of the Act which calls for a "conventional outdoor rooftop receiving antenna."²⁰⁵ As the Electronics Technicians Association states in its Comments: "[T]he antenna needs to be above the roof peak."²⁰⁶ Plainly, a "conventional" antenna does not sit flush with the roof but rather is located at a height several feet above the roof. Otherwise, reception will be blocked by the roof itself. Thus, any requirement that measurements be taken at roof level would be inconsistent with the Act.

Several carriers propose that, rather than measuring median field strength levels and analyzing those measurements in a standard statistical manner, as is standard FCC and industry practice, somehow measurements should be conducted to determine whether a Grade B intensity

²⁰³ See Affiliate Associations Comments at 66-73.

²⁰⁴ See, e.g., EchoStar Comments at v; SBCA Comments at 21; DirecTV Comments at 28.

²⁰⁵ 17 U.S.C. § 119(d)(10)(A).

²⁰⁶ Electronics Technicians Association Comments at 25.

signal is present 90% of the time.²⁰⁷ Apparently what they mean by this—and as EchoStar goes so far as to suggest—is that ten readings should be taken—in the course of only five minutes—and if so much as even “one” reading registers below Grade B, then the household should be deemed “unserved” (the SBCA would make that “two” readings).²⁰⁸ They pretend that this is what is meant as receipt of an acceptable picture 90% of the time. Such proposals are nonsensical and are completely inconsistent with longstanding Commission and industry practice. This sleight-of-hand in effect “double counts” the time probability inherent in the median Grade B intensity levels. When testing for Grade B intensity levels, the Commission has always relied on measurements of the median ambient field strength because the Commission’s Grade B intensity values already incorporate a time fading factor to boost time probability. This time fading factor ensures that if the *median* ambient field strength registers Grade B signal intensity, then an acceptable picture will be received at least 90% of the time at the perimeter of the Grade B contour.²⁰⁹ Furthermore, measurements of median field strengths conducted in the standard way are inherently more reliable than what would otherwise amount to random measurements of random data. As the SBCA/Hatfield & Dawson Statement acknowledges, the “determination of median values of any random data is the most reliable statistical parameter.”²¹⁰ Were the Commission to adopt the satellite carriers’ proposal, it would repudiate all of the Commission’s existing sound engineering rules and practices in this regard.

²⁰⁷ See PrimeTime 24 Comments at 28; SBCA Comments at 21; DirecTV Comments at 28.

²⁰⁸ See EchoStar Comments at v; SBCA Comments at 10.

²⁰⁹ See, e.g., Notice ¶ 4 n.16, ¶ 32.

²¹⁰ SBCA Comments, Hatfield & Dawson Statement at 3.

Finally, some of the satellite carriers propose that the Commission modify the “loser pays” for the cost of measurement provision that Congress added to the Act in 1994.²¹¹ Under the existing statutory provision, if a satellite carrier provides service to *any* household and a local station conducts a signal measurement test which establishes that the household is “served,” the satellite carrier must reimburse the station for the costs it incurred in conducting the measurement.²¹² Conversely, if a broadcaster challenges *any* household receiving a distant network station, and a satellite carrier conducts a signal measurement test which establishes that the household is, in fact, “unserved,” the station must reimburse the satellite carrier for the costs it incurred in conducting the measurement.²¹³ The satellite carriers propose to modify the statute by changing the “loser pays” provision into a “challenger pays” provision.²¹⁴ Thus, once the Grade B values are spiked upward and the geographical area is enlarged in which satellite carriers could legally import distant duplicating network signals, a presumption is created that homes within that area are “unserved.” If a local station then conducted signal measurements which showed that homes within the presumptively “unserved” area are, in fact, “served”—and thus not eligible for satellite delivery—the local station—even though correct—would be barred from recovery of its measurement costs. This is an outrageous proposal! It is yet another of many examples of the overreaching and unprincipled greed of an industry whose history is most notable for a record of fraud, deception, and gross indifference to the law.

²¹¹ See 17 U.S.C. § 119(a)(8).

²¹² See *id.* § 119(a)(9).

