

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

In the Matter of:)
)
Technical Standards for Determining Eligibility) **ET Docket No. 00-90**
for Satellite-Delivered Network Signals Pursuant)
to the Satellite Home Viewer Improvement Act)

COMMENTS OF THE NATIONAL ASSOCIATION OF BROADCASTERS

Henry L. Baumann
Benjamin F.P. Ivins

NATIONAL ASSOCIATION OF
BROADCASTERS
1771 N Street, N.W.
Washington, D.C. 20036
(202) 429-5300

Counsel

Mark Fratrick
Vice President, Research and Planning

Kelly Williams
Director of Engineering

June 27, 2000

TABLE OF CONTENTS

INTRODUCTION AND EXECUTIVE SUMMARY	iv
I. THERE IS NO JUSTIFICATION FOR FURTHER EROSION OF THE SERVICE AREAS OF LOCAL NETWORK AFFILIATES	1
A. Network Television is Already Available to Virtually Everyone.....	1
B. The Satellite Industry is Thriving and Providing Robust Competition to the Cable Industry	2
II. LOCAL-TO-LOCAL SATELLITE TRANSMISSIONS REPRESENT A FUNDAMENTAL CHANGE IN THE NEED FOR DISTANT STATIONS AS A WAY OF DELIVERING NETWORK PROGRAMMING TO DISH OWNERS.....	5
A. The Principles of Localism and Respect for Copyright Are Fundamental to America’s Extraordinarily Successful Television Delivery System.....	6
1. The “Unserved Household” Limitation Implements the Crucial Principle of Localism, Which is Deeply Embedded in American Communications Policy.....	6
2. Protecting the Rights of Copyright Owners to License Their Works in the Marketplace is Another Principle Supporting a Highly Circumscribed Compulsory License	14
3. In Enacting the SHVIA, Congress Reaffirmed the Central Role of Localism and of Copyright Protection in Television Distribution.....	15
B. The Local-to-Local Compulsory License Works Well and Should Remain In Force	17
C. The Only Justification for the Distant-Signal Compulsory License is to Make Network Programming Available to Truly Unserved Households	18
D. Local-to-Local Delivery Is Now Available to a Majority of American Households, and the Number is Constantly Increasing	20
E. Households In Markets In Which Local-to-Local Satellite Transmissions Are Available Are Obviously Not Really “Unserved”	23

TABLE OF CONTENTS (CONTINUED)

F. Any Expansion of the Unserved-Household Compulsory License In Local-To-Local Markets Would be Antithetical To The Effort To Expand The Availability Of Local-To-Local Service To Smaller Markets.....24

III. THE ONLY REAL NEED FOR AN UNSERVED-HOUSEHOLD COMPULSORY LICENSE IS IN MARKETS IN WHICH LOCAL-TO-LOCAL RETRANSMISSIONS ARE NOT AVAILABLE.....25

IV. THE ECONOMIC IMPACT ON STATIONS IN SMALLER MARKETS FROM IMPORTATION OF DISTANT STATIONS IS PARTICULARLY HARMFUL25

V. CONGRESS OR THE COMMISSION HAVE ALREADY EFFECTIVELY RELAXED THE GRADE B STANDARD IN THREE DIFFERENT WAYS.....28

A. Incorporation of Co-Channel and Adjacent Channel Interference into the ILLR Model28

B. Modification of ILLR Model for UHF Stations29

C. Waivers By Stations.....29

VI. THE CURRENT GRADE B STANDARD FOR ANALOG BROADCASTS IS A SOUND OBJECTIVE PROXY FOR ACCEPTABLE PICTURE QUALITY30

A. The Definition of “Unserved Household” Must be Objective.....30

B. The Eligibility Standard Should be Proxy for *Acceptable* Quality, Not “Fine” or “Excellent” Quality31

C. Empirical Research Shows that Grade B Intensity is An Excellent Proxy for Acceptable Picture Quality31

D. The Eligibility Standard Should Assume Use of a Properly Oriented Rooftop Antenna -- Just As Satellite Subscribers Use to Receive Satellite Signals32

TABLE OF CONTENTS (CONTINUED)

E. The Current Grade B Intensity Standard Assumes a Correctly Oriented Antenna, and the SHVIA Amendments Do Not Change That Assumption.....34

F. There Has Been No Change Relating to the “Planning Factors” That Would Warrant An Increase In Grade B Intensity38

 1. Summary of Prior Commission Reviews of the Grade B Standard39

 2. Analysis of Individual Planning Factors41

VII. IT WOULD BE PREMATURE FOR THE COMMISSION TO RECOMMEND AN “UNSERVED HOUSEHOLD” STANDARD FOR DIGITAL SIGNALS AT THIS TIME54

INTRODUCTION AND EXECUTIVE SUMMARY

In the Satellite Home Viewer Improvement Act (“SHVIA”), Congress directed the Commission to consider “all possible standards and factors for determining eligibility for [satellite] retransmissions of the signals of network stations.” 47 U.S.C. § 339(c). Congress also asked the Commission, “*if appropriate*,” (1) to “recommend modifications to the Grade B intensity standard for analog signals . . . or recommend alternative standards or factors for purposes of determining such eligibility” and -- also only “if appropriate” -- (2) to recommend a standard for digital signals. *Id.* (emphasis added).

In carrying out this task, the Commission should be guided by the principles endorsed by Congress when it enacted the SHVIA:

- that in creating compulsory licenses, Congress “*needs to act as narrowly as possible to minimize the effects of the government’s intrusion on the broader market in which the affected property rights and industries operate. . . .*”¹
- that the goal of the distant-signal compulsory license is solely “*to allow for a life-line network television service to those homes beyond the reach of their local television stations*”;² and
- that any network affiliate compulsory license must take into account “*the importance of protecting and fostering the system of television networks as they relate to the concept of localism. . . .*”³

¹ SHVIA Conference Report, 145 Cong. Rec. H11792 (daily ed. Nov. 9, 1999) (emphasis added).

² *Id.* at H11793.

³ *Id.* at H11792.

Based on those principles, and on the marketplace and technical developments discussed below, the Commission should make the following recommendations to Congress:

- With respect to retransmission of local stations within their local markets, there is no controversy and no need for change: the Section 122 compulsory license for retransmission of local stations in their local markets works well and needs no modification.
- As to distant signals, there is no justification for any expansion in the eligibility standard. Households in markets in which local-to-local satellite delivery of network affiliates is available are obviously not “unserved” in any meaningful sense, regardless of the strength of their local stations over the air. Since more than half of the TV households in the U.S. can today receive their own local network affiliates by satellite, there is no reason to override basic principles of localism and copyright by allowing importation of duplicative distant network stations to still more households in local-to-local markets.
- The Commission therefore need only address any technical issues about “Grade B intensity” as applied to those markets that have not yet been reached by local-to-local satellite service. The stations in these smaller markets are particularly economically vulnerable to poaching by distant signals: they have many of the same costs as stations in big cities, including the exorbitant costs of conversion to digital broadcasting -- yet given their much smaller audiences, they cannot expect to achieve the same revenues as big-city stations. As a result, over the past few

years, even as the nation has generally enjoyed an economic boom, the average profits of smaller stations have plummeted. Taking away additional viewers from these stations by expanding the definition of "unserved household" could put many stations in smaller markets at risk.

- The Commission concluded after an exhaustive review last year, based on a massive record submitted by all interested parties, that there has been no technological or environmental change that warrants a change in the existing definition of Grade B intensity: 47 dBu for low-VHF, 56 dBu for high-VHF, and 64 dBu for UHF. To the extent there have been relevant changes in the Grade B planning factors since the 1950s, those changes either cancel one another out, or show that the signal strength defined as "Grade B" should be reduced, not increased.

- As to digital signals, the Commission should defer making any substantive recommendation to Congress until such time -- at least three years from now -- as the relevant technical and regulatory issues, including the application of the "carry one, carry all" rule to satellite carriers, and the expansion of local-to-local service to smaller markets, are further resolved.

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

In the Matter of:)
)
Technical Standards for Determining Eligibility) **ET Docket No. 00-90**
for Satellite-Delivered Network Signals Pursuant)
to the Satellite Home Viewer Improvement Act)

COMMENTS OF THE NATIONAL ASSOCIATION OF BROADCASTERS

The National Association of Broadcasters (“NAB”)⁴ hereby submits its comments in response to the Commission’s May 26, 2000 Notice of Inquiry (“Notice”) in the above-captioned matter.

I. THERE IS NO JUSTIFICATION FOR FURTHER EROSION OF THE SERVICE AREAS OF LOCAL NETWORK AFFILIATES

A. Network Television is Already Available to Virtually Everyone

There are remarkably few television households in the United States that are not able to receive programming from all four of the major broadcast networks, ABC, CBS, Fox, and NBC. The nearly universal reach of the four networks is clear from, among other sources, empirical work by Nielsen Media Research -- which checks on the availability of each network in each of the roughly 5,000 homes in its national Nielsen Television Index sample -- showing that programming from each of the four networks is available today in at least 99% of homes

⁴ NAB is a nonprofit incorporated association that serves and represents America’s radio and television broadcast stations and networks.

nationwide.⁵ The television marketplace, of course, relies on these Nielsen data as the basis for billions of dollars of advertising expenditures.

In addition to over-the-air signals, which are available to the overwhelming majority of American households, more than half of U.S. television households today have the option of receiving their local ABC, CBS, Fox, and NBC stations directly from a satellite carrier.⁶ The Nielsen 99%+ figure quoted above shows that viewers are successfully using one or more of these options to obtain their local network affiliates. To the extent that there remain true "white areas" in the United States, therefore, those areas are extremely small.

B. The Satellite Industry is Thriving and Providing Robust Competition to the Cable Industry

As the Commission recently recognized in its most recent Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming (released during January 2000), the satellite industry was *already* thriving -- and offering potent competition to the cable industry -- *before* Congress authorized satellite carriers to deliver local TV stations within their local markets. For example, the Commission found, based on data through June 1999, that "DBS appears to attract [both] former cable subscribers and consumers not previously subscribing to an MVPD." During the year ending June 1999, "the number of DBS subscribers [rose] from 7.2 million households to 10.1 million households," an increase of more than 40% in

⁵ Nielsen Television Index, Program Report for Primetime Monday-Sunday (Sept. 20, 1999 through May 24, 2000).

⁶ In addition, 97% of all U.S. television households have the option of subscribing to cable as a way of receiving local network affiliates. *See* Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, 15 FCC Rcd 978, ¶ 19 (2000) ("Annual Assessment").

just 12 months.⁷ As a result of this rapid increase in subscribers, DBS subscribers represented 12.5% of all MVPD subscribers as of June 1999.⁸ Thanks to the extraordinary prowess of the DBS industry in attracting new subscribers, cable's share of all MVPD subscribers dropped from 85% to 82% just in the 12 months ending in June 1999.⁹

In the Commission's recent Annual Assessment, it emphasized that, with the advent of local-to-local satellite transmissions, it expected that "DBS operators will now offer a programming package more comparable to and competitive with the services offered by cable operators," with a resulting "significant and positive effect on MVPD competition."¹⁰ Based in part on the potent appeal of local-to-local transmissions, the Commission noted that industry analysts expect that "DBS will have nearly 21 million subscribers by 2007."¹¹ In just the few months that have passed since the Commission issued its Annual Assessment, it has become clear that the availability of local-to-local retransmissions has made satellite an even more formidable competitor to cable.

In early June 2000, for example, DirecTV boasted that during January-May 2000, it "acquired 715,000 new high-power customers, a 30 percent increase over the same year-ago period." Taking into account both DirecTV subscribers and customers subscribing to the

⁷ Annual Assessment, ¶ 8.

⁸ *Id.*

⁹ *Id.* ¶ 5.

¹⁰ *Id.* ¶ 14.

