

BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)	
)	
Satellite Delivery of Network Signals)	CS Docket No. 98-201
to Unserved Households for)	RM No. 9335
Purposes of the Satellite Home)	RM No. 9345
Viewer Act)	
)	
To: The Commission)	
)	

REPLY COMMENTS
OF
THE NATIONAL RURAL TELECOMMUNICATIONS COOPERATIVE

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SUMMARY

Last summer, the National Rural Telecommunications Cooperative (“NRTC”) urged the Commission to initiate a rulemaking proceeding to define the Grade B standard for purposes of the Satellite Home Viewer Act (“SHVA”). NRTC sought Commission action on an expedited basis because a Miami District Court then threatened to deem millions of consumers ineligible to receive distant network signals by satellite, even though many could not receive an acceptable over-the-air picture from the local affiliate.

In their response to the Commission’s Notice of Proposed Rulemaking, the broadcasters argue that the FCC cannot make any changes to the definition, prediction or measurement of Grade B for purposes of the SHVA because it would be (1) contrary to Congressional intent of creating a “narrow” satellite compulsory license, (2) beyond the Commission’s jurisdiction and (3) detrimental to the principle of localism which Congress sought to protect in the SHVA.

In essence, the broadcasters want the FCC to use 1950s signal strength standards, which they claim were “frozen” into a 1988 statute, to solve a 1998 problem. They want the Commission to use predictive models and measurement techniques that were designed years ago for a wholly different purpose -- allocating TV spectrum -- to determine whether a particular household can now receive an acceptable local signal under the SHVA. They complain that modern Grade B standards will somehow undermine “localism” by causing the loss of advertising revenues for households that cannot even receive local signals.

Congress intended to authorize the reception of distant network signals by all households that could not receive an acceptable over-the-air picture from the local affiliate regardless of the number of households which would be affected or where the households were located. To accomplish that result, Congress assigned to the Commission the task of defining the term “an over-the-air signal of Grade B intensity.”

Because the Commission’s current Grade B signal strength standards were designed for a different purpose, are premised on an outdated propagation environment and are no longer representative of viewer expectations of picture quality, NRTC urges the Commission to adopt new standards for the SHVA that reflect more accurately which households can actually receive an acceptable signal through a conventional roof top antenna: 70.75 dBu for low-band VHF, 76.5 dBu for high-band VHF, and 92.75 dBu for UHF. NRTC also urges the Commission to adopt TIREM as an improved predictive model for SHVA purposes. Because TIREM takes into account important factors that affect signal propagation, which are ignored by the Longley-Rice model, it will more accurately predict which households actually receive a signal of Grade B intensity through a conventional roof top antenna. Where individual household measurements are required, NRTC supports a measurement methodology that more accurately measures signal reception at the home — not merely in the vicinity.

NRTC urges the Commission to act forcefully on behalf of consumers across the country to enable satellite reception of distant network signals at households that are unable in fact to receive acceptable local network signals over-the-air. The Preliminary Injunction issued by the Miami District Court will be implemented as of

February 28, 1999, threatening the distant network service received by hundreds of thousands of satellite subscribers. By adopting new, modern Grade B standards, the Commission can, consistent with Congressional intent, prevent this massive disenfranchisement of satellite subscribers and correct many of the current problems facing consumers, the satellite industry and broadcasters alike in determining whether a particular household is “unserved”.

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**REPLY COMMENTS
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Pursuant to Section 1.430 of the Commission's Rules and Regulations, the National Rural Telecommunications Cooperative ("NRTC"), by its attorneys, hereby submits these Reply Comments in the above-captioned proceeding.^{1/} NRTC is concerned that in applying the Commission's current Grade B signal strength values to the "unserved household" restriction of the Satellite Home Viewer Act ("SHVA"), many households will be deemed ineligible to receive distant network signals by satellite even though they are in fact unable to receive an acceptable picture over the air. NRTC believes this no-win situation facing many consumers is caused by (1) field strength values based on antiquated technological assumptions and outdated consumer expectations of picture quality, (2)

^{1/} Notice of Proposed Rule Making, 63 Fed. Reg. 67439 (released December 7, 1998) ("NPRM" or "Notice").

unreliable Grade B signal strength predictive methodologies, and (3) inadequate measurement techniques for individual households. NRTC believes that the Commission can, consistent with Congressional intent, correct many of the current problems facing consumers, the satellite industry and broadcasters alike in determining whether a particular household is “unserved”.