²¹³ *Id.*

²¹⁴ See, e.g., SBCA Comments at 18; DirecTV Comments at 26.

Plainly, the Commission does not have authority to overrule, supersede, and rewrite the carefully crafted “loser pays” for the cost of measurement provision Congress placed in the Act. That provision was put in the Act to prevent satellite carriers and local stations from making frivolous challenges under the Act. SBCA complains that the present law causes satellite carriers to “needlessly” spend “time and money” conducting signal measurement tests.²¹⁵ The *fact is*, in the Act’s ten-year history, the satellite industry has conducted no more than a handful of signal measurement tests, and no court has ever found *even a single* broadcaster challenge to be in error.

Thus, this absurd proposal should be summarily rejected for what it is—a ruse by the satellite industry to exploit to an unconscionable degree the special *limited* copyright privilege Congress gave it in the Act.

IV.
**Should The Commission Decide To Adopt A Measurement Methodology,
It Should Adopt The Model Used In The Primestar/Netlink Agreement**

As stated in our Comments, the Affiliate Associations recommend the measurement methodology (the “industry methodology”) that has been agreed upon in the compliance agreement (“Agreement”) voluntarily entered into, at arms-length, by the broadcast industry and two satellite carriers, Primestar and Netlink.²¹⁶ This methodology incorporates the Commission’s existing test procedures as set forth in Section 73.686 but modifies them for testing at individual households. The fact that these two satellite carriers have already agreed to this methodology in an arms-length negotiation is, perhaps, the best evidence that this methodology represents a fair and cost-efficient

²¹⁵ See SBCA Comments at 18-19.

²¹⁶ The relevant section of the Agreement is attached hereto as Exhibit B.

way of conducting household-by-household measurements. The essential elements of the methodology are as follows:

Testing Location. Theoretically, the ideal location for purposes of measuring signal intensity is the area above the roof, where the antenna would normally be located. However, it generally will not be practical to take measurements at that location. Obstructions such as trees, lawns, and shrubbery may make it difficult or impossible to maneuver the measurement equipment to such a location above the roof of a house. Although handheld measuring equipment could be used, it would be time-consuming and imprudent to require technicians to climb on roofs to take measurements.²¹⁷

The Commission's "cluster method" allows the tester to get as close to the house as possible in order to obtain accurate readings. In addition, it requires five measurements to be taken, and these measurements may be statistically analyzed to give a highly accurate reading of the field strength at that location. The "median" reading is entered as the final determinant.

This methodology incorporates a modified version of the Commission's cluster method. It requires that a cluster of five measurements be taken "either (at the tester's option) (i) as close to the home as possible given safety and other constraints (probably in the driveway in most cases) or (ii) at the nearest public road from which measurements can be safely made," and it requires a "minimum distance between [the] five points small enough to make testing practical."²¹⁸

Testing Equipment. The Commission should require that measurements be taken using standardized, calibrated equipment that will replicate a homeowner's typical outdoor receiving

²¹⁷ See Comments of Biby Engineering Services, PC at 4 (noting that "there has been a loss of life and property over the years as a result of" taking measurements).

²¹⁸ See Exhibit B, ¶ d.

antenna. Use of standardized, calibrated equipment ensures accurate results and is more efficient because it reduces the likelihood of challenges to the testing procedure.²¹⁹ The industry methodology requires use of a “standard antenna—the Channel Master Model 3016 Antenna along with 50 feet of RG/6U cable, or such other standardized antenna as the parties may agree to.”²²⁰

Antenna Height. Using standard antenna heights is preferable to a fluctuating standard, such as taking measurements “five feet above the roof.”²²¹ It may be difficult for technicians to calculate the height that is five feet above a homeowner’s roof and to raise the testing antenna to that height, particularly if the structure is more than two stories high. Moreover, use of a fluctuating standard could lead to disputes over whether the antenna height was properly calculated.