¹¹ *Id.* ¶ 70.

medium-power *PRIMESTAR By DIRECTV* service, DirecTV had 8.6 million total subscribers as of May 2000.¹²

EchoStar (which does business as Dish Network) likewise continued its rocketing growth. In April 2000, EchoStar announced that less than seven months after reaching the three million subscriber mark, it had added a million net new subscribers to achieve a new total of four million.¹³ Just during the first three months of 2000, EchoStar added approximately 455,000 net new customers, a 40 percent increase over the comparable signup rate during the first three months of 1999. The rapid signup rate represented another recordbreaking quarter for EchoStar.¹⁴

Between DirecTV and EchoStar, then, the DBS industry had some 12.6 million customers as of May 2000, a 25% increase just in the 11 months since June 1999. To put this extraordinary growth in perspective, DirecTV had *zero* subscribers until the spring of 1994, and EchoStar had none until the spring of 1996.

Satellite carriers are not only signing up new subscribers at an astonishing pace, but are keeping their subscribers happy. As the Commission reported in its January 2000 Annual

¹² DirecTV Press Release, "DIRECTV Announces Record May Growth With 130,000 Net New Customers," <<http://www.directv.com/press/pressdel/0,1112,328,00.html>> (visited June 26, 2000).

¹³ EchoStar Press Release, "DISH Network Passes Four Million Customer Milestone," <http://www.corporate-ir.net/ireye/ir_site.zhtml?ticker=dish&script=410&layout=-6&item_id=89372> (visited June 13, 2000).

¹⁴ *Id.*

Assessment, “DBS subscribers continue to report higher levels of customer satisfaction over cable.”¹⁵

In short, there is no need for any additional governmental subsidy to the satellite industry: it is experiencing stunning levels of success as it offers everything that cable systems can offer, and in many cases substantially more.

II. LOCAL-TO-LOCAL SATELLITE TRANSMISSIONS REPRESENT A FUNDAMENTAL CHANGE IN THE NEED FOR DISTANT STATIONS AS A WAY OF DELIVERING NETWORK PROGRAMMING TO DISH OWNERS

Today, more than half of all U.S. television viewers have access to their *local* network affiliates *by satellite* -- and that number is growing all the time. The satellite dish owners in these local-to-local markets -- including, for example, every DirecTV and EchoStar subscriber in the local Washington, D.C.-Hagerstown, Maryland DMA -- are obviously not “unserved” by their local stations: they can receive them, with excellent technical quality, directly from their satellite carrier, just by picking up the phone.

The widespread availability of local-to-local network affiliate retransmissions is profoundly significant for the Commission's inquiry: it means that, as a real-world matter, *there are no unserved viewers* in markets in which local-to-local satellite transmissions are available, because it is no more difficult for viewers to obtain their local stations from their satellite carriers than to obtain distant stations. There is therefore no need for the Commission to devote any attention in this Inquiry to the issue of “white areas” for the more than 50% of the population that already enjoys access to local-to-local service. Indeed, history will eventually look back on the distant-signal compulsory license for what it is: a temporary departure from the principles of

¹⁵ Annual Assessment, ¶ 71.

localism and copyright protection, created during the early days of the satellite industry when delivery of local stations by satellite was not yet feasible.

**A. **The Principles of Localism and Respect for
Copyright Are Fundamental to America’s
Extraordinarily Successful Television Delivery System****

The principles of localism and of free market transactions in copyrighted programming have been pivotal to the success of the American television system -- as Congress emphasized just a few months ago in approving the SHVIA.

**1. **The “Unserved Household” Limitation Implements the
Crucial Principle of Localism, Which is Deeply
Embedded in American Communications Policy****

Unlike many other countries that offer only national television channels, the United States has succeeded in creating a rich and varied mix of *local* television outlets through which more than 200 communities -- including towns as small as Glendive, Montana, which has fewer than 4,000 television households -- can have their own local voice. But over-the-air local TV stations -- particularly those in smaller markets such as Glendive -- can survive only if they can generate advertising revenue based on local viewership. If satellite carriers can override the copyright interests of local stations by offering the same programs on stations imported from other markets, the viability of local TV stations -- and their ability to serve their communities with the highest-quality programming -- is put at risk.

The “unserved household” limitation is simply the latest way in which the Congress or the Commission has implemented the fundamental policy of localism, which, as the Commission

has observed, has been embedded in federal law since the Radio Act of 1927.¹⁶ In particular, the “unserved household” limitation in the SHVA implements a longstanding communications policy of protecting local network affiliates -- which provide free television and local news to virtually all Americans -- against importation of duplicative network programming.

The objective of localism in the broadcast industry is “to afford each community of appreciable size an over-the-air source of information and an outlet for exchange on matters of local concern.” *Turner Broadcasting Sys. v. FCC*, 512 U.S. 622, 663 (1994) (*Turner I*); see *United States v. Southwestern Cable Co.*, 392 U.S. 157, 174 & n.39 (1968) (same). That policy has provided crucial public interest benefits. Only three years ago, the Supreme Court declared that

Broadcast television is an important source of information to many Americans. Though it is but one of many means for communication, by tradition and use for decades now it has been an essential part of the national discourse on subjects across the whole broad spectrum of speech, thought, and expression.

Turner Broadcasting Sys. v. FCC, 117 S. Ct. 1174, 1188 (1997).

¹⁶ First Report and Order, 14 FCC Rcd 2654, ¶ 11 (1999); see SHVA Notice of Proposed Rule Making, ¶ 3 (“The network station compulsory licenses created by the Satellite Home Viewer Act are limited because Congress recognized the importance that the network-affiliate relationship plays in delivering free, over-the-air broadcasts to American families, and because of the value of localism in broadcasting. Localism, a principle underlying the broadcast service since the Radio Act of 1927, serves the public interest by making available to local citizens information of interest to the local community (e.g., local news, information on local weather, and information on community events). Congress was concerned that without copyright protection, the economic viability of local stations, specifically those affiliated with national broadcast network[s], might be jeopardized, thus undermining one important source of local information.”)

Thanks to the vigilance of Congress and the Commission over the past 50 years in protecting the rights of local stations, over-the-air television stations today serve more than 200 local markets across the United States, including markets as small as Presque Isle, Maine (with only 28,000 television households), North Platte, Nebraska (with fewer than 15,000 television households), and Glendive, Montana (with only 3,900 television households).

This success is largely the result of the partnership between broadcast networks and affiliated television stations in markets across the country. The programming offered by network affiliated stations is, of course, available over-the-air for free to local viewers, unlike cable or satellite services, which require substantial payments by the viewer. *See Turner I*, 512 U.S. 622, 663; Communications Act of 1934, § 307(b), 48 Stat. 1083, 47 U.S.C. § 307(b). Although cable, satellite, and other technologies offer alternative ways to obtain television programming, tens of millions of Americans still rely on broadcast stations as their exclusive source of television programming. *Turner I*, 512 U.S. at 663.

The network/affiliate system provides a service that is very different from nonbroadcast networks. Each network affiliated station offers a unique mix of national programming provided by its network, local programming produced by the station itself, and syndicated programs acquired by the station from third parties. H.R. Rep. 100-887, pt. 2, at 19-20 (1988) (describing network/affiliate system, and concluding that “historically and currently the network-affiliate partnership serves the broad public interest.”) Unlike nonbroadcast networks such as Nickelodeon or USA Network, which telecast the same material to all viewers nationally, each network affiliate provides a customized blend of programming suited to its community -- in the Supreme Court’s words, a “local voice.”

The local voices of America's local broadcast stations make an enormous contribution to their communities. Over a 12-month period in 1998-99, local radio and television stations donated \$8.1 billion in community service nationwide. The average television station ran 142 public service announcement ("PSAs") per week amounting to a total contribution of \$1.8 billion industry-wide. For the average station, 56% of these PSAs addressed issues of purely local concern. More than nine out of ten television stations reported helping charitable causes, resulting in a nationwide total of \$934 million. And two-thirds of all television stations aired local public affairs programs of at least 30 minutes in length every week.¹⁷ Nearly half of all television stations reported involvement in on-air or off-air disaster relief campaigns during the period.

The following are just a few examples of television broadcasters' commitment to localism:

Saving Lives by Discouraging Alcohol Abuse and Drunk Driving

- KTWU-TV in Topeka, KS helped local high school students produce a PSA, entitled "Last Kiss," which aired throughout the state during the 1999 prom/graduation season.
- WTVQ-TV, Billings, MT, worked with the local law enforcement and medical communities to recreate DUI accidents at every high school within a 100-mile radius of Billings. "Since we started our efforts a few years ago, the community has not had a DUI fatality with seniors at graduation time," says President and General Manager Monty Wallis.

¹⁷ These figures do *not* include: "off-air" community service such as participation of news anchors and other station staff in community events; stations' investment in *producing* telethons and other community events; the production costs and air time for news and public affairs programming addressing issues of community concern; or the value of air time donated for coverage of breaking weather in emergencies and national disasters. NAB, *National Report on Local Broadcasters' Community Service* at 3, 7 (Apr. 2000). In a notable local example, four female news anchors for a local station here in Washington, D.C. have just participated in the AIDS Ride from Raleigh, North Carolina to Washington.

Building Healthy Communities

- KHNL-TV in Honolulu, HI, in its joint efforts with the Hawaii Chapter of the American Heart Association, has put on programs such as bimonthly CPR training throughout the community. The sessions bring in 150 to 300 people. KHNL-TV has also produced and aired PSAs as well as regularly airing stories highlighting community-members who were saved by CPR.
- WIVB-TV in Buffalo, NY has formed a strong commitment to Roswell Park Cancer Institute. WIVB's activities include: annual donations of up to \$500,000; an annual "Tree of Hope" concert and fundraiser, which is broadcast live by WIVB; promoting an annual "roundup" program that rounds up shopping bills to the nearest dollar, donating proceeds to the hospital; and organizing the annual "Ride for Roswell."

Embracing Education and Youth

- KXLN-TV, a Spanish-language station in Houston TX, created "Nuestra Vida" ("Our Lives"), an initiative targeting the educational needs of the community's Hispanic youth. The station, together with local community leaders and students, produces 1-2 stories a week highlighting community organizations, that are edited into PSAs aired throughout the week.
- WBIR-TV Channel 10, in Knoxville, TN, has created the "10 for the Future" campaign, a series of four "town hall" meetings a year dealing with various topics in education held in schools and other community locations. Topics to be discussed are chosen by local educators.

Reducing Violence

- WCSC-TV, in Charleston, SC, created a "Stop the Violence" panel of community members to participate in a weeklong discussion with local students, parts of which were aired on WCSC's evening news. A telephone number was also given where members of the community could talk with teen counselors.
- KSL-TV, in Salt Lake City, UT, focused on intimate violence as part of its continued Family Now efforts. Calls to a local rape recovery hotline increased by a factor of 20 within a month of KSL-TV's publicity.

Helping Neighbors in Need

- WXYZ-TV, in Detroit, MI, is a partner in Operation Can-Do, which collected more than 235 tons of food in 1998 for food banks and soup kitchens in the tri-county area. The program has brought over two-and-a-half million tons of food to needy families and individuals in the community.
- WDTN-TV, in Dayton, OH, enlists its on-air meteorologist in its annual Coats for Kids campaign, which provides coats for local Goodwill Industries. Their on-air meteorologist

tapes PSAs, appears at local dropoff sites, and incorporates the Coats for Kids program into his weather reports.

- KSDK-TV, St. Louis teams up with the local Salvation Army every year on a fundraising drive collecting as much as \$4.5 million annually.

Protecting the Environment, Keeping Communities Clean

- KITV-TV, in Honolulu, HI, airs a special magazine program called "Pacific Adventures" which educates viewers about the flora and fauna of the Pacific region and current preservation efforts. KITV-TV, with the Hawaii Department of Land and Resources, also created Silent Invasion which aims to educate the community about damage caused to the Hawaii's environment by nonnative species.
- KIRO-TV, in Seattle, WA, joined with the Washington Forest Protection Association to produce a special on the importance of salmon in hopes of educating viewers in the wake of proposed legislation that would significantly change salmon habitat laws.