I. REPLY COMMENTS

1. At the urging of NRTC, EchoStar Communications Corporation (“EchoStar”) and the satellite industry, the Commission commenced this rulemaking proceeding to determine what changes to the Commission’s Grade B definition should be made to ensure that households not receiving acceptable local signals over-the-air are not denied access to network services by satellite. The majority of the satellite industry supported the Commission’s adoption of an updated Grade B signal strength standard and better predictive and measurement methods to reflect today’s operational environment and heightened viewer expectations. The broadcasters vehemently opposed any changes to the FCC’s Grade B standard, predictive models or measurement methodologies which would affect the application of the “unserved household” provision of the SHVA. They argued that the Commission does not have authority to revise the Grade B standard for purposes of the SHVA and that any changes to the Grade B standard would be contrary to Congressional intent to preserve localism. NRTC appreciates this opportunity to respond to the broadcasters’ concerns.

A. The Purpose Of The Commission's "Grade B" NPRM Is To Determine More Accurately Which Households Can/Cannot Receive An Acceptable Picture.

2. The National Association of Broadcasters ("NAB"), the ABC, CBS, FOX, and NBC Television Network Affiliates ("Affiliate Associations"), and several other broadcasters claim that the SHVA created a "limited" and "narrow" satellite compulsory copyright license which can legitimately apply only to a small number of households, located almost entirely in rural areas.^{2/} The NAB and Affiliate Associations cite testimony before Congress, legislative history, and 1987 and 1988 FCC Reports to argue that because in the late 1980s only 1 million households were estimated to be unable to receive the signals of local network affiliates over-the-air, the unserved household provision of the SHVA was intended by Congress to apply -- and today can only apply -- to no more than 1 million households.^{3/}

3. The broadcasters argue that any changes to the definition of Grade B signal strength or to prediction and measurement of Grade B signal strength at individual households would somehow be contrary to Congressional intent in enacting the SHVA. They argue that the changes proposed by NRTC, EchoStar or the Commission would

^{2/} See NAB Comments at p. 13; Affiliate Associations Comments at pp. 10-12; Walt Disney Company ("ABC") Comments at pp. 8-9; CBS Comments at p. 3; NBC Comments at p. 4; Capital Broadcasting Co., Inc. Comments at p. 2; Cordillera Communications, Inc. Comments at p. 6; Hearst-Argyle Television, Inc. Comments at pp. 4-5; A.H. Belo Corporation Comments at p. 5.

^{3/} NAB Comments at p. 13; Affiliate Associations Comments at pp. 10-11.

dramatically increase the number of households predicted to be unserved and, because the number of “unserved households” would thereby surpass a million, any of the proposed changes to the Grade B standard would be contrary to Congressional intent.

4. Congress, however, set no such artificial “cap” on how many unserved households should be eligible to receive distant network services by satellite. Rather, Congress made an exception to traditional copyright protections afforded to the networks and their affiliates to permit the provision of distant network service by satellite to those consumers who cannot otherwise receive an acceptable network signal, based on the Grade B standard.^{4/} The Commission’s fundamental mission in this rulemaking proceeding, therefore, is to develop a *better* method of defining, measuring and predicting Grade B signal strength at individual homes so that it may be determined *which* households *do not* in fact receive an acceptable local signal and *are* entitled to receive distant network signals by satellite, as contemplated by Congress.