The industry methodology provides that measurements for two story homes be taken using the Commission’s standard antenna height of 30 feet but states that measurements for one-story homes may be taken using an antenna at 20 feet. The satellite carriers have acknowledged that 20 feet is a reasonable antenna height for a single story home.²²²

Antenna Orientation. Consistent with the Commission’s existing rules and Commission and industry longstanding practice, the Agreement requires that “the antenna must be pointed in the

²¹⁹ See Further Engineering Statement at 8; Hammett & Edison Comments at 3 (stating that a “reasonable, well-defined, and conclusive approach would be to measure the field strength with a calibrated antenna elevated near the household in question”).

²²⁰ See Exhibit B, ¶ b.

²²¹ Notice ¶ 20.

²²² See Affidavit of Richard L. Biby in Support of PrimeTime 24’s Motion for Clarification of Order Affirming in Part and Reversing in Part Magistrate Judge Johnson’s Report and Recommendation, and Request for Hearing Prior to the Entry of Any Preliminary Injunction, *CBS, Inc. v. PrimeTime 24 Joint Venture*, Civil Action No. 96-3650-CIV-NESBITT (S.D. Fla., filed May 28, 1998), ¶ 5.

direction in which the strongest signal is available from the station in question.”²²³ As discussed above, this practice is the only way to ensure an accurate result. The extent to which reception is impaired by improper antenna orientation is further confirmed by the videotape submitted herewith as Exhibit D.²²⁴

Loser Pays Provision. The industry methodology incorporates the Act’s “loser pays” provision.²²⁵ This provision caps reimbursements expenses at \$150 and requires payment to be made within 45 days.²²⁶ The loser pays provision keeps parties intellectually honest by discouraging both stations and satellite companies from taking irresponsible positions under the Act.

Notice Provision. The industry methodology includes a notice provision which provides that the other side must be given 45 calendar days’ written notice of the test and be permitted to attend.²²⁷ This provision is necessary to guard against unscrupulous test practices. For example, a dishonest technician could deliberately use faulty equipment, search for locations with low field strengths, or otherwise “rig” the test in order to skew the result. Moreover, allowing the parties to monitor the testing procedures will help ensure accurate results and minimize the number of challenges made to test results.

In summary, should the Commission conclude that it has the authority to adopt a measurement methodology for determining signal strength at individual locations, then the Affiliate

²²³ See Exhibit B, ¶ b.

²²⁴ See *supra* at part II.B.

²²⁵ See Exhibit B, ¶ j.

²²⁶ See *id.*

²²⁷ See *id.*, ¶ a.

Associations recommend that the Commission refine its current method, as specified in 47 C.F.R. § 73.686, along the lines of the industry methodology detailed in the broadcasting industry's agreement with Primestar and Netlink.

V. The Solution

The Commission should undertake efforts immediately to stop the defrauding of millions of innocent satellite subscribers. To that end, the Commission should issue letters of admonishment to satellite carrier licensees—or impose other appropriate sanctions to put an end to the satellite industry's unfair and deceptive trade practices.

Second, the Commission should recommend to Congress that legislation be enacted to require satellite carriers to disclose in bold and conspicuous type in all written, visual, and oral sales presentations the limitations of the statutory copyright license they hold. Full disclosure would eliminate the deception and fraud.

Third, the Commission should recommend to Congress that local-into-local legislation, with appropriate must-carry and retransmission consent provisions, be enacted with all due speed. When Congress adopted the Act in 1988, existing technology did not allow satellite carriers to offer local signals in local markets. However, it now appears that such technology is available, and it, apparently, will allow satellite retransmission of *all* local signals, not just those signals that are cherry-picked by the satellite carriers. Last year, Local TV on Satellite, LLC (“LTVS”) announced that it would distribute via satellite within each local market all over-the-air, full power commercial and noncommercial television stations located within the market.²²⁸ LTVS's engineers have

²²⁸ See Jim Goodmon, *Why Local TV Via Satellite is Good For Everyone*, Multichannel (continued...)

developed a technical plan that will use two satellites in the Ka-band with 61 spot beams covering the continental United States, Alaska, and Hawaii, with 159 regional uplink sites. This system will allow consumers to receive all the current DBS signals, as well as all local television signals, with one 24-inch dish. The LTVS plan is expected to accommodate 1700 NTSC signals, as well as high definition television prime time and special event network feeds.²²⁹