Saying No To Drugs

- KCCI-TV in Des Moines broadcast a special news program, "Iowa's War on Meth," hosted by KCCI's news anchor, that aired live during prime time from a local high school gymnasium and featured a panel including substance-abuse specialists, police, and meth users.
- KELO-TV, KSFY-TV, KTTW-TV, and 11 radio stations in Sioux Falls, SD simultaneously broadcast a half-hour program on zero alcohol and drug tolerance that featured stories of individual abusers and the price they paid.
- KTIV-TV, Sioux City, IA, produced a two-day anti-drug symposium consisting of daytime assemblies for children and evening sessions for parents reaching 6,500 middle school students and 1,300 parents. Packaged segments from the sessions were used in half-hour primetime shows and tapes were distributed to local schools.

Putting Children First

- "A Home for Keeps" is a public service campaign that began in the mid-1990s by WTOL-TV in Toledo, Ohio. The weekly news segment features a child who is up for adoption and has greatly increased not only adoptions but also the community's foster parent program.
- The third annual Operation Kid Shot sponsored by KOAT-TV in Albuquerque, New Mexico, provided more than 2,100 immunizations shots to almost 1,000 children. KOAT-TV teams up with New Mexico Primary Care Association each year to ensure that many children receive essential immunizations in community clinics free of cost.
- WRC-TV's (Washington DC) "Camp 4 Kids" program awarded checks totaling \$50,000 to three area summer camps serving kids with special needs. Funds were raised from

businesses and individuals who were given special recognition. WRC aired regular news features on the camps and children's profiles throughout the summer.

Making Communities Safer

- The National Highway Traffic Safety Administration awarded WBRZ-TV in Baton Rouge, Louisiana with their 1999 Public Service Award for the station's "Buckle Up For Tony" campaign. Named after WBRZ news anchor Andrea Clesi's 18-year-old son who was killed in an automobile accident, the seatbelt safety campaign included PSAs and news coverage about the issue, with special programs hosted by Clesi on the problem.
- When a series of house fires struck the community of Syracuse, New York, WTVH-TV partnered with the local fire department to encourage residents to install life-saving smoke detectors. The station handed out free smoke detectors to the community's needy citizens. PSAs and news coverage of the importance of smoke detectors were also part of the station's campaign.

When Disaster Strikes: Answering The Call

- WLOX-TV in Biloxi, Mississippi received the prestigious Edward R. Murrow Award for their extensive efforts to help local communities ravaged by Hurricane Georges. The station stayed on the air for more than 40 hours straight covering the storm and informing residents of emergency situations. Following the hurricane's destruction, WLOX joined with the American Red Cross and Salvation Army to sponsor a relief concert for victims of the storm.
- WNMU-TV in Marquette, Michigan became a central coordinating point for emergency officials and volunteers during the spread of wild fires in May 1999. The station organized an emergency phone bank in its studios that kept track of evacuations, separated families, road closings, and more. During the emergency period, the station fielded thousands of calls from local residents.
- KARE-TV, Minneapolis, worked to organize busloads of volunteers to send to nearby St. Peter, MN after devastating tornadoes.

Community Affairs Programming: Keeping People Connected and Informed

- "Seven Can Help" has been a part of KETV-TV Newswatch 7 in Omaha, Nebraska for nearly 20 years. The special series assists local residents with consumer problems, including warning people about scams and ripoffs. The station has a 24-hour hotline to have questions answered by Newswatch 7 reporters and volunteers. The hotline has helped to uncover serious problems, such as dangerous day care situations.
- WRAL-TV in Raleigh, North Carolina developed a "Facing Race" campaign, which included local programs, news coverage, and PSAs to deal with racism in the community.¹⁸

¹⁸ *Id.* at 10-58.

* * * * *

Programming like this -- along with day-to-day local news, weather, public affairs, and community service programming -- is made possible, in substantial part, by the sale of local advertising time during and adjacent to network programs. These programs (such as "Survivor," "Who Wants to Be a Millionaire," and "ER") often command large audiences, and the sale of local advertising slots during and adjacent to these programs is therefore a crucial revenue source for local stations.

A variety of technologies have been developed or planned -- including cable, satellite, open video systems ("OVS"), and the Internet -- that, as a technological matter, enable third parties to retransmit distant network stations into the homes of local viewers. Whenever those technologies posed a risk to the network/affiliate system, Congress or the Commission (or both) have acted to ensure that the retransmission system does not import duplicative network programming from distant markets. The most recent example is the threat of unauthorized Internet retransmissions of television stations, which was quickly halted by the courts (applying the Copyright Act) and condemned by Congress as outside the scope of any existing compulsory license.¹⁹

¹⁹ See *National Football League v. TVRadioNow Corp. (d/b/a iCraveTV)*, 53 U.S.P.Q.2d (BNA) 1831 (W.D. Pa. 2000); 145 Cong. Rec. S14990 (Nov. 19, 1999) (statements by Senators Leahy and Hatch that no compulsory license permits Internet retransmission of TV broadcast programming).

In the case of cable television, for example, the Commission has since the mid-1960's imposed "network nonduplication" rules on cable systems. 47 C.F.R. §§ 76.92-76.97 (1996). As the Commission explained when it strengthened the network nonduplication rules in 1988:

[I]mportation of duplicating network signals can have severe adverse effects on a station's audience. In 1982, network non-duplication protection was temporarily withdrawn from station KMIR-TV, Palm Springs. The local cable system imported another network signal from a larger market, with the result that KMIR-TV lost about one-half of its sign-on to sign-off audience. Loss of audience by affiliates undermines the value of network programming both to the affiliate and to the network. Thus, an effective non-duplication rule continues to be necessary.²⁰

Similarly, when considering the possible entry by telephone companies into the multichannel video business through open video systems, Congress in 1996 specifically directed the FCC to apply its program exclusivity rules, including its network nonduplication, syndicated exclusivity, and sports blackout rules, to OVS operators. Telecommunications Act of 1996, Pub. L. 104-104, § 653(b)(1)(D). Congress' decision to impose an "unserved household" limitation on satellite retransmissions of network signals is thus an integral part of an overall policy of protecting local stations (and copyright owners) from importation of duplicative programming from distant stations.

²⁰ Report and Order, *In Re Amendment of Parts 73 and 76 of the Commission's Rules Relating to Program Exclusivity in the Cable and Broadcast Industries*, 3 FCC Rcd 5299, 5319 (1988), *aff'd*, 890 F.2d 1173 (D.C. Cir. 1989); *see also Southwestern Cable Co.*, 392 U.S. at 165; *Wheeling Antenna Co. v. WTRF-TV, Inc.*, 391 F.2d 179, 183 (4th Cir. 1968).

2. Protecting the Rights of Copyright Owners to License Their Works in the Marketplace is Another Principle Supporting a Highly Circumscribed Compulsory License

By granting exclusive rights to authors, the Copyright Act serves as the economic engine that drives the creation and distribution of books, films, music, computer programs, and television programs. *See Harper & Row, Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539 (1985). The Copyright Act is designed to *limit* competition in the marketing of works as to which the owners enjoy exclusive rights. *See* U.S. Constitution, art. I, § 8, cl. 8 (“The Congress shall have Power . . . To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries”); *Mazer v. Stein*, 347 U.S. 201, 219 (1954) (“The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in ‘Science and useful Arts.’”).

While Congress has determined that compulsory licenses are needed in certain circumstances, the courts have emphasized that such licenses must be construed narrowly, “lest the exception destroy, rather than prove, the rule.” *Fame Publ’g Co. v. Alabama Custom Tape, Inc.*, 507 F.2d 667, 670 (5th Cir. 1975); *see also* Cable Compulsory License; Definition of Cable Systems, 56 Fed. Reg. 31,580, 31,590 (1991) (same). The principle of narrow application and construction of compulsory licenses is particularly important as applied to the distant-signal compulsory license, because that license not only interferes with free market copyright transactions but also threatens localism.

3. In Enacting the SHVIA, Congress Reaffirmed the Central Role of Localism and of Copyright Protection in Television Distribution

When Congress temporarily extended the distant-signal compulsory license last year, it strongly endorsed both localism and copyright protection as fundamental to the American television system. With regard to localism, for example, the SHVIA Conference Report says this:

“[T]he Conference Committee reasserts the importance of protecting and fostering the system of television networks as they relate to the concept of localism. . . . [T]elevision broadcast stations provide valuable programming tailored to local needs, such as news, weather, special announcements and information related to local activities. To that end, the Committee has structured the copyright licensing regime for satellite to encourage and promote retransmissions by satellite of local television broadcast stations to subscribers who reside in the local markets of those stations.”

SHVIA Conference Report, 145 Cong. Rec. H11792 (daily ed. Nov. 9, 1999) (emphasis added).

The SHVIA Conferees also stressed the need to interfere only minimally with marketplace arrangements -- premised on protection of copyrights -- in the distribution of television programming:

“[T]he Conference Committee is aware that in creating compulsory licenses . . . [it] needs to act as narrowly as possible to minimize the effects of the government’s intrusion on the broader market in which the affected property rights and industries operate. . . . [A]llowing the importation of distant or out-of-market network

stations in derogation of the local stations' exclusive right--bought and paid for in market-negotiated arrangements--to show the works in question undermines those market arrangements."

Id. The Conference Report also emphasized that "the specific goal of the 119 license, which is to allow for a *life-line network television service to those homes beyond the reach of their local television stations*, must be met by *only* allowing distant network service to those homes which cannot receive the local network television stations. Hence, the 'unserved household' limitation that has been in the license since its inception." *Id.* (emphasis added).

Finally, the Conferees highlighted "the continued need to monitor the effects of distant signal importation by satellite," and made clear that Congress would need to re-evaluate after five years whether there is any "continuing need" for the distant signal license. *Id.*

These points were echoed by Rep. Coble, the chief House sponsor of the SHVIA and its floor manager for House passage:

"Indeed, virtually all of the programming that we enjoy on both broadcast and nonbroadcast stations is produced under th[e] free market regime. Because exclusive rights and marketplace bargaining are so fundamental to copyright law, we should depart from those principles only when necessary and only to the most limited possible degree. Statutory licenses represent a departure from these bedrock principles, and should be construed as narrowly as possible."

145 Cong. Rec. H12813 (daily ed. Nov. 18, 1999).

B. The Local-to-Local Compulsory License Works Well and Should Remain In Force

Unlike the importation of distant network stations, which can do grave damage to the network/affiliate relationship, delivery of *local* stations to the stations' own *local* viewers -- *e.g.*, Minneapolis stations to viewers in the Minneapolis area -- is a win-win for all concerned. As Congress explained in adopting a new local-to-local compulsory license in Section 122 of the Copyright Act, the new Act "structures the copyright licensing regime for satellite to encourage and promote retransmissions by satellite of local television broadcast stations to subscribers who reside in the local markets of those stations." 145 Cong. Rec. H11792 (daily ed. Nov. 9, 1999). The Commission should recommend to Congress that it leave in place the Section 122 compulsory license for local-to-local retransmissions, at least until such time as (i) the marketplace takes over the necessary rights-gathering function or (ii) satellite carriers abuse the license by, for example, accepting false addresses to (say) make viewers in Wyoming appear to live in New York City.

C. The Only Justification for the Distant-Signal Compulsory License is to Make Network Programming Available to Truly Unserved Households

Unlike the local-to-local compulsory license, the distant-signal compulsory license threatens localism and interferes with the free market copyright system. As a result, the only defensible justification for that compulsory license is as a "hardship" exception -- to make network programming available to the small number of households that otherwise have no access to it. The 1999 SHVIA Conference Report states that principle eloquently: "the specific goal of the 119 license . . . is to allow for *a life-line network television service to those homes beyond the reach of their local television stations.*" 145 Cong. Rec. at H11792-793. (emphasis added).