^{4/} See H.R. Rep. No. 100-887, pt. I, at 15 (1988) reprinted in 1988 U.S.C.C.A.N. 5618 (“ . . . the legislation adds a new section 119 to the Act, creating a system by which scrambled superstation and network signals can be transmitted by satellite carriers, through distributors to earth station owners. The distribution of network signals is restricted to unserved households; that is those that are unable to receive an *adequate* off-air signal.”(emphasis added)); Comments of Senator Patrick Leahy (“The clear purpose of the law was, and is, to protect those living in more rural areas so that they can receive TV signals using satellite dishes when they are unable to receive a strong signal using an antenna . . . Congress enacted the Satellite Home Viewer Act so that households that cannot receive over-the-air broadcasts or cable can be supplied with television programming via home satellite dishes . . . the legislative history shows that the restriction of satellite delivery of network signals actually refers to those geographic areas where subscribers are unable to receive the signal of a particular network”) at p.1 citing H.R. Rep. 103-703, H.R. Rep. 100-187, S. Rep. 103-407.

5. Any changes to the definition, prediction and measurement of the Grade B standard which would make it a more precise determinant of whether a viewer receives an acceptable quality picture from the local affiliate through a conventional rooftop antenna would only *further* Congressional intent in enacting the “unserved household” provision of the SHVA. If a viewer does not in fact receive an acceptable signal over the air -- based on an updated, realistic definition of Grade B signal strength -- the network affiliate has no right to claim that viewer as “theirs” or to complain that the viewer has been unlawfully “stolen” by scofflaw satellite companies. Nor, if the viewer cannot receive an acceptable signal over the air, does the affiliate have a right to claim that viewer as “served” for purposes of generating additional advertising revenues.

6. In its Comments, NRTC identified as the root problem in this proceeding the fact that the Commission’s “Grade B” standard was developed *in the 1950s* — as a Commission-defined measure of the strength of a television station’s broadcast signal necessary to provide what the median observer at that time would have deemed an “acceptable” picture. That antiquated standard is now woefully out of date in a competitive multichannel video distribution marketplace. Once the Commission’s flawed definition of Grade B signal strength is updated, NRTC believes many consumers truly unable to receive acceptable over-the-air reception from the local affiliate will be eligible to receive distant network service through satellite.

7. The Grade B field strength values provided in the Commission's rules are premised on an outdated propagation and technology environment. NRTC, the Satellite Broadcasting and Communications Association ("SBCA"), DIRECTV, Inc. ("DIRECTV"), EchoStar and Primestar Partners, L.P. ("Primestar"), among others, argued that signal propagation today is affected by factors that were not identified and factored into the Grade B calculations of the 1950s -- and that viewers today have much more heightened expectations of picture quality than did viewers in the 1950s.^{5/} As a result, households that are determined to receive a signal of Grade B intensity as currently defined in the Commission's rules, may well not in fact receive an acceptable picture under any fair concept of the term today. This problem, of course, underscores Congressional efforts to allow access to distant network signals by households unable to receive acceptable local signals over the air.

8. To correct this fundamental defect in the Commission's Grade B standard, NRTC urged the Commission to update its definition of "an over-the-air signal of Grade B intensity" to reflect more accurately which households can actually receive an acceptable signal through a conventional rooftop antenna. Accordingly, NRTC endorsed the Grade B signal strength values of 70.75 dBu for low-band VHF stations, 76.5 dBu for high-band

^{5/} SBCA Comments at pp. 12-13; DIRECTV Comments at pp. 3, 18-19 ("the Grade B signal strength values found in Section 73.683 of the Commission's rules . . . are Grade B contour-based signal strengths keyed to a 1950's conception of suitable picture quality.") EchoStar Comments at pp. 6-7; Primestar Comments at pp. 2, 4-5; PrimeTime24 Comments at pp. 10-12.

