

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)	
)	
Annual Assessment of the Status of)	Docket No. 99-230
Competition in Markets for the)	
Delivery of Video Programming)	
)	
)	
Federal-State Joint Board)	Docket No. 96-45
on Universal Service)	

**Exparte Comments of the
Rural Utilities Service**

Introduction

The Rural Utilities Service (RUS) is a rural development agency of the United States Department of Agriculture. For over 50 years, RUS (originally the Rural Electrification Administration) has been helping build modern telecommunications systems in rural America. Today, RUS continues to promote rural telecommunications by providing financing and technical advice to about 825 rural local exchange carriers.

This filing is intended to demonstrate that commonly-used statistics on the availability of cable TV and telephone service are not equivalent and, in particular, that cable TV is not as widely available as some statistics would seem to indicate. This issue is important because policy makers and regulators cannot make good decisions without accurate information.

Commonly Used Cable and Telephone Statistics Are Not Equivalent

Recently, RUS and the National Telecommunications and Information Administration (NTIA) released *Advanced Telecommunications in Rural America*.¹ That report is a response to a request by ten United States Senators for an analysis and comparison of broadband deployment in rural and non-rural areas.

1. See NTIA and RUS, *Advanced Telecommunications in Rural America: The Challenge of Bringing Broadband Service to All Americans*, rel. April 26, 2000 [hereinafter NTIA-RUS Broadband Paper]. A copy is attached to this filing. It is also available in PDF format at: www.usda.gov/rus/telephone/telephon.htm.

Among the issues raised by the Senators was the rate of deployment of broadband facilities in rural areas compared to non-rural areas. In our response, we focused on the two technologies with significant deployment numbers: broadband over cable television systems (cable modems) and broadband over telephone systems (digital subscriber line or DSL). A second issue of concern to the Senators was the capability of broadband enhancements to existing systems. Both issues require knowledge of the extent of existing facilities (*i.e.*, the area over which the service is “available” without significant construction) because these technologies are generally added to an existing cable TV or telephone system. While not all existing plant can carry broadband without modification, availability is a useful first step. In our research, we discovered that the commonly used statistics for the availability of telephone and cable TV are not equivalent, and when used as if they are, the result is a significant overstatement of the prospects for the availability of advanced services, particularly in rural areas.²

Telephone Availability

The U.S. Census collects information on telephone subscription, both in the decennial Census and through periodic estimates known as the *Current Population Survey*. The most commonly used statistic from the Census is service penetration - the ratio of households with telephone service to total households (a household in this case is an occupied housing unit). By this measure, telephone penetration on a national basis has held relatively steady at approximately 94% for the last several years of the surveys.³ In addition to providing detailed and comprehensive information on subscription down to the Census block level,⁴ the statistics from the decennial Census can be compared and correlated with other Census data in a multitude of ways such as by income, race, and population density.⁵

It is important to note that this commonly-used statistic is a measure of subscription, not availability. The Census does not collect information on whether non-subscribers live in an area where telephone service is available so they do not publish a statistic such as “homes passed by telephone plant,” which could be compared directly to one of the commonly-used cable statistics described below.

If such a statistic of telephone availability were available, it can be estimated that it would be significantly higher than 94%. For example, while there are some extremely remote rural areas without available telephone service, we know of no metropolitan statistical areas (MSAs) without near-ubiquitous availability. Thus, it can be assumed that virtually all the households without telephone service in MSAs are passed by telephone plant. With the acknowledgement

2. Also, the statistics do not reflect cases where, because carriers expect low subscription rates, the carriers are reluctant to deploy service in high poverty rural areas, even when the population density would appear to support such deployment.