In thus explaining the purpose of the distant-signal compulsory license, Congress reaffirmed principles it set forth when it first created that compulsory license in 1988. *See, e.g.*,

Copyright Office Report at 104 (“The legislative history of the 1988 Satellite Home Viewer Act is *replete with Congressional endorsements of the network-affiliate relationship and the need for nonduplication protection.*”) (emphasis added); Satellite Home Viewer[] Act of 1988, H.R. Rep. No. 100-887, pt. 2 at 20 (1988) (“The Committee intends [by Section 119] to . . . bring[] network programming to unserved areas *while preserving the exclusivity that is an integral part of today’s network-affiliate relationship*”) (emphasis added); *id.* at 26 (“The Committee is concerned that changes in technology, and accompanying changes in law and regulation, *do not undermine the base of free local television service upon which the American people continue to rely*”) (emphasis added); H.R. Rep. No. 100-887, pt. 1, at 20 (1988) (“Moreover, the bill *respects the network/affiliate relationship and promotes localism.*”) (emphasis added).

The distant-signal compulsory license is *not* designed to damage the network/affiliate relationship by permitting viewers in *served* households -- who can already watch their own local ABC, CBS, Fox, and NBC stations -- to obtain network programming from another source. The license was also never intended to line the pockets of the extraordinarily lucrative satellite industry. Yet satellite carriers have aggressively advertised the benefits to served households of obtaining distant signal programming, including most notably:

- time-shifting (*e.g.*, Mountain and Pacific Time Zone viewers watching network programming two or three hours earlier from East Coast stations)
- out-of-town sports: because TV networks often show different sports events (such as NFL games) in different cities, a subscription to an out-of-town network station enables viewers to see sports events that are not televised locally.

These abuses of the compulsory license damage both the network/affiliate system and the free market copyright regime. Consider, for example, a network affiliate in Sacramento,

California, a DMA in which there are today no DBS subscribers who are genuinely "unserved" because both DIRECTV and EchoStar offer the local Sacramento ABC, CBS, Fox, and NBC stations by satellite. Nevertheless, for any Sacramento-area viewer who is technically "unserved" under the Grade B intensity standard, DIRECTV and EchoStar can scoop the Sacramento stations with the stations' own programming by offering distant signals from East Coast stations. The Sacramento station -- and every other station in the Mountain and Pacific Time Zones that has local-to-local service -- therefore loses badly needed local viewers, even though the viewers have zero need to obtain a distant signal to watch network programming. The Commission should not compound this problem by recommending that Congress expand the distant-signal compulsory license still further.

Similarly, the ability of satellite carriers to offer distant stations that carry attractive sports events is a needless infringement of the rights of copyright owners, who offer the same product -- out-of-town games -- on a free market basis. For example, the NFL has for years offered satellite dish owners (at marketplace rates) a package called "NFL Sunday Ticket," which includes all of the regular season games played in the NFL. The distant-signal compulsory license creates a needless "end-around" this free-market arrangement by permitting satellite carriers to retransmit distant network stations for a pittance through the compulsory license. Again, the Commission should not aggravate the problem by proposing a further expansion of the distant-signal compulsory license.

D. Local-To-Local Delivery Is Now Available To A Majority of American Households, And The Number Is Constantly Increasing

The two largest satellite carriers -- DirecTV and EchoStar -- now offer local-to-local transmissions of network affiliates in a total of 28 markets covering 51% of the nation's

population. These signals are available throughout the DMA, without regard to the strength of the local stations' signals over the air. The cost is \$1.20 or \$1.25 per station per month -- the same price that DirecTV and EchoStar charge for distant network signals.

As of June 2000, the markets in which DirecTV and EchoStar offered local-to-local delivery of network affiliates were (in order of market size):

- New York
- Los Angeles
- Chicago
- Philadelphia
- San Francisco-Oakland-San Jose
- Boston
- Dallas-Fort Worth
- Washington, D.C.-Hagerstown
- Detroit
- Atlanta
- Houston
- Seattle-Tacoma
- Tampa-St. Petersburg-Sarasota
- Minneapolis-St. Paul
- Cleveland
- Miami-Ft. Lauderdale
- Phoenix
- Denver
- Sacramento-Stockton-Modesto
- Pittsburgh
- St. Louis
- Orlando-Daytona Beach-Melbourne
- Portland, Oregon,
- Indianapolis

- Hartford-New Haven
- Charlotte
- Nashville
- Kansas City
- Greenville-Spartanburg-Asheville-Anderson
- Salt Lake City.²¹

The markets in which DirecTV and EchoStar today offer local-to-local -- encompassing some 51% of U.S. television households -- are just the beginning. For its part, DirecTV has announced plans to add 12 more cities to its local-to-local lineup over the next few months, including Charlotte and Milwaukee. By late September 2000, DirecTV “expects to offer local channels in 35 markets across the country, representing 58 million homes, or about 58 percent of the nation’s television households.”²²

EchoStar has similarly ambitious plans for expanding its local-to-local offerings. With local-to-local service already available in 28 DMAs, EchoStar plans to expand its local station delivery by, among other things, launching two new satellites -- EchoStar VII and VIII -- that “will include spot-beam technology that will allow DISH Network to offer local channels in as many as 60 or more markets across the United States.”²³

²¹ See DirecTV web site, www.directv.com (visited June 22, 2000); EchoStar web site, www.dishnetwork.com (visited June 22, 2000). EchoStar lacks a few stations in a few of these markets because it has not yet obtained retransmission consent as to those stations.

²² DIRECTV to Rollout Local Channels in 12 Additional Markets, <<http://www.directv.com/press/pressdel/0,1112,315,00.html>> (visited May 2, 2000).

²³ Press Release, "EchoStar Announces Construction Plans for Three New Satellites to Serve DISH Network's Fast Growing Satellite TV Service," <<http://www.corporate->

In addition to DirecTV and EchoStar, a third firm, Local TV on Satellite, “will serve approximately 65 markets in 75% of U.S. TV households.”²⁴ To do so, Local TV on Satellite plans to “use ‘spot beam’ satellite technology” to offer “quality digital transmission of every local television station within each local TV market served.”²⁵

Finally, both the House and the Senate have passed legislation providing for federal loan guarantees to promote the availability of local-to-local satellite delivery in smaller markets. *See*, Rural Local Broadcast Signal Act, H.R. 3615 (passed as amended Apr. 13, 2000); Launching Our Communities’ Access to Local Television Act of 2000, S.2097 (passed Mar. 30, 2000). The legislation passed by wide margins in both houses of Congress, and is expected to be enacted once differences between the House and Senate versions have been resolved.

E. Households In Markets In Which Local-To-Local Satellite Transmissions Are Available Are Obviously Not Really “Unserved”

When a viewer can obtain local network affiliates by satellite just by picking up the phone -- as more than half of all viewers can do today -- they are not "unserved" by those stations in any real-world sense, and they have no need at all to use distant stations to obtain network programming. A viewer in Frederick, Maryland, for example, can obtain the Washington, D.C. network affiliates by satellite from either DirecTV or EchoStar, for the same price that he or she would pay to obtain a package of distant network stations -- whatever the

ir.net/ireye/ir_site.zhtml?ticker=dish&script=410&layout=-6&item_id=76216> (visited June 16, 2000).

²⁴ Local TV on Satellite web site, <<http://www.localtv-satellite.com/index1.html>> (visited June 23, 2000).

²⁵ *Id.*

station's over-the-air intensity at the viewer's home. As a result, in this proceeding the Commission should waste no time whatsoever with the issue of "white areas" in markets in which local-to-local service is (or will in the near future be) available.

There is no policy reason for further attacking localism -- and further undermining the copyrights of local stations -- by *expanding* the importation of distant network signals to viewers who can receive their own local network affiliates by satellite. In fact, even the existing overlap between the local and distant network licenses imposes needless transaction costs in the administration of the "Grade B intensity" standard, both in predicting signal intensity (through the Individual Location Longley-Rice model) and in making individual signal intensity measurements.

F. Any Expansion of the Unserved-Household Compulsory License In Local-To-Local Markets Would be Antithetical To The Effort To Expand The Availability Of Local-To-Local Service To Smaller Markets

The House and the Senate have passed differing versions of legislation to encourage local-to-local retransmissions in the many smaller markets in which ordinary marketplace incentives may not be sufficient to make such retransmission possible. Although the legislation enjoys overwhelming political support, even supporters have been concerned that firms offering local-to-local service in small markets may fail – leaving taxpayers with the tab for federal loan guarantees, and leaving small-market viewers without satellite access to their local stations.

Any expansion of distant-signal network affiliate transmissions in smaller markets in which local-to-local is available *would be at direct cross purposes to the effort to encourage local-to-local transmissions in smaller markets.* The reason is simple: if distant network affiliates are available to additional viewers in small markets – *even when their local network affiliates are available by satellite* – it will be that much harder for any firm offering local-to-local retransmissions to succeed as a business, since a major part of the local audience is likely to be siphoned off by distant signals. In Santa Barbara, California, Yuma, Arizona, or Eugene, Oregon, for example, a company hoping to build a business of local-to-local delivery of those markets' network affiliates is already forced to compete, as to some local viewers, against stations imported from the Eastern and Mountain Time Zones – which scoop the local stations' network offerings by one to three hours. The Commission should certainly not suggest to Congress that it expand the distant signal compulsory license, thereby undermining its local-to-local loan guarantee program.

III. THE ONLY REAL NEED FOR AN UNSERVED-HOUSEHOLD COMPULSORY LICENSE IS IN MARKETS IN WHICH LOCAL-TO-LOCAL RETRANSMISSIONS ARE NOT AVAILABLE

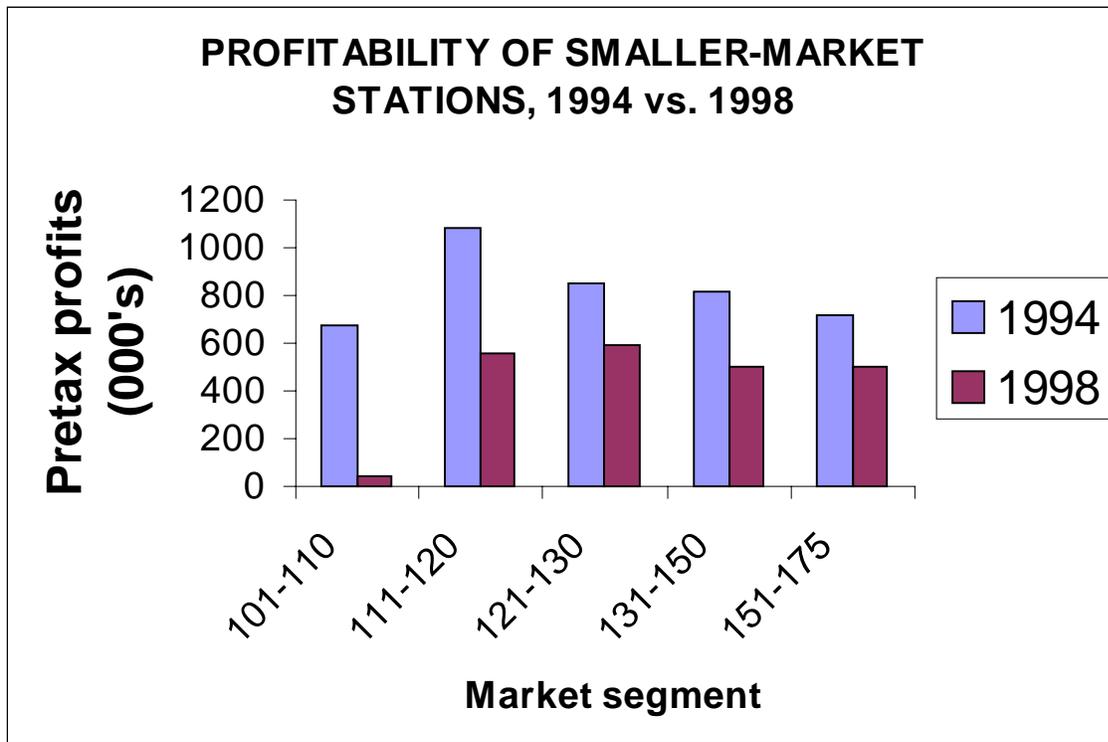
Because local-to-local transmissions result in there being *no* genuinely “unserved” viewers in the DMAs in which the local-to-local transmissions are available, the only reason for the Commission even to consider possible changes to the Grade B intensity standard is in connection with markets in which local-to-local is not yet available. Today, a little less than half of U.S. television viewers live in the roughly 180 markets in which local-to-local service is unavailable, and that figure is steadily shrinking as satellite companies expand their local-to-local offerings. Only in those markets in which local-to-local service is unavailable are the technical issues raised by the Commission – about Grade B planning factors and the like – at all relevant.