VHF stations, and 92.75 dBu for UHF stations recommended by the SBCA. These updated standards were the result of conservative calculations based on today's propagation environment. NRTC also supported the use of TIREM, a more realistic predictive model, and revised, more accurate procedures to predict and measure signal strength at individual households. Because these proposals will better determine a household's real ability to receive a local signal over the air -- and eligibility under the SHVA -- to receive a distant network signal by satellite -- they will only further Congressional intent of providing network service to those households truly unable to receive a local affiliate's signal.^{6/} These proposals are not meant to, and will not, "enlarge" the satellite compulsory copyright license in any way. They will only identify more accurately those households which Congress intended to be eligible to receive distant network signals.

B. The Commission Has Ample Authority to Update a Communications Term.

9. The broadcasters, led by the NAB and the Affiliate Associations, claim that the FCC cannot make *any* changes to its Grade B standard for purposes of the SHVA because the FCC is not authorized to administer copyright law. However, NRTC is not asking the Commission to administer the SHVA. NRTC seeks narrow relief. It simply asks the Commission to update its definition of Grade B signal strength so that the

^{6/} SBCA Comments at p. 17.

definition can be incorporated into the SHVA's definition of "unserved household," as fully intended by Congress.

10. While it is true that the FCC is not authorized by Congress to "administer" the SHVA, it is also true that Congress, as is evidenced by the plain text of the SHVA, looked to the FCC to define a telecommunications term well within the Commission's special area of expertise. By explicitly naming the FCC within the SHVA -- and deferring to its definition of "an over-the-air signal of Grade B intensity" -- Congress clearly turned to the Commission as the expert regulatory agency in telecommunications matters. The fact that the term is located in the Copyright Act is of no significance as to whether the Commission has been authorized by Congress to define it.

11. The broadcasters argue that any changes to the Commission's Grade B signal strength definition cannot be read into the statute because the statute incorporated the definition of Grade B as it existed in 1988 when the statute was enacted. NRTC, along with other DTH satellite industry commenters, however, have repeatedly shown the error in the broadcaster's argument that the Grade B standard (as defined by the FCC in 1988) remains static in the SHVA.^{2/}

12. In arguing that the signal strength standards in Section 73.683(a) have been codified for purposes of the SHVA and are not subject to revision by the

^{2/} NRTC Reply to NAB at pp. 6-11 (Aug. 6, 1998).

Commission, the broadcasters ignore a basic rule of statutory construction -- that a statute of *specific* reference refers to a particular statute by its title or section number while a *general* reference statute refers to the law on the subject generally.^{8/} In the case of a *general* reference, the rules of statutory construction show that all subsequent amendments to the cited statute *are* incorporated into the referring statute.^{9/} As the FCC recognized in the NPRM, Congress made a *general* reference in the SHVA in defining an “unserved household,” because there was no *specific* reference to a particular rule.^{10/}

13. By the unequivocal language of the statute, the FCC was given the broad, general authority and responsibility to define the term “an over-the-air signal of [G]rade B intensity.” By using the term and allowing the FCC to define it, Congress eliminated any confusion as to whether it had intended to “freeze” into law the FCC’s Grade B definition as it existed in 1988. Had Congress intended to adopt a specific, then-existing FCC rule, it could have done so, as it did in other section of the Act.^{11/} Similarly, had it intended to

^{8/} U.S. v. Rodriguez-Rodriguez, 863 F2d 830, 831 (11th Cir 1989), *citing*, 2A Sutherland Statutory Construction §51.07 at page 514 (4th ed. 1984).

^{9/} Rodriguez-Rodriguez at 831 [emphasis added] *citing* Hurwitz v. United States, 208 F.Supp. 594, 596-97 (S.D. Tex. 1962), *aff’d*, 320 F2d 911 (5th Cir. 1963), *cert. denied*, 376 U.S. 936, 84 S. Ct. 791, 11 L. Ed. 2d 658 (1964).

^{10/} NPRM at ¶20.