In addition, EchoStar recently announced a \$1.16 billion deal with News Corp. and MCI Worldcom that will give EchoStar a full continental U.S. satellite slot at 110 degrees west longitude.²³⁰ The acquisition will allow EchoStar to offer all local signals to its subscribers on a single dish. As one trade publication notes, "Beaming down signals from 110 and 119 degrees will allow EchoStar to offer many customers a one-dish local-into-local solution. . . ." ²³¹

Although the technology is available to provide local-into-local service, satellite carriers cannot proceed without congressional action. In the last session of Congress, legislation was introduced in the House that would amend the Act to permit satellite providers to distribute local television signals, including network programming, to their subscribers.²³² The legislation was never

²²⁸(...continued)
News, June 15, 1998, at 69.

²²⁹ *See id.*

²³⁰ *See EchoStar/News Corp. Do \$1.16B DBS Deal*, Broadcasting & Cable TV Fax, Dec. 1, 1998; Leslie Cauley, *EchoStar to Buy Satellite-TV Assets of News Corp.*, MCI, Wall St. J., Dec. 1, 1998, at B8.

²³¹ *EchoStar/News Corp. Do \$1.16B DBS Deal*, Broadcasting & Cable TV Fax, Dec. 1, 1998.

²³² On June 24, 1998, the House Commerce Committee reported favorably on H.R. 2921, styled the "Multichannel Video Competition and Consumer Protection Act of 1998." *See* H.R. Rep. No. 105-661, pt. 1 (1998). An amended version of the same bill, styled the "Copyright Compulsory License Improvement Act of 1998," was reported favorably by the House Judiciary Committee on (continued...)

passed. The Affiliate Associations support local-into-local legislation and will work cooperatively with the Commission, the satellite industry, and Congress to expedite its enactment.

Fourth, the Commission, if it believes it necessary or appropriate, may recommend that Congress enact or authorize the Commission to adopt appropriate “presumptive” standards of service based on the Longley-Rice point-to-point methodology. An appropriate “presumptive” standard would minimize the number of homes for which site testing is likely to be necessary. Such a standard—coupled with (1) a loser pays mechanism for the cost of testing and (2) a reliable, yet cost-efficient, testing methodology that assures advance notice to each party and that should be modeled on the testing regime contained in the voluntary compliance agreement between Primestar, Netlink, and the broadcast industry—would eliminate much of the current “white area” controversy.

Finally, the marketplace itself, unless skewed by action taken by Congress or the Commission, will, in time, solve the local station reception problem. The genius of the marketplace should not be underestimated. The satellite and broadcast industries have confidence in the ability of new technologically-improved, attractive, over-the-air antennas to solve the reception issue. As noted earlier, DirecTV is making these new antennas available to satellite subscribers at highly discounted rates. This voluntary practice should not be discouraged. Regulatory action by the Commission that might create disincentives for or minimize the use of antennas should be avoided. Some consumers elect to receive local television stations by cable television, and regulatory actions should not be taken to discourage consumers from exercising that reception option. In short, the Commission should refrain from any action that might unwittingly interfere with the consumer

²³²(...continued)

August 4, 1998. *See* H.R. Rep. No. 105-661, pt. 2 (1998). The latter version of the bill was referred to the Committee of the Whole House in the State of the Union. 144 Cong. Rec. H7583 (Sept. 10, 1998).

choice of how best to receive local stations.

Until broadcast stations began to enforce the Act and protect their copyrights, satellite carriers had no real incentive to solve the local reception issue. Now they do. Unless the Commission removes that incentive, the satellite industry will find a solution—and it will be vastly more efficient for consumers than any regulatory solution Congress or the Commission could craft.

VI. Conclusion

Whatever action, if any, the Commission may take, it must be consistent with the Satellite Home Viewer Act's core objective of protecting the integrity of the copyright each local network station now has for the delivery of its network's programming within its Grade B service area.

Respectfully submitted,

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