IV. THE ECONOMIC IMPACT ON STATIONS IN SMALLER MARKETS FROM IMPORTATION OF DISTANT STATIONS IS PARTICULARLY HARMFUL

Stations in smaller markets, which operate with smaller audiences to begin with and smaller profit margins, are particularly hard-hit by “poaching” by satellite delivery of distant stations carrying the same programming. The fixed costs of running a television station (*e.g.*, the costs of towers, transmitters, studios, and the like) are generally the same for a small market as for a large market, but the revenue potential in a small market is necessarily far lower because of the smaller size of local audiences. As a result, it is a challenge for stations in smaller markets to achieve substantial profits.

Although the U.S. economy as a whole was in a continuous expansion during the period 1994-98, financial data collected by NAB shows that stations in markets 101 through 175

actually showed a *decrease* in profitability from that period, with profits for each market segment declining by at least 30% -- and one segment declining by more than 90%. The following table (based on data from the *NAB/CBFM Television Financial Report*) shows the 1994 and 1998 pretax profitability data for these stations:



Although good economic times have kept most of these stations afloat so far, the stations will be at great risk during the next economic downturn, particularly if they lose still further viewers to distant affiliates of the same network. A decrease in audiences will mean lower advertising revenues, which, given the precarious position of many stations in smaller markets, could put these stations in financial peril. For each of these market segments, for example, the modest pretax profits of the average station would be virtually wiped out by a 10% decrease in advertising revenues.²⁶

²⁶ Source: 1999 *NAB/BCFM Television Financial Report*.

The adverse economic impact on smaller-market stations caused by duplicative distant programming is particularly great because satellite penetration levels are higher in smaller markets than in large markets. As a result, many small-market stations are already suffering major losses to distant network stations -- losses that would only increase if Congress were to adopt a still more lenient standard for eligibility to receive distant signals. To take just one example, in the Missoula, Montana DMA, during the 1998 Winter Olympics, distant CBS stations imported by satellite achieved a rating fully 12.5% as high as that of the local CBS station in Missoula, as viewers used the New York and Los Angeles CBS stations as a way to time-shift Olympic coverage.

The economic strength of network affiliates in smaller markets has also been undercut by other changes in the marketplace, leaving them particularly vulnerable to still further losses to distant signals. For one thing, network compensation, long an important source of revenue for affiliate stations, is being rapidly reduced as networks seek to pare costs -- and in some cases, the dollar flow has actually been reversed. *See, e.g., Joe Flint, How the Top Networks Are Turning the Tables on Their Affiliates*, Wall St. J. (June 15, 2000) at A1. In addition, every year, local stations face competition from an ever-larger array of nonbroadcast channels (such as ESPN, Nickelodeon, CourTV, HGTV, and the like) for the time and attention of viewers.

Finally, stations in smaller markets are being forced to incur huge expenditures in carrying out the Commission-mandated transition to digital broadcasting. Because many of the costs of upgrading to digital are the same in a small market as in a large one, the burden of converting to digital is particularly heavy for smaller-market stations.

For all these reasons, the Commission should be extremely reluctant to recommend any changes to the “unserved household” compulsory license that would siphon still more viewers away from smaller-market stations, which have already disproportionately borne the brunt of losses to distant network stations and which face many other challenging economic circumstances.

V. CONGRESS AND THE COMMISSION HAVE ALREADY EFFECTIVELY RELAXED THE GRADE B STANDARD IN THREE DIFFERENT WAYS

Over the past two years, Congress and the Commission have together already acted effectively to relax the Grade B intensity standard in three different ways. We lay out each of those ways here – and show that no further liberalization of the standard would be appropriate.

A. Incorporation of Co-Channel and Adjacent Channel Interference into the ILLR Model

In its First Report & Order in February 1999, the Commission recommended inclusion of co-channel and adjacent-channel interference into the Individual Location Longley-Rice model. First Report & Order, 14 FCC Rcd 2654, ¶ 57 (1999). The effect of this decision – which was by no means mandated by the term “Grade B intensity,” which refers only to the strength of the desired signal, not of the strength of other, undesired signals – was to change the status of viewers in certain parts of some markets from “served” to “unserved,” even though they *do* receive Grade B signals from the desired network affiliate. On Long Island, for example, significant numbers of households in Suffolk County are predicted to be “unserved” only because of predicted interference from other stations. The Commission’s creation of a special prediction procedure for the SHVA has thus already made more viewers eligible for distant signals than the Act actually contemplated.

B. Modification of ILLR Model for UHF Stations

In new Section 339(c)(3) of the Communications Act, adopted last year as part of the SHVIA, Congress directed the Commission to consider adjusting the existing ILLR model to further take into account buildings and vegetation. In response, in a Report & Order issued on May 26, 2000, the Commission announced certain modifications to the ILLR model.²⁷ In substance, the Commission has directed that, for UHF stations, as many as 8 dBu be subtracted from the predicted field intensity at particular households, depending on the type of buildings or vegetation in the area. Although billed as changes based on "clutter," these changes are really alterations to the Grade B standard itself for UHF stations, since the new model calls for a deduction of 5 dB for "dry salt flats," "beaches," and "bare ground," where there is obviously no problem of ground clutter.²⁸ These changes, if not modified on reconsideration, also have the effect of making additional viewers eligible (or at least predicted to be eligible) to receive distant network stations. In this second way, too, then, the Commission has already revised the pre-existing Grade B intensity standard in favor of satellite carriers.

C. Waivers By Stations

Although the definition of "unserved household" must necessarily be objective to avoid a bureaucratic morass, the objective definition is also effectively softened by the availability of waivers from affected stations. While stations have long granted waivers when they believed the circumstances warranted, Congress underscored its interest in having stations consider waivers

²⁷ In Re Establishment of an Improved Model for Predicting the Broadcast Television Field Strength Received at Individual Locations, ET Docket No. 00-11, FCC 00-185, Tables 2-3 (released May 26, 2000).

²⁸ *Id.*

by adopting a new provision in the Communications Act, 47 U.S.C. § 339(c)(2), which (once the Commission adopts implementing regulations) will require stations to respond to certain waivers within 30 days. Although the 30-day clock is not yet formally part of the law, stations have nevertheless been even more vigilant in considering – and in many cases granting – waivers. The ability of consumers to request waivers in the occasional circumstances in which Grade B intensity is *not* well correlated with the presence of an acceptable picture provides an important safety valve – and one that Congress has specifically endorsed.

VI. THE CURRENT GRADE B STANDARD FOR ANALOG BROADCASTS IS A SOUND OBJECTIVE PROXY FOR ACCEPTABLE PICTURE QUALITY

A. The Definition of “Unserved Household” Must be Objective

From time to time, satellite interests have advocated use of a subjective standard to determine whether particular households are eligible to receive distant network signals. As all neutral parties have consistently recognized, a subjective standard would be completely unworkable. Experience teaches that a subjective standard administered by asking viewers their opinion of their own over-the-air picture quality is no standard at all: it is simply a sham that eviscerates the “unserved household” limitation. *See CBS Broadcasting Inc. v. PrimeTime 24, Joint Venture*, 48 F. Supp. 2d 1342, (S.D. Fla. 1998); *ABC, Inc. v. PrimeTime 24, Joint Venture*, 17 F. Supp.2d 478, *aff’d in relevant part*, 184 F.3d 348 (4th Cir. 1999). And a subjective standard administered using proper procedures -- multiple neutral observers using a standardized antenna and receiver -- would be incalculably expensive and unworkable. *See Copyright Office, A Review of the Copyright Licensing Regimes Covering Retransmission of Broadcast Signals* (1997) (“The Office rejects the substitution of a picture quality standard for the Grade B standard

as too subjective, legally insufficient, and administratively unworkable.") Any standard for distant signal eligibility, therefore, must be strictly objective.

B. The Eligibility Standard Should be a Proxy for Acceptable Quality, Not "Fine" or "Excellent" Quality

The Commission appropriately asks if the test for whether a household is "unserved" over the air should be whether the over-the-air reception is "comparable to that received by satellite." Notice, ¶ 15. The answer, of course, is no. It would be totally unfair – and devastating to the future of over-the-air television – to say that an over-the-air analog television must be of the same quality as a digital satellite signal for which the viewer makes substantial payments every month. Few, if any, over-the-air analog television pictures could meet that standard, and to impose it would simply be a backdoor way of decimating localism and copyright protection.

C. Empirical Research Shows that Grade B Intensity is An Excellent Proxy for Acceptable Picture Quality

Real-world research conducted for an entirely different purpose -- evaluating the performance of digital television as compared to analog television in the early 1990's -- shows that Grade B intensity in fact performs well as an objective proxy for acceptable signal quality.

The specifics are as follows: in 1994, researchers from the Field Testing Task Force of the FCC's Advisory Committee on Advanced Television Service conducted field tests in Charlotte, North Carolina. The purpose of these tests was to compare the performance of conventional (analog) TV signals and digital signals. As part of the field work, neutral researchers collected data at about 200 different locations about both (a) the signal strength of the analog signals (in dBu units) and (b) subjective ratings (by several expert viewers) of the resulting picture quality. Although collected for a different purpose -- to compare digital and

analog broadcasting -- the data show there is in fact a strong relationship between signal strength and picture quality. See Engineering Statement of Jules Cohen, ¶ 16 (June 26, 2000). In short, far from being outmoded as a proxy for acceptable picture quality, Grade B intensity is shown by very recent research data to be an excellent one.

D. The Eligibility Standard Should Assume Use of a Properly Oriented Rooftop Antenna -- Just As Satellite Subscribers Use to Receive Satellite Signals

Satellite dish owners do not expect to use *indoor* antennas to receive satellite signals; only outdoor antennas (typically on a rooftop) are capable of picking up satellite signals. Nor do satellite subscribers expect to be able to receive satellite signals by pointing their satellite just anywhere; unless a satellite dish is oriented precisely towards the right satellite, it produces no picture whatsoever. See Notice, ¶ 17 (noting that "reception of satellite delivered television is generally based on the installation of a directional outdoor antenna").

Since satellite subscribers need to use a correctly oriented outdoor rooftop antenna to receive satellite signals, it is only fair to set a standard that assumes they will do at least as much to receive over-the-air signals from local stations. There are many resources available to consumers (and to TV technicians) to help them determine what type of antenna is most suitable for any given location. DIRECTV, for example, offers on its web site a simplified guide to different types of over-the-air antennas, explaining that "[a] new generation of off-air antennas can seamlessly deliver high-quality signals from free local TV broadcasters directly to your DIRECTV System with just a push of your remote."²⁹

²⁹ DIRECTV Web site, <www.directv.com/howtoget/howtogetpages/0,1076,103,00.html> (visited June 26, 2000).

The Consumer Electronics Association has gone a step further, launching last year antennaweb.org, “a fast, effective tool to help [consumers] receive off-air local television signals.”³⁰ As CEA explains, “It’s as easy as a few clicks to find the proper TV antenna, and retailers and consumers alike will have the benefit of this sophisticated mapping tool at their fingertips.”³¹ The antennaweb.org site explains the “four basic rules for TV signal reception,” all of which should be assumed to have been followed by households seeking to receive over-the-air local signals, just as they must follow the corresponding rules about receiving satellite signals:

“1. Outdoor is generally better.

Outdoor antennas have a better view of the transmitting station, with no building-induced signal loss. They receive less interference from other household electronic/electrical appliances, and they are less likely to receive reflected ghost signals from the building structure.