^{11/} The Commission, in its NPRM, correctly observed that “[w]here Congress intended to incorporate regulations as they existed on a certain date, it has expressly done so.” NPRM at ¶ 20. By way of contrast, the Commission noted that in the Copyright Act’s definition of “local service area of a primary transmitter”, Congress “explicitly references Commission regulations ‘in effect on April 15, 1976, or such station’s television market as defined in section 76.55(e) of title 47, Code of Federal Regulations

prevent a subsequent change in the FCC's definition of Grade B signal strength for purposes of the SHVA, it also easily could have done so. It did neither.

14. The language of 17 U.S.C. §119(d)(10), "an over-the-air signal of [G]rade B intensity (as defined by the Federal Communications Commission) . . .", reflects a general reference to the laws on signal intensity measurements. When a statute refers to the law on the subject generally, the law is clear that subsequent amendments to the statute are incorporated into the statute.^{12/} It follows that if the FCC created in its rules a new definition of an "over-the-air signal of [G]rade B intensity," for purposes of the SHVA, this new definition would be incorporated indirectly into the SHVA's definition of "unserved household."

15. In its earlier Reply to NAB on this point, NRTC cited Lukhard v. Reed, 481 US 368, 379 (1987) and Helvering v. Wilkshire Oil Co., 308 US 90 (1939) to make clear that the meaning of "signal of Grade B intensity" can be modified over time by the Commission and incorporated into the SHVA.^{13/} Despite the broadcasters' efforts to

(as in effect on September 18, 1993) . . ." (footnote omitted).

^{12/} See Lukhard v. Reed, 481 U.S. 368 (1987); Helvering v. Wilkshire Oil Co., 308 U.S. 10 (1939); Rodriguez-Rodriguez 863 F.2d 830 (11th Cir. 1989); Allison v. Ticor Title Insurance Co., 979 F.2d 1187, 1202 (7th Cir. 1993).

^{13/} NRTC Reply to NAB at p. 7.

discount Lukhard and Helvering, those decisions are plainly relevant and controlling in this case.

16. As with the SHVA, in Lukhard and Helvering Congress made a general reference to the terms at issue and permitted the agency charged with defining the term to update the meaning of those terms.^{14/} In Lukhard, the U.S. Supreme Court made it clear that “it is not true that whenever Congress enacts legislation using a word that has a given administrative interpretation it means to freeze that administrative interpretation in place.”^{15/} The Supreme Court in Helvering held that an agency is free to change such a term, because otherwise an agency would be unable without the prior consent of Congress to change its rules prospectively even through the exercise of appropriate rulemaking powers. Clearly, the FCC has the power -- and obligation -- to update the Grade B standard in this proceeding.

^{14/} As noted by the Affiliate Associations, the term “net income” in Helvering was in flux, and in Lukhard, “the administering agency’s interpretation of the term ‘income’ had changed over time.” Affiliate Associations Comments at p. 34. Similarly, the field strength values of “an over-the-air signal of Grade B intensity” are no longer an accurate indicator of whether a household can receive an acceptable quality picture over-the-air through a conventional rooftop antenna and should change with time. DIRECTV cites additional decisions similarly demonstrating that the Commission has authority to change the definition of Grade B signal intensity for purposes of the SHVA. DIRECTV Comments at pp. 10-11 citing AFL/CIO v. Brock, 835 F2d 912 (D.C. Cir. 1987); Society of Plastics Industry, Inc. v. ICC, 955 F2d 711 (D.C. Cir. 1992).

^{15/} NRTC Reply to NAB at p. 7, citing Lukhard v. Reed, 481 U.S. 368, 379 (1987).

C. A Revised Definition of Grade B Will Not Endanger Localism.

17. The broadcasters argue the common theme that any changes to the Commission's Grade B standard will destroy the bedrock principle of localism that has brought consumers free, over-the-air television. They argue that changes to the Grade B standard will unfairly shrink the local markets of individual network affiliates and result in less revenues for affiliates from advertisers, who pay the television stations based on market size.