3. See www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/Monitor/mrd99-6.pdf

4. A census block averages approximately 20 households.

5. The Rural Task Force in their White Paper Number Two, *The Rural Difference*, used Census data to demonstrate significant differences between rural and non-rural areas served by Local Exchange Carriers. The paper can be found at: www.wutc.wa.gov/rtf/rtfpub.nsf?open

that this misses some non-MSA households with available service, it can be estimated that at least 98% of all households are passed by telephone plant.⁶

Cable Availability

There are no similarly comprehensive statistics for cable TV service. The Census, for example, does not gather information on cable television. The commonly used statistics are collected through private surveys and self-reporting by cable providers. One of the most frequently quoted statistics is “homes passed by cable as a percentage of TV Households,” a measure that appears to describe availability. The Commission has reported such industry-provided statistics in its *Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming* from which this excerpt is taken:⁷

Cable’s Capacity to Serve Television Households. The number of U.S. Homes with at least one television (“TV households”) was reported as 98 million at the end of 1997 and June 1998.⁸ At the end of 1998 and June 1999, the number of U.S. TV Households was reported as 99.4 million.⁹ The number of homes passed by cable was 94.6 million at the end of 1997 and 95.6 million at the end of 1998, an increase of 1.1%.¹⁰ By the end of June 1999, the number of homes passed by cable was 96.1 million.¹¹ The number of homes passed as a proportion of the number of TV households increased 0.1% from 96.5% in December 1997 to 96.6% in December 1998, remaining at 96.6% of TV households in the first half of 1999.¹²

Based on extensive field experience in rural America, RUS staffers found these availability numbers surprisingly high. We know that cable TV is less available in rural areas, particularly in the unquestionably rural areas (outside of town and not in a Metropolitan Statistical Areas) where there are approximately 10 million households according to the 1990 Census.¹³ During

6. Based on the 1990 Census, there were 91,690,462 households in the nation. Of these, 1,229,991 were non-MSA unserved households.

7. See Sixth Annual Report: *Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, FCC 99-418, rel. Jan. 14, 2000 at ¶19 [hereinafter Sixth Annual Report].

(Footnotes 8-12 are from the Sixth Annual Report.)

8. Nielson Media Research. Nielson Media Research estimates the number of television households annually, and industry practice is to use this figure throughout the television broadcast season, which begins in September and ends in August of the following calendar year. Thus the figure for TV households in June 1999 is the same as the figure for December 1998. In App. B, Tbl B-1, we report the number of television households as of year-end 1998 and June 1999. These figures are from Paul Kagan Associates, and we use these estimates of television households for consistency with the remainder of reported figures in this section.

9. Nielson Media Research.

10. See App. B, Tbl. B-1.

11. *Id.*

12. *Id.*

13. See *supra* note 1 at 4-5 (including footnotes 9-12) and 19 (footnote 63).

research for the NTIA-RUS Broadband Paper, we found the reason for the disparity. As we noted in the paper:¹⁴

Statistics for the availability of cable vary according to whether a comparison is made to TV households, all households, or housing units. The most commonly used statistic is to compare homes passed by cable to TV households. According to estimates developed by Paul Kagan Associates, Inc., and reported in the National Cable Television Association's (NCTA's) *Cable Television Developments*, there were 99 million TV households, 66 million cable customers, and 95.6 million homes passed by cable service. See NCTA, 23 *Cable Television Developments* 1 (Summer 1999). Using these figures, the ratio of homes passed by cable to TV households was 96.6%. *Id.* The Warren Report, a second source reported by NCTA on its website, estimated that there were fewer homes (91 million) passed by cable in 1999 based on information collected from cable providers (ncta.cyberserv.com/qs/user_pages/Dev%28statedata%29.cfm). Comparing the Warren estimate of homes passed to the Kagan estimate for TV households yields a ratio of approximately 92%.

Another way to measure the availability of cable is to compare homes passed by cable to all households, not only TV households. According to a December 8, 1999 report, there were approximately 101 million households (occupied housing units) and 112 million housing units (occupied or un-occupied) as of July 1998. See Census Bureau, *Estimates of Housing Units, Households, Households by Age of Householder, and Persons per Household: July 1, 1998* (www.census.gov/population/estimates/housing/stuhh1.txt). Comparing the Kagan and Warren estimates for homes passed to total households yields ratios of 95% and 90%, respectively.