2. Higher is better.

The higher an antenna is, the more direct signal it can receive from the TV transmitter, while at the same time reducing the reception of interfering signals from other household electronic/electrical appliances and reflected ghost-causing signals from other nearby structures. The higher the better, but any antenna should be at least four feet above the structure to which it is mounted, and ideally above the roofline.

3. Closer is better.

If a position above the roofline is not possible, the antenna should at least be on the side of your building facing the TV signal broadcast tower.

³⁰ Consumer Electronics Association web site, <www.ce.org/newsroom/newsloader2.cfm?id=5260> (visited June 26, 2000).

4. Bigger is better.

The larger an antenna, the more signal it receives. This is especially important on channels 2-6, where the longer wavelength requires a larger antenna in order to be efficiently received. Larger antennas also become directional which reduces ghosting caused by reflected signals coming from the side and the rear of the receiving antenna.”

E. The Current Grade B Intensity Standard Assumes a Correctly Oriented Antenna, and the SHVIA Amendments Do Not Change That Assumption

The Commission’s Notice of Inquiry suggests that the addition of the word “stationary” might have changed the definition of “unserved household” to assume use of an improperly oriented antenna, *i.e.*, one pointed (in many cases) away from the strongest signal available from the station in question. Notice, ¶ 18. That suggestion is incorrect. Indeed, the chief sponsors of the SHVIA went out of their way to dispel any such mistaken impression. Senator Hatch, for example, chairman of the Conference Committee and of the Senate Judiciary Committee, said the following about this issue on the day the SHVIA passed the Senate:

“ . . . I would clarify one other point relating to a minor modification we made to the definition of ‘unserved household’ in the distant signal satellite statutory license found in section 119 of Title 17 of the United States Code. The conferees decided to add the word ‘stationary’ to the phrase “conventional outdoor rooftop receiving antenna” in Section 119(d)(10) of the Copyright Act. As the Chairman of the Conference Committee and of the Senate Judiciary Committee, which has jurisdiction over copyright matters, I should make clear that this change should not require any alteration in the

methods used by the courts to enforce the 'unserved household' limitation of Section 119. *The new language states only that the antenna is to be 'stationary'; it does not state that the antenna is to be misoriented (i.e., pointed away from the station in question). Any interpretation that assumed misorientation would be inconsistent with the basic premise of the definition of 'unserved household,'* which defines that term in relation to an individual TV station rather than to all network affiliates in a market--and speaks to whether a household 'cannot' receive a Grade B intensity signal from a particular station. *If a household can receive a signal of Grade B intensity with a properly oriented stationary conventional antenna, it is not 'unserved' within the meaning of Section 119.* In addition, if station towers are located in different directions, conventional over-the-air antennas can be designed so as to point towards the different towers without requiring the antenna to be moved. And reading the definition of 'unserved household' to assume misoriented antennas would mean that the 'unserved household' limitation had no fixed meaning, since there are countless different ways in which an antenna can be misoriented, but only one way to be correctly oriented, as the Commission's rules make clear."

145 Cong. Rec. S14991 (daily ed. Nov. 19, 1999) (emphasis added).

The Ranking Minority Member of the Senate Judiciary Committee, Senator Patrick Leahy, emphasized precisely the same point on the day the SHVIA passed the Senate:

"The addition of the word 'stationary' to the phrase 'conventional outdoor rooftop receiving antenna' in Section 119(d)(10) of the Copyright Act merits a word of discussion. As the Ranking Member of the Senate Judiciary Committee, which has jurisdiction over

copyright matters, and one of the original sponsors of this legislation, I want to emphasize that use of this word should not be misunderstood.

The new language says only that the antenna is to be 'stationary'; it does not say that the antenna is to be improperly oriented, that is pointed in way that does not obtain the strongest signal. The word 'stationary' means, for example, that testing should be done using a stationary antenna, as the FCC has directed.

Satellite companies must not be encouraged to urge consumers to point antennas in the wrong direction to qualify for different treatment. *As to antenna orientation, the relevant guidance is provided in Section 119(a)(2)(B)(ii)(II) of the bill, which specifies that the FCC's procedures (requiring correct orientation) be followed.* Since satellite dishes must be properly oriented to receive a picture at all, it would make no sense to specify misorientation of over-the-air antennas.

Permitting misorientation would also be inconsistent with the entire structure of the definition of 'unserved household,' which looks to whether a household is capable of receiving a signal of Grade B intensity from a particular type of affiliate, that is an ABC station or a Fox station, not whether it is capable of receiving all of the stations in the market."

Id. at S15022 (emphasis added).

Finally, Rep. Howard Coble, House manager of the SHVIA legislation and Chairman of the House Judiciary Subcommittee that drafted the bill, said this:

"I should briefly discuss the addition of the word 'stationary' to the phrase 'conventional outdoor rooftop receiving antenna' in Section 119(d)(10) of the Copyright Act. As the Chairman of the

Subcommittee on Courts and Intellectual Property of the House Judiciary Committee, which has jurisdiction over copyright matters, and as the original sponsor of this legislation, I want to stress that this one-word change to the Copyright Act does not require (or even permit) any change in the methods used by the courts to enforce the 'unserved household' limitation of Section 119. The new language says only that the test is whether a 'stationary' antenna can pick up a Grade B intensity signal; although some may have wished otherwise, *it does not say that the antenna is to be improperly oriented (i.e., pointed away from the TV transmitter in question)*. To read the Act in that way would be extraordinarily hypocritical, since 'stationary' satellite antennas themselves must be perfectly oriented to get any reception at all. In any event, *the Act provides controlling guidance about antenna orientation in Section 119(a)(2)(B)(ii)(II) of the bill, which specifies that the FCC's existing procedures (requiring correct orientation) be followed*. See 47 C.F.R. Sec. 73.686(d), Appendix B, at para. (2)(iv); see also FCC Report & Order, Dkt. No. 98-201, at para. 59 (describing many precedents calling for correct orientation). A contrary reading would leave the Copyright Act with no fixed meaning at all, since while there is a single correct way to orient an antenna to receive a particular station (which is what the Act assumes), there are at least 359 wrong ways to do so as one moves in a circle away from the correct orientation.

A contrary reading would also fly in the face of the text of the Act, which makes eligibility depend on whether a household 'cannot' receive the signal of particular stations. The Act is clear: if a household could receive a signal of Grade B intensity with a properly oriented stationary rooftop antenna of a particular network affiliate station, the household is not 'unserved' with respect to that network."

145 Cong. Rec. H12814 (daily ed. Nov. 18, 1999) (emphasis added).

In short, in a matter over which the Judiciary Committee plainly has jurisdiction -- an amendment to the Copyright Act -- the Judiciary Committee leadership of both the House and Senate agree that the term "stationary" should *not* be read to permit use of an misoriented antenna. Given this authoritative guidance, the Commission should correct the misimpression that might be created by its Notice on this issue.

F. There Has Been No Change Relating To The “Planning Factors” That Would Warrant An Increase In Grade B Intensity

The Commission asks whether there have been changes relating to the Grade B “planning factors” -- the building blocks that go into the determination of the signal level expected to produce an acceptable picture -- that warrant a change in the definition. Notice, ¶ 11. The short answer is that, if anything, technological developments might warrant a decrease -- bur certainly do not warrant an increase -- in the field strengths defined as “Grade B.”

As the Commission explained in its First Report & Order on SHVA matters in February 1999, “the environmental and technical changes that have taken place [since the Grade B planning factors were first established in the 1950s] trend in opposite directions and tend to cancel each other out.” First Report & Order, 14 FCC Rcd 2654, ¶ 42. That fact helps to explain why, on each of the “several occasions” on which “the Commission has examined the adequacy of the Grade B standard . . . since it was adopted in the 1950s,” it has “decided not to make changes.” *Id.* The most recent such occasion is, of course, the First Report & Order itself, in which the Commission again declined to disturb the existing Grade B definitions. *Id.* at ¶¶ 42-44.

There have been no developments since February 1999 that warrant any different result, nor should the Commission alter its correct conclusion in the First Report & Order that no change in the definition of Grade B intensity was justified at that time.

1. Summary of Prior Commission Reviews of the Grade B Standard

In the February 1999 First Report & Order on SHVA matters, the Commission describes its consideration of -- and ultimate rejection of -- proposed changes to the definition of “Grade B intensity” in the early 1970s. Since that time, the Commission or its staff have three times studied the arguments for modifying the Grade B standard, and in each case have declined to make any changes. The three studies are:

- **1977: Kalagian, *A Review of the Technical Planning Factors for VHF Television Service***
- **1979-80: UHF Comparability Report³²**
- **1993-1998: DTV Allocation Proceeding³³**

The following table summarizes the conclusions of these three reviews of the Grade B planning factors, along with the Commission's discussion in the 1999 First Report & Order itself:

In other words, the Commission has gone down this road many times, and each

³² Staff Report, *Comparability For UHF Television: A Preliminary Analysis*, 180- 83 (Sept. 1979) (emphasis added), which was incorporated by reference in a Final Staff Report, *Comparability for UHF Television*, 246 (Sept. 1980) (“The rationale behind the modifications [to Grade B intensity] is given in Appendix B to our earlier report”).

³³ See Engineering Statement of Jules Cohen, ¶ 7 (December 1998) (summarizing work of Working Party 3 of DTV Working Group).

time has declined to tamper with the long-standing definition of Grade B intensity. As the Commission explained in the First Report & Order in February 1999 (at ¶ 41), “the

Study	Grade B for Low-VHF Channels (dBu)	Grade B for High VHF Channels (dBu)	Grade B for UHF Channels (dBu)	Net Change from Current FCC Figures (dB)
FCC (1952)	47	56	64	----
Kalagian, A Review of the Technical Planning Factors for VHF Television Service (1977)	44 or 45	54-56	--	Low VHF: -2 or -3 High VHF: -2 or 0 UHF: --
UHF Compatibility Report (1980)	47	56	71	Low VHF: 0 High VHF: 0 UHF: +7³⁴
DTV Advisory Committee, Working Party 3 (1993) / FCC DTV Ruling (1998)	47	56	64	Low VHF: 0 High VHF: 0 UHF: 0
SHVA First Report & Order (1999)	47	56	64	Low VHF: 0 High VHF: 0 UHF: 0

technology of receivers and antennas has kept pace" with any claimed changes in consumer expectations or increased noise." As we show below -- planning factor by planning factor -- there is no reason to reach a different conclusion now.

³⁴ The UHF Comparability Report used planning factors based on high UHF receiver noise figures from 1972, which were then (1979-80) becoming outdated and are now completely obsolete. In any event, the Commission did not adjust Grade B intensity for UHF based on this Report.

2. Analysis of Individual Planning Factors

a. Receiver noise: as the Notice indicates, TV receivers today produce far less noise than TV receivers from the 1950s, thanks to advances in technology, including the use of solid-state components. Notice, ¶ 12. These improvements are not just a recent development: both the 1977 Kalagian study and the 1980 UHF Comparability Report rely on receiver noise figures of 6, 7, and 12 dBu for low VHF, high VHF, and UHF respectively -- reflecting substantial reductions in receiver noise between the 1950s and the mid-1970s.

The 6/7/12 figures themselves are now plainly too high, at least for UHF. Based on testing around 1980 of “almost 200 television receiver[s]” meeting the FCC's then-new noise requirements, “[t]he overall [receiver noise] average [for UHF]. . . was 9.03 dB.”³⁵ Thus, appropriate planning factors for the receiver noise figure should not exceed 6, 7, and 9 for the three channel ranges -- and are no doubt lower today given advances in technology.³⁶

³⁵ *Comparability for UHF Television*: Final Report at 89 n.11; see *Television Receiver Equipment Grading*, 47 Fed. Reg. 35014, 35015-16 (1982) (“The UHF Comparability Task Force has previously determined that the noise figure of receivers meeting our present standards averages 9 dB.”).