18. NRTC, however, is not requesting that the Commission reduce the affiliates' market size or allow satellite carriers to "steal" affiliates' viewers. As explained above, NRTC is seeking rules from the FCC that incorporate the full intent of Congress to permit those households unable to receive a signal of Grade B intensity through a conventional rooftop antenna to receive distant network service by satellite.^{16/} That Congressional objective will be frustrated if the Commission does not establish rules to reflect more accurately which households cannot actually receive an acceptable over-the-air picture.

19. Satellite carriers are not infringing in any way on an affiliate's area of exclusivity when they provide distant network signals to households unable to receive an

^{16/} Comments of Senator Patrick Leahy at p.1 citing H.R. Rep. 103-703, H.R. Rep. 100-187, S. Rep. 103-407.

acceptable over-the-air signal. The broadcasters' opposition to a more accurate means of determining whether a household actually receives a Grade B signal demonstrates their disdain for consumers who are unfortunately located within an affiliate's local market but who cannot receive a signal of Grade B intensity through a conventional rooftop antenna. As made clear in their comments in this proceeding, the broadcasters' interests rest with their of advertising revenues.^{17/} They care only if the number of households in a local market is reduced for purposes of calculating advertising revenues. They care not whether many of these households cannot in fact receive acceptable local signals over the air. This, the broadcasters' call "localism."

20. The broadcasters' concerns are troubling because the SHVA clearly authorizes satellite retransmission of distant network signals to households unable to receive an over-the-air signal of Grade B intensity through a conventional rooftop antenna -- regardless of whether the household is located in an affiliate's area of exclusivity, Nielsen DMA, Grade B contour or whatever other market designation is used by the broadcaster for advertising purposes. By the same token that the Commission should not expand the "unserved household" exception of the SHVA, the Commission should not afford the affiliates greater copyright protection than was actually negotiated by the affiliate. The Commission should be especially suspicious of the broadcasters' concerns that localism will be undermined because the affiliate's local market will be encroached.

^{17/} NAB Comments at pp. 21, 22-24; Affiliate Associations at pp. 52, 47-57. ABC Comments at p. 5; NBC Comments at p. 6; Fox Broadcasting Comments at p. 6.

No local market definition, to our knowledge, is based on "Grade B" signal strength or contours.^{18/} Local market definitions, such as Nielsen DMAs, often cover a geographic area much larger than the 35 mile area of exclusivity typically bargained for by the affiliate in its network/affiliate contract. Consumers that cannot receive an acceptable over-the-air signal from the local network affiliate should not be penalized by being denied eligibility for distant network signals because they happen to live within an affiliate's expansive concept of its "local market" for advertising purposes

D. The Grade B Signal Strength Values, Predictive Model And Measurement Techniques Proposed By SBCA And Endorsed By NRTC Will More Accurately Ascertain Which Households Actually Can/Cannot Receive An Acceptable Picture From The Local Affiliate.

21. The broadcasters argue that the current Grade B standard does reflect whether a household can receive an acceptable picture from a local station and that the Commission's recent decision to allocate new DTV channels on the basis of replicating existing Grade B service areas confirms that the current signal intensity levels will ensure reception of an acceptable picture.^{19/} In allotting DTV channels, however, the Commission

^{18/} ". . . [S]tations having entered into exclusive programming distribution contracts gain syndex or non-dup rights on cable systems within a certain distance of the station, regardless of the station's viewability in such communities." The WB Television Network Comments at p. 14 citing to 47 C.F.R. §§ 76.92(f) (Note), 76.151 (Note), 73.658(m). "Generally, such distances are 35 miles for syndex, 35 miles for non-dup in major television markets, and 55 miles for non-dup in smaller television markets. Of course, this demonstrates that the SHVA's compulsory license for "unserved areas" is not a substitute for syndex or non-dup rules." *Id.* At n. 33.