Finally, a third comparison is between houses passed by cable and total housing units. This comparison is especially useful because there is evidence that cable providers may be reporting housing units passed, not households or TV households passed. For example, the Warren report listed 258,832 homes passed by cable in Washington, D.C., while Census estimated 265,000 housing units but only 225,000 households for the same area. The cable provider in Arlington, Virginia reported 89,968 homes passed and 89,968 housing units in its franchise area. It is reasonable that providers report housing units passed because, when it does not serve a house, a cable provider has no easy way to distinguish among a household without TV, a household with TV, or an unoccupied housing unit. Comparing the Kagan and Warren estimates for homes passed to total housing units yields ratios of 86% and 81%, respectively.

Since the publication of the NTIA-RUS Broadband Paper and in response to an RUS request for clarification (attachment A), the Warren Publishing Company has confirmed (attachment B) that the phrase "homes passed by cable" refers to housing units, not households or TV households. Put another way, using the Kagan estimates, cable may pass 96.6% as many housing units as there are TV households, but it does not pass 96.6% of TV households because some of the houses it passes are households without TV or are unoccupied. If cable TV were nearly universally available, (that is, available to nearly all of the of the 112 million habitable units

14. *Id.* at 19 (footnote 62).

whether or not those units have a TV or are currently occupied) the ratio of “homes passed by cable” to “TV households” would approach 113%, not 100%.¹⁵ Of the estimated 14% to 19% of houses not passed by cable, most are TV households in rural areas.

Public Policy Implications of the Overstatement of Cable TV Availability

The incorrect perception of near-universal availability of cable TV is widespread¹⁶ and has important public policy implications. First, it seems to undermine the need for universal service support for telephone service. If it could be argued that cable TV is available to 97% of households without support, it could also be argued that telephone service, which reaches only 94% of households, should not be supported. Second, it could lead to complacency about broadband deployment in rural areas. For example, in a recent paper, the authors quoted FCC-reported cable statistics¹⁷ in support of their conclusion that there is no reason to believe that broadband will not be ubiquitously deployed over cable systems in the near future in rural areas.¹⁸ If it is known that narrow-band telephone is available to at least 98% of the population whereas cable is available to an estimated 81% to 86% of the population, and most of the areas where it is unavailable are rural, then the need for preserving and advancing universal service and the challenges of rural broadband delivery are compellingly demonstrated.

Meeting the broadband challenge in rural America will likely require modernization and extension of both cable and telephone plant. Distance and density remain the major impediments to rural broadband. A combination of policies including universal service support, competition, affordable access to capital, new technologies, and regulatory incentives will all be necessary to achieve the vision of the Telecommunications Act of 1996.

Conclusion

Commonly used statistics for the availability of cable TV and telephone service are not equivalent. Caution should be exercised in using such statistics to draw conclusions about the pressing telecommunications needs in rural America. Broadband provided over cable TV

15. 112 million housing units (Census estimate) ÷ 99 million TV households (Kagen report of Nielson estimate) = 113%.

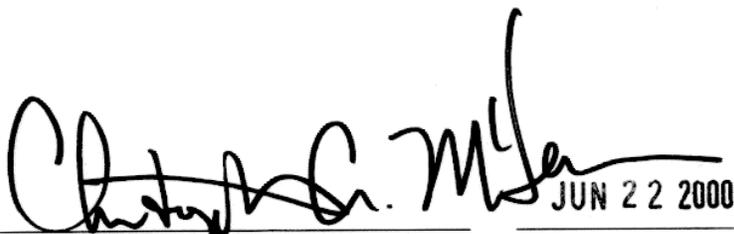
16. For example, in a comparison of satellite and cable TV services, a leading consumer testing organization reported that “[a]lmost all households now have access to cable, but satellite service is still limited to those people whose home affords a clear view of the sky above the southern horizon.” See *Satellite TV comes down to earth*, Consumer Reports, July 2000, at 19 and 20. Not only is this perception of near universal availability untrue, it was this lack of availability of cable TV in rural America that was largely responsible for the unexpectedly rapid initial growth in the number of customers served by satellite.