In setting forth proposed planning factors, the UHF Comparability Task Force used the older 12 dB average noise figure based on data from 1972 about average noise levels. *Compare Comparability for UHF Television*: Final Report at Table B-2 (proposed planning factors) *with id.* at 89 (citing study showing average noise levels of 12 dB for UHF receivers as of 1972). New receivers being manufactured as of 1979-80, however, were 3 dB less noisy on average. *Id.* The Task Force presumably used the older figure because many TV sets being used in 1979-80 were older, noisier models. In 2000, however, there is obviously no reason to rely on long-outdated 1972 noise figures.

³⁶ See *id.* at 78 (“th[e] lowering of television receiver noise can be expected to continue . . .”).

b. Signal-to-Noise Ratio. As the Notice correctly observes, despite speculation about possible changes in viewer expectations about what type of picture viewers consider to be acceptable, “no current study documents this purported change or replicates the methodology of the initial TASO study that correlated viewer judgments of television picture quality with specific signal levels.” Notice, ¶ 14.³⁷ For example, unlike the TASO study, the 1992 study by Bronwen Lindsay Jones, “Subjective Assessment of Cable Impairments on Television Picture Quality,” relied on viewers “who may have expected to receive, and to pay for, higher quality pictures.” *Id.* In at least two other respects as well, the 1992 Jones study plainly did not replicate the methodology of the original TASO study. *First*, as Jules Cohen points out in an accompanying Engineering Statement, the Jones study relied on weighted noise, as opposed to the unweighted noise in the TASO research. *Second*, and even more significantly, the design of the 1992 Jones study essentially predetermined its outcome, and guaranteed that the study would reach very different results than the original TASO study. Specifically, the 1992 Jones study completely excluded all signal-to-noise ratios below 36 dB -- even though the TASO study had found that 27 dB was the median “acceptable” signal-to-noise ratio. That exclusion is extremely significant, because the Jones study itself found that viewers will spread the available ratings (from “very annoying” to “imperceptible” impairments) across the full range of picture qualities they are shown.³⁸ (That is, a phenomenon like Parkinson's Law -- work expanding to

³⁷ The TASO study actually found that a signal-to-noise ratio of approximately 27 dB was appropriate for an “acceptable” picture. *See* Engineering Statement of Jules Cohen. In using 30 dB in the Grade B planning factors, the Commission was therefore being conservative by 3 dBu.

³⁸ Bronwen Lindsay Jones, *Subjective Assessment of Cable Impairments on Television Picture Quality* (Cable Television Laboratories, Inc. 1992) (“Test subjects will take a range which is narrow (i.e., all high- or low-quality presentations) and expand it to fit the scale, thereby labeling, for example, good quality signals as ‘Very Annoying’ Conversely, if the range is quite wide, the subjects will compress it to fit.”)

fill the time allotted -- is at work in such studies.) By showing viewers only much higher quality pictures than those used in the TASO study, the Jones study sheds no light on whether a TASO-type study would achieve the same or different results today.

In any event, even if there had been a small increase in viewer expectations of the quality of free, over-the-air television signals since the 1950s, any such increase would, at most, be neutralized by the large reductions in receiver noise and other favorable changes since that time.³⁹

c. **Antenna gain.** To determine appropriate figures for receiver antenna gain, it is important to begin with the Commission's description of the intended function of "Grade B intensity":

Grade B represents the field strength of a signal 30 feet above ground that is strong enough, in the absence of man-made noise or interference from other stations, to provide a television picture that the median observer would classify as "acceptable" using a *receiving installation* (antenna, transmission line, and receiver) *typical of outlying or near-fringe areas.*

SHVA NPRM, 13 FCC Rcd 22,977, ¶ 4 (1998) (emphasis added).

In other words, what is relevant is the type of receiving equipment that is appropriate for use in an area with low signal strength. As the Commission has pointed out, "[p]ersons living in areas located in the outer reaches of 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

³⁹ The worst case would be to assume a required signal-to-noise ratio of 36 dB, which is the ratio employed by the Commission for an acceptable picture for a *cable* system. *See Cable Television Technical and Operational Requirements*, 7 FCC Rcd 2021, 2027 ¶ 38 (1992).

as installation of an *improved roof-top antenna* and careful location and orientation of that antenna to enhance their off-the-air reception.”⁴⁰ More specifically, the Commission pointed out in 1980 that “the 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 1952 counterpart.*”⁴¹ There is, obviously, no reason to expect viewers who wish to receive over-the-air signals to use *worse* equipment today than in 1980.⁴² And since satellite subscribers must use equipment costing hundreds of dollars to receive satellite signals -- even if satellite carriers subsidize the purchase in the first instance -- there is no reason to establish a standard that assumes that viewers will buy BMW-quality satellite dishes but Hyundai-quality over-the-air reception equipment.

Since the FCC's 1952 planning factors assumed gains of 6, 6, and 13 for low VHF, high VHF, and UHF respectively, the Commission's 1980 finding means that outlying viewers who wish to receive over-the-air signals are likely to use an antenna with *at least* those amounts of gain.⁴³ As discussed below, antennas with gains equal to or greater than those specified in the

⁴⁰ In re Amendment of Parts 1, 63, and 76 of the Commission's Rules to Implement the Provisions of the Cable Communications Policy Act of 1984, FCC 84-1296, 3 F.C.C. Rcd 2617, ¶ 18 (released April 29, 1988) (emphasis added).

⁴¹ *In re Table of Television Channel Allotments*, FCC 80-545, 83 F.C.C.2d 51, 84 (released Oct. 21, 1980) (emphasis added).

⁴² See Comments of Richard P. Biby, Biby Engineering Services (Dec. 11, 1998) (“It is quite true that the chimney or tower mounted antenna is still popular and widely used in more rural areas. This type of antenna is effective in assisting in the reception of both nearby and very distant stations.”).

⁴³ See *Comparability for UHF Television: Final Report* at 81 (“It appears that the planning factor value selected by the FCC for VHF receiving gain is correct. If anything, it *underestimates* system performance.”) (emphasis added).

original planning factors are readily available in the marketplace and widely used in outlying areas.

The FCC's observation about the use of enhanced reception equipment by viewers in areas with relatively weak signals is confirmed from many sources. In its comments in the SHVA proceeding, for example, the Electronics Technicians Association, an organization of over 2,000 technicians who install both over-the-air antennas and satellite dishes, said this:

To get signals in rural areas "may require a higher gain antenna. . . .

*Common all-band antennas easily achieve four times or 12 dB gain over half-wavelength simple dipoles, cut for each channel. . . ."*⁴⁴

*"Regarding outlying or near-fringe area locations, the 'conventional rooftop antenna' requirements are greater. The SHVA . . . should not limit the size, number of elements, number of bays, reflectors, directors, etc. commonly required for proper reception at distances or because of terrain problems."*⁴⁵

*"The difference in reception ability between a bare antenna -- of any style, length, etc. is vastly different from a system as commonly used in suburban and rural areas."*⁴⁶

*"[The] '4-bay UHF screen' antenna . . . and its 8-bay counterpart . . . are the conventional [outdoor] UHF antennas for fringe rural areas, used with a pre-amplifier and usually a rotor."*⁴⁷

⁴⁴ Comments of the Electronics Technicians Association, International, Inc. (filed Dec. 11, 1998) at 14 (emphasis added).

⁴⁵ *Id.* at 24 (emphasis added).

⁴⁶ *Id.* at 14 (emphasis added).

For areas in which signal strength is relatively low, antenna manufacturers and installers universally recommend use of a large antenna, combined with a pre-amplifier to further boost signal strength. *See* Consumer Electronics Association, www.antennaweb.com (“These large, multi-element rooftop antennas are used in weak signal areas for maximum possible TV reception”) (visited June 20, 2000) (emphasis added); Electronics Technicians Association Comments at 14-15; Radio Shack Answers Catalog, 152 (1999) (“When to use an antenna-mounted TV/FM amplifier . . . [a]ntenna-mounted amplifiers are intended primarily for weak-signal 'fringe' areas”) (emphasis in original). As discussed above, the Commission itself has repeatedly made the same point.⁴⁸

Even setting aside the major dB gains from use of pre-amplifiers, large directional antennas that are appropriate for use in outlying areas -- particularly in combination with separate UHF antennas, as recommended by the Electronics Technicians Association and the UHF Comparability Report⁴⁹ -- have gains comparable to those in the existing Grade B planning factors, and in some cases substantially larger. By spending \$129.99 on an all-channel antenna

⁴⁷ *Id.* at 23 (emphasis added).

⁴⁸ *See, e.g.*, In re Amendment of Parts 1, 63, and 76 of the Commission's Rules to Implement the Provisions of the Cable Communications Policy Act of 1984, 3 FCC Rcd 2617, ¶ 18 (“[p]ersons living in areas located in the outer reaches of the service areas of broadcast stations . . . can, and generally do, take relatively simple measures such as installation of an *improved* roof-top antenna . . . to enhance their off-the-air reception.”) (emphasis added).

⁴⁹ *See Comparability for UHF Television: Final Report* at 49 (“clearly, a separate UHF-only antenna would provide superior performance”); *id.* at 52 (“[t]he advantages of the two antenna system are numerous”).

from Radio Shack (model VU-210-XR), for example, a household can boost its gains to 6.2 dB, 8.7 dB, and 11.1 dB for the three channel ranges.⁵⁰

For reception of UHF stations, by spending only another \$36.60 for a separate UHF antenna (*e.g.*, Winegard DS-8050), a household can achieve average UHF gains of 12.3 dB.⁵¹ Even that figure is an underestimate: the Commission found in 1982 that a commercially-available Radio Shack 8-bay UHF antenna had a gain of 13.4 dB.⁵²

To be sure, these gain figures assume that an antenna has been properly installed, and it is no doubt possible to improperly install an over-the-air antenna. (The same is true, of course, of satellite dish antennas.) In the 1981 NTIA report about antennas in Northern Illinois discussed in the Notice, for example, the researchers found -- not surprisingly -- that antennas installed in grossly inappropriate ways performed poorly.⁵³ But as the NTIA report emphasizes, “installations can be made using antenna system

⁵⁰ See <http://support.tandy.com/support_video/doc17/17346.htm> (visited June 26, 2000). By comparison, satellite dishes can cost vastly more, *see* Radio Shack Answers Catalog, at 136-139, even if satellite carriers sometimes “eat” the cost as a promotional measure. And, of course, satellite subscribers must *pay* every month for their service; by contrast, a rooftop antenna is a one-time investment, with a need thereafter only for occasional tune-ups.

⁵¹ Winegard Web Site, <www.winegard.com/dsspecs.html> (visited June 26, 2000).

⁵² *In re Improvements to UHF Television Reception*, 90 FCC 2d 1121 (1982) at Appendix B. As discussed above, the Electronics Technicians Association's Comments state (at 23) that “[the] ‘4-bay UHF screen’ antenna . . . and its 8-bay counterpart . . . are the conventional [outdoor] UHF antennas for fringe rural areas, used with a pre-amplifier and usually a rotor.” (Emphasis added.)

⁵³ See R.D. Jennings, *Television Field Strength and Home Receiving System Gain Measurements in Northern Illinois*, NTIA Report No. 81-68 (1981), at 35-36 (discussing antenna installation in which antenna was pointed in the opposite direction as the tower and in which mismatched splitter was used); *id.* at 54 (describing improper outdoor use of indoor cable, with resulting premature aging and degradation).

components commonly available which will provide very good gain versus frequency performance.”⁵⁴

Again, as a simple matter of fairness, and to avoid a devastating impact on localism, the standard for over-the-air signal reception should assume that viewers make at least the same type of efforts to receive over-the-air signals as they do to receive satellite signals -- including use of a high-quality antenna, tailored to reception of the particular channels in question, at rooftop height, oriented towards the desired signal. Based on that assumption, the current planning factors for antenna gains are, if anything, conservative.

d. Line loss: The transmission line loss figures on which the current Grade B intensity values are based are 1, 2, and 5 dB (per 50 feet of cable) for the three channel ranges. These figures are either in agreement with, or are more conservative than, specifications published by a leading manufacturer of antennas and cables (Winegard) for readily available RG-6 coaxial cable -- the cable that the UHF Comparability Report recommends for use in downloads. The Winegard specifications are as follows:

Low VHF: 0.7 to 0.95 dB

High VHF: 1.3 to 1.4 dB

UHF: 2.15 to 2.9 dB⁵⁵

⁵⁴ *Id.* at 55. In addition, the authors of the NTIA study cautioned of possible bias because "homeowners who felt they might have an antenna system problem [may have been] more cooperative with our field measurement program than were homeowners who apparently recognized no deficiency in their TV reception." *Id.*

⁵⁵ Cohen Engineering Statement, ¶ 6; *see* <<http://www.winegard.com/cable.html#75ocut>>).