^{19/} Affiliate Associations at p. 27.

was concerned with replicating the predicted Grade B contour of a station, (i.e. using Grade B for allocation purposes, as has traditionally been the purpose of Grade B in the Commission's rules).^{20/}

22. As the broadcasters have recognized, the test for eligibility under the SHVA is not based on whether a household is located inside or outside a Grade B contour. It is not based on TV station allocations. Instead, it is based on signal strength received at an individual household.

23. Furthermore, the Commission's intent in promulgating its DTV rules and assigning DTV channels was not to ascertain whether a signal of Grade B intensity provided an acceptable over-the-air analog picture.^{21/} If any conclusion can arguably be drawn from the DTV proceeding regarding acceptable picture quality, it would be that a

^{20/} See Advanced Television Stations and Their Impact Upon the Existing Television Broadcast Service, Sixth Report and Order, ¶29 12 FCC Rcd 14588, 14605. ("We believe that providing DTV allotments that replicate the service areas of existing stations offers important benefits for both viewers and broadcasters. This approach will ensure that broadcasters have the ability to reach the audiences that they now serve and that viewers have access to the stations that they can now receive over-the-air.") "For purposes of service replication, the service or coverage area of a DTV allotment is the predicted noise-limited service area, contained within the Grade B contour of the NTSC station associated with that allotment, less any area where interference from other DTV or NTSC operations may occur." *Id.* At ¶32, citing to §73.683 of the rules for the definition of the Grade B contour of an NTSC station.

^{21/} *Id.*, Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, Fifth Further Notice of Proposed Rulemaking, 11 FCC Rcd 6235, ¶¶37-40 (1996). In requesting comment on a digital television standard, the FCC's focus was on developing a digital, not analog, standard.

digital signal of Grade B intensity produces an acceptable digital picture. However, this conclusion is based on the nature of digital reception -- a signal either produces an "acceptable" digital quality picture or no picture.^{22/} This is not the case with analog signals. Because television stations today mainly transmit analog signals, the DTV proceeding is hugely irrelevant to the issue of revising current Grade B signal strength values to more accurately reflect acceptable analog picture quality reception.

24. The Grade B signal strength values proposed by SBCA, NRTC and others reflect the effects of some of the factors present today that were not considered when Grade B was developed in the 1950s, such as vegetation, buildings, other obstructions and terrain. The proposed Grade B signal strength values as high as 70.75 dBu for low-band VHF stations, as high as 76.5 dBu for high-band VHF stations, and as high as 92.75 dBu for UHF stations are conservative because they have not been adjusted to account for man-made noise, ghosting and continually increasing consumer expectations of acceptable picture quality.

25. The broadcasters also argue that because the Commission endorsed the Longley-Rice 1.2.2 model in assigning DTV channels, the Longley-Rice 1.2.2 model

^{22/} See U.S. Copyright Office, A Review of the Copyright Licensing Regime Covering Retransmission of Broadcasts Signal, August 1, 1997, p. 130 (in noting that implementation of over-the-air digital broadcasting in the next several years is likely to change the complexion as to what constitutes an unserved household, the CRO notes that "parties represented to the Office that over-the-air receipt of a digital television signal is on an all or nothing basis. Either the household receives a digital quality picture, or it receives no signal at all.")

should also be used to determine a household's "served" status. However, they have not provided any predictive models that would take into account the significant variables that cause signal degradation from the television station's transmission tower to a household's rooftop antenna. As noted in the Hatfield & Dawson Engineering Report submitted along with SBCA's comments and by several other parties:

the Commission (in the DTV proceeding) was concerned with the general replication of service over wide areas. In the SHVA situation the Commission is compelled by the statutory language to provide a method which is valid for computation of service at individual household locations. Because it is manifestly just at those locations where propagation path impairments may result in input parameter variations which cannot properly be calculated by Longley-Rice 1.2.2, its use for SHVA compliance testing is unsupportable.^{23/}

26. In supporting the TIREM model proposed by the SBCA, NRTC noted some of the shortcomings of the Longley-Rice 1.2.2 predictive model and how the TIREM model would overcome these shortcomings. DIRECTV, SBCA, and others also described the advantages of TIREM over the Longley-Rice 1.2.2 model.^{24/} The Hatfield & Dawson Engineering Report best describes the significant advantages of TIREM over Longley-Rice 1.2.2:

- TIREM calculates losses due to terrain obstructions (i.e. diffractive losses) using a much more sophisticated technique which involves up to 8 different modes that are automatically selected by the program to suit the exact conditions along the propagation path.