17. In the Sixth Annual Report, the cable statistics are presented in such a manner as to suggest that the ratio of “homes passed by cable” to “TV households” is a genuine measure of cable availability when it is actually a much less meaningful comparison of incompletely overlapping sets, *i.e.*, there are units in the numerator that are not in the denominator. Both the heading of the paragraph excerpted above (*Cable’s Capacity to Serve Television Households.*) and the use of the word “proportion” in the phrase “the number of homes passed by cable as a proportion of the number of TV households” imply that every “home passed by cable” is a “TV household.”

18. Lee L. Selwyn *et al*, *Bringing Broadband to Rural America: Investment and Innovation in the Wake of the Telecom Act*, September 1999 at 22 and 29.

systems is growing rapidly and the competition between cable modems and DSL provides those in more densely populated areas a choice. However, cable TV does not reach an estimated 14% to 19% of American houses and most of those houses are in rural areas. Thus, comparing the number of "homes passed by cable" to "TV households" creates the misleading perception that cable TV is available almost everywhere and that it is just a matter of time until rural cable systems can provide broadband. This perception could reduce efforts to promote rural deployment and rural development of broadband capable plant.

The RUS appreciates the opportunity to comment.



Handwritten signature of Christopher A. McLean in black ink, written over a horizontal line. To the right of the signature, the date "JUN 22 2000" is printed in a small, black, sans-serif font.

Christopher A. McLean
Acting Administrator
Rural Utilities Service

Date



United States Department of Agriculture
Rural Development

Rural Business-Cooperative Service • Rural Housing Service • Rural Utilities Service
Washington, DC 20250

COPY

April 18, 2000

Mr. Michael Taliaferro
Managing Editor and Assistant Publisher
Warren Publishing, Inc.
2115 Ward Court, NW
Washington, DC 20037

Dear Mr. Taliaferro:

This letter concerns two of the television statistics published annually in Warren's Television & Cable Factbook (Factbook). Recently, my associate, John Huslig, discussed this in a telephone conversation with Richard Koch, the assistant managing editor and editorial director of your organization. Specifically, the Rural Utilities Service is interested in the definition of "homes" in the statistics "homes passed by cable television facilities" and "homes in franchised area."

On page D-10 of the 1999 Factbook, "homes in franchised area" is defined as the number of "housing units" in the area for which the cable system holds the franchise. (According to the Census definition, housing units include all habitable structures, occupied or not.) In their conversation, Mr. Koch told Mr. Huslig that the same definition applies to "homes passed by cable." In other words, the definition of "homes" in both statistics refers to housing units as defined by the Census, not households, which are occupied housing units.

RUS would appreciate your confirming that the "homes passed" statistic is the number of housing units passed by cable, as reported to your organization by the individual cable systems. Please call Mr. Huslig at 202-720-0665 if you have any questions in regard to this request.

Sincerely,

GARY B. ALLAN

GARY B. ALLAN
Chief, Universal Services Branch
Advanced Services Division
Rural Utilities Service

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Secretary of Agriculture, Washington, DC 20250

Attachment A



April 24, 2000

Mr. Gary B. Allan
Chief, Universal Services Branch
Advanced Services Division
Rural Utilities Service
U.S. Department of Agriculture
Washington, DC 20250

Dear Mr. Allan,

I received your letter of April 18th regarding Warren's definitions of "homes passed by cable" and "homes in franchised area" as presented on page D-10 of the 2000 Television & Cable Factbook.

In both cases, the term "homes" means the number of housing units. As you pointed out, the wording is a bit confusing and therefore will be changed in the 2001 edition to read "housing units".

Thank you for bringing this to my attention.

Sincerely,

Michael Taliaferro
Managing Editor, Television & Cable Factbook