Even if one rounded each of these ranges up, these line loss figures would be the same as, or (in the case of UHF) 2 dB less than, the transmission line loss figures in the Grade B planning factors.

Again, as the Northern Illinois study discussed above shows, there is no doubt that one can achieve inferior performance with transmission line by using inappropriate materials or by damaging the materials in the course of installation. But it would be grossly unfair to broadcasters, and a needless disruption of the network/affiliate relationship, to define a household as "unserved" because it has set up a faulty over-the-air antenna system -- while at the same time setting up a costly and carefully tuned satellite antenna.

As to splitters: a household with an ambient field intensity of 47 dBu in the air above its rooftop is "capable of receiving a signal of Grade B intensity [from a low VHF station] with a conventional outdoor rooftop receiving antenna," whether or not the household chooses to split the signal once it comes into the house. Moreover, amplifiers are readily and inexpensively available to overcome the effect of splitters if viewers wish to use a single rooftop antenna to serve more than one television set. See Cohen Eng. Statement ¶ 22; Cohen Reply Eng. Statement ¶ 9.

e. **Dipole factor.** The Commission's Notice observes, correctly, that the dipole planning factor for UHF channels is an average of figures that range about 2.3 dB above and below the average at the extreme ends of the UHF band (Channel 14 and Channel 69). (The much smaller VHF band does not raise similar issues.) If the Commission wished to define Grade B intensity more precisely in light of this variability across the wide range of frequencies that make up the UHF band, it could do so by adjusting Grade B intensity as follows:

Channels 14-23: -2

24-33 : -1

34-46: no change

47-59: +1

60-69: +2⁵⁶

f. **Field strength variability.** The definition of Grade B intensity already has built into it a “time fading factor” that is designed to assure that an acceptable picture will be available at least 90% of the time. The Commission should not tamper with this long-settled factor, which is appropriate given that (1) a free, over-the-air signal cannot reasonably be held to the quality standards of a subscription service, (2) even if the signal sometimes suffers impairments beyond the “acceptable” range, they are unlikely to cause a TV screen to go black, but may simply result in a temporary level of higher impairments; (3) beyond the 90% level, adjustments to Grade B intensity are no longer “log normal,” and hence result in eccentric and unreliable figures. *See* Eng. Statement of Jules Cohen, ¶¶ 9-10.

g. **Environmental noise.** As the Commission notes, atmospheric and galactic noise is generally only relevant in the low VHF band, *see* Notice , ¶ 23 -- and there is no reason to believe that either thunderstorms or radiation from the Milky Way have increased since the 1950s. As to man-made noise, NAB is not aware of any reliable studies showing (or quantifying) an increased level of man-made noise in the Grade B area. *See* Cohen Eng. Statement, ¶ 11. Indeed, as America has made the transition from a smokestack economy to a

high-tech economy, many noise sources may actually have been reduced since the 1950s. In any event, only in the low-VHF band is environmental noise a consideration at all. *Id.*

h. Multipath and ghosting. There is no need to modify the distant-signal eligibility standard to deal with the problem of ghosting, which is both (a) readily correctible in many if not all cases and (b) not subject to any scientific method of prediction in any event.

First, ghosting can be reduced, if not eliminated, by using a properly oriented directional antenna. See Notice, ¶ 25 ("The viewer . . . can take certain actions, such as turning or moving the antenna, to minimize ghosting"); Eng. Statement of Jules Cohen, ¶ 12. Again, neutral third parties, such as the Consumer Electronics Association, confirm the point: "Directional antennas are the most ghost-resistant antennas since they 'see' in only one direction and have a tendency not to see the reflected ghost signal." <<http://www.antennaweb.org/antennaweb/>> (visited June 26, 2000); see also Winegard Web Site, <www.winegard.com/offair1.html> (visited June 26, 2000) (offering "Ghost Killer" V/U Antenna for \$84.35); Channel Master web site, <<http://www.channelmaster.com/pages/q1.htm>> (visited June 26, 2000) ("Quantum antennas offer unsurpassed ghost and interference rejecting ability. If you are in an area where ghosting is a problem, the Quantum series is the right choice"); <www.supercalibrations.com/antenna.htm> (visited Dec. 15, 1998) ("The antenna must be aimed accurately. . . . Having the antenna pointed properly will minimize one of the most common distortions in television: Ghosts!").

Again, a distant-signal eligibility standard should assume that viewers have made all reasonable efforts to obtain over-the-air signals, including, at a minimum, taking the steps

⁵⁶ Cohen Engineering Statement, ¶ 8.

described by neutral experts (such as the Consumer Electronics Association) to obtain strong signals and minimize ghosting. Indeed, since over-the-air signals come for free, while satellite services charge monthly fees, one could reasonably expect viewers to make larger expenditures of time and money on hardware to obtain over-the-air signals.

Second, ghosting can be almost completely eliminated through an already-proven, off-the-shelf technology, namely ghost-cancellation. *See* Cohen Eng. Statement, ¶ 13. If satellite carriers believe that ghosting is a serious impediment to over-the-air reception, and if they are unwilling or unable to carry stations in all markets on a local-to-local basis, they should provide ghost cancellation equipment in the hardware they provide to consumers, rather than asking the Congress to imperil free, local, over-the-air television by changing the distant-signal eligibility standard.

Third, as the Commission suggests, the phenomenon of ghosting is extremely complex, and there is no reliable way of predicting the existence or severity of ghosting at any particular location. *See* Notice, ¶ 26. To even begin to create such a system, one would need a comprehensive database of the locations and characteristics of every reflective object in the United States -- obviously an impossibility.

Finally, to the extent that ghosting may be caused by tall buildings in "urban canyons" such as Manhattan, that problem is now completely irrelevant in this context: the major urban areas that have tall buildings (such as New York City) *also have local-to-local satellite service*, which means that satellite subscribers have an effortless way to obtain ghost-free signals from their local network affiliates.

Conclusion with respect to definition of “unserved household” for analog purposes.

The historic concern about “unserved households” with satellite dishes is now moot in every market in which satellite carriers offer local-to-local transmissions -- markets that now include more than half of the viewers in the nation. As the carriers add new local-to-local markets, the concern about unserved households will evaporate in those markets as well.

In markets in which local-to-local service is not yet available, the existing definition of “unserved household” -- grounded in the battle-tested Grade B intensity standard -- remains sound. As the Commission found only 16 months ago based on a vast factual record, any technical or environmental changes that have occurred since the Grade B standard was set tend to cancel each other out, with improvements in receivers and antennas offsetting any increased viewer demands or other factors. Indeed, to the extent there have been changes since the Grade B standard was set, they would warrant a decrease, not an increase, in Grade B intensity.

As to ghosting, that problem is now moot in New York, Chicago, and the other “urban canyons” that have inspired much commentary in the past -- thanks to local-to-local. To the extent ghosting arises in smaller markets, it can be largely solved on an individual basis through use of a correctly oriented directional antenna -- as many sources completely independent of the broadcast industry confirm. Ghosting can also be eliminated on a systematic basis through use of readily available ghost-cancellation technology, which the satellite industry could easily incorporate into the equipment that it sells to customers. In addition, given the extraordinary complexity of multipath interference, there is no available prediction device that could be used to predict where ghosting might arise, as the Commission has previously observed. In any event, the network-affiliate relationship should not be sacrificed to address a problem that can be solved

by viewer and/or satellite industry efforts in markets in which local-to-local service is not yet available, and that is a total nonproblem in markets in which local-to-local *is* available.

VII. IT WOULD BE PREMATURE FOR THE COMMISSION TO RECOMMEND AN “UNSERVED HOUSEHOLD” STANDARD FOR DIGITAL SIGNALS AT THIS TIME

The SHVIA directs the Commission, “if appropriate,” to “make a further recommendation relating to an appropriate standard for digital signals.” 47 U.S.C. § 339(c).⁵⁷ Given the snail-like pace of the transition to digital television, it would be inappropriate for the Commission to make a recommendation at this time about whether there needs to be any “unserved household” standard for digital signals, or about what such a standard should be.

Although almost all American TV households are able to receive analog signals from local TV stations, very few TV households -- currently fewer than 20,000 nationwide -- are able to receive digital signals, even though broadcast stations have (at the Commission’s direction) spent huge sums on the equipment necessary to broadcast in a digital format. Not until at least 2006 will all TV stations be expected to have made the transition to digital transmission equipment and all households be expected to have made the transition to digital reception equipment. As a result, through the expiration of the distant-signal compulsory license at the end of 2004, there will be no practical need to address the “served” or “unserved” status of households with respect to over-the-air digital signals.

Between now and completion of the digital transition in 2006, many events are likely to

⁵⁷ The Act does not now create any compulsory license based on the unavailability of an over-the-air digital signal: the term “unserved household” is defined in Section 119(d)(10) of the Copyright Act solely in terms of inability to receive a signal of the *analog* field intensities defined as Grade B in 47 C.F.R. § 73.683(a).

occur that will be highly relevant to whether there is any need for an “unserved household” provision for digital signals, and if so, what the definition of an “unserved household” should be.

Those developments include:

- further progress in local-to-local delivery of both analog and digital signals of local network affiliates, including through implementation of the rural satellite initiative likely to be passed by Congress this year;
- resolution of the technical challenges filed by various parties relating to the standard for digital transmissions, which could have a major impact on how (if at all) to define which households are “unserved” by digital signals;
- establishment of Commission rules implementing the “carry one, carry all” provisions of SHVIA about satellite carriage of local TV stations;
- rulings about the application of digital must-carry rules to the satellite industry's principal competitor, the cable industry; and
- possible development of marketplace solutions to the white area issue, including voluntary licensing of programming to areas determined by broadcasters to be unserved by local stations (in those markets in which local-to-local satellite delivery is unavailable).

Given these facts, the Commission should decline to recommend any definition of “unserved household” with respect to digital signals at this time, and defer making such a recommendation until a time much closer to when Congress will actually need to consider action on the matter.⁵⁸

⁵⁸ If the Commission concludes that it needs to make a tentative recommendation, it should suggest adoption of the signal intensity values (28, 36, 41 dBu for Channels 2-6, 7-13, and 14-69) set forth in the Notice.

Conclusion

For the foregoing reasons, the Commission should recommend to Congress that the existing definition of "unserved household" not be expanded in any way, and, if anything, the dBu values defined as "Grade B" for analog signals should be reduced. Since an ever-larger majority of American TV households have access to their local stations by satellite, there is obviously no need for any *expansion* of the definition of "unserved household" in those markets. And more generally, there is no basis, whether in the technical planning factors or otherwise, to revise the definition of "Grade B intensity" based on technological or environmental changes since the 1950s. If anything, those changes -- including the great reduction in receiver noise -- would warrant a decrease, not an increase, in the dBu's defined as "Grade B."

Respectfully submitted,

NATIONAL ASSOCIATION OF
BROADCASTERS

Henry L. Baumann
Benjamin F. P. Ivins
National Association of Broadcasters
1771 N Street, N.W.
Washington, D.C. 20036
(202) 429-5300

Counsel

Mark Fratrik
Vice President, Research and Planning

Kelly Williams

June 27, 2000

Director of Engineering