^{23/} Hatfield & Dawson, Engineering Statement: Technical Issues and Definitions Relative to the Satellite Home Viewer Act, p. 7 (Dec. 1998)("Hatfield & Dawson Engineering Statement").

^{24/} DIRECTV Comments at pp. 24-25; SBCA Comments at pp. 16-17.

- TIREM includes techniques to minimize or eliminate the abrupt discontinuities, common in Longley-Rice calculations, in a calculated loss along a path.
- Unlike Longley-Rice, TIREM can handle receiving sites that are close to obstructions without returning error messages.
- TIREM continues to be refined by NTIA and others.^{25/}

27. The measurement procedures proposed by SBCA are necessary in those rare cases where a household's "served" status is disputed and an individual household measurement is required. Noting that the Commission's current signal strength measurement methodology, like the Grade B standard itself, is based on invalid assumptions, SBCA, NRTC and others proposed a more accurate measurement technique to determine actual signal strengths at individual households.^{26/} Among the reasons cited by the SBCA, NRTC and others that skew the Commission's current measurement method are assumptions that each house has a 30-foot antenna and that the rooftop antenna is oriented towards the station's broadcast tower.^{27/} DTH providers also protested the deficiency of using a 100-foot mobile run to determine actual field strength at the home.

28. In their Comments, SBCA, NRTC and the DTH industry endorsed a more accurate, updated measurement technique which would feature: (1) measurements taken in

^{25/} Hatfield & Dawson Engineering Statement at p. 11. DIRECTV at pp. 24-25.

^{26/} SBCA Comments at p. 20.

^{27/} Id.

an accessible location, as close as possible to the residence, at actual roof height; (2) signal strength readings taken approximately every thirty seconds for a period of five minutes; and (3) adjustment of those readings for signal strength loss due to the actual length of the antenna line and the actual number of splitters per household. According to the proposed testing method, if more than one of the ten signal strength values is less than the Grade B signal strength values proposed by SBCA and endorsed by NRTC, then the subscriber would be deemed an “unserved household” under the SHVA, and should be eligible to receive distant network service by satellite. Otherwise, millions of households will be denied distant network service by satellite, despite the fact that they cannot actually receive an acceptable over the air signal and should be eligible under the SHVA to receive satellite retransmission of distant network signals.

II. CONCLUSION

Congress did not set a cap on how many households should be eligible to receive distant network signals by satellite under the SHVA’s compulsory copyright license. Along with protecting localism and the network/affiliate relationship, Congressional intent was to permit those households that are unable to receive an acceptable off-air signal to receive distant network signals by satellite. Congress relied on the Commission’s definition of “an over-the-air signal of Grade B intensity” for purposes of determining which households were not able to receive an acceptable off-air signal and thus eligible to receive distant network service by satellite. The Commission must update its signal

strength standards and predictive and measurement methodologies to reflect the modern world of telecommunications.

WHEREFORE, THE PREMISES CONSIDERED, the National Rural Telecommunications Cooperative urges the Commission to act forcefully on behalf of consumers across the country to enable satellite reception of distant network signals at households that are unable in fact to receive acceptable local network signals over-the-air. The Commission should adopt a revised Grade B signal strength standard which reflects today's more sophisticated operational and viewing environment; adopt TIREM as a predictive model to qualify viewers for distant network service by satellite; and adopt a revised measurement procedure to resolve disputes over a household's "served" status.

Otherwise, one million or more consumers across the country will be unfairly disenfranchised from receiving network programming.

Respectfully submitted,

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