

**Before the**  
**DEPARTMENT OF COMMERCE**  
**National Telecommunications and Information Administration**

In the Matter of )  
 )  
Proposed Information Collection; Comment ) OMB Control No. 0660-0021  
Request; Computer and Internet Use )  
Supplement to the Census Bureau's Current  
Population Survey

**COMMENTS OF**  
**THE UNITED STATES TELECOM ASSOCIATION**

Patrick Brogan  
Jonathan Banks  
United States Telecom Association  
607 14<sup>th</sup> Street, N.W., Suite 400  
Washington, D.C. 20005  
202-326-7300

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USTelecom – The Broadband Association (USTelecom) is pleased to offer these comments in response to the Notice published by the National Telecommunications and Information Administration (“NTIA”) in the Federal Register, Vol. 82, No. 5, January 9, 2017, seeking input on the Computer and Internet Use Supplement (“Supplement”) to the November 2017 Current Population Survey (“CPS”). The comments below also refer to the draft survey instrument (“Draft”) available from the NTIA web site at [https://www.ntia.doc.gov/files/ntia/publications/november\\_2017\\_cps\\_supplement\\_draft\\_for\\_public\\_comment.pdf](https://www.ntia.doc.gov/files/ntia/publications/november_2017_cps_supplement_draft_for_public_comment.pdf), which we last retrieved on March 7, 2017.

USTelecom last filed CPS-related comments in June 2012 in anticipation of the October 2012 CPS. We are grateful that NTIA took into consideration many of the comments we offered in 2012 and we appreciate the opportunity to offer comments in anticipation of the upcoming November 2017 Supplement to the CPS. As in 2012, we commend the Census Bureau (“Census”) and NTIA for collecting information about Internet adoption and usage through the CPS and the Supplement. Data provided through these surveys remain useful in tracking the status of Internet and broadband adoption and non-adoption. Furthermore, the ability to leverage the large Census sample has enabled policymakers and stakeholders to segment and cross-tabulate the data for a range of demographic groups to understand variations in adoption patterns.

USTelecom recognizes that there is a wide range of potential topics and questions that the Supplement might address, including many with important ongoing economic and policy implications. We also understand that Census is constrained by policy considerations, survey format, time and space limitations, and the need for consistency with prior surveys. Therefore, we offer these comments to assist Census and NTIA in

identifying and prioritizing topics for inclusion in the Supplement while balancing the objectives of gaining useful insights and efficient survey design.

We offer these comments and suggestions for consideration in the 2017 Supplement and in future versions. We present our comments in roughly the same order as the questions appear in the Draft. This does not necessarily reflect the importance we place on the different comments. We place the greatest importance on the issues of competition, inclusion of all relevant technologies, mobile substitution for fixed broadband, Internet video, and survey frequency. Thank you again for the opportunity to comment in this proceeding. We hope you find our comments helpful.

1. Survey Frequency. In the 2012 CPS proceeding, USTelecom commented that Census and NTIA should field the Supplement to the CPS annually. Since then, Census and NTIA have fielded the Supplement in three of five years (2012, 2013, and 2015). USTelecom continues to believe that Census and NTIA would benefit from fielding this Supplement annually. It is important to collect regular time series data to analyze trends in this rapidly evolving area of communications technology, particularly where there are core questions with ongoing economic and policy relevance.

While many topics compete for slots in the CPS supplemental schedule, USTelecom suggests that developments in Internet and computer use are among the most important in the U.S. economy, affecting consumer welfare, economic growth, and social cohesion. At the same time, adoption trends are shifting rapidly; networked devices and applications are becoming more widely and more quickly diffused; and product cycles are becoming faster. In such a rapidly evolving industry with such economic importance, public policy must be responsive and keep pace with the facts on the ground.

Unfortunately, the data used to inform public policy can become outdated quite quickly. In order to help ensure that policy is informed by the most current data possible, we recommend that Census and NTIA field the Supplement annually in the future.

Another reason to field the Supplement annually is that it might address some of the limitations of space and time available for questions. In other words, Census and NTIA could reserve a small portion of slots for rotating questions to ask less frequently than each year. In this way, Census and NTIA might extend the breadth of coverage to include topics that they might otherwise exclude. As USTelecom highlights below, some categories in the Draft are overbroad, and the Draft excludes some potentially important topics. A rotating questions approach may be one way to address these issues and constraints.

2. CMPINT - Clarity on Timing of Device Usage. It appears that Census and NTIA seek to understand usage of devices, including those purchased recently within the last six months. If so, USTelecom recommends revising the next to last sentence of the CMPINT language for clarity, and we suggest the following: “Please focus on devices [you/members of your household] currently have access to, and have used at least occasionally during the past six months, *including devices purchased recently*.”

3. CMPINT – Home Digital Assistants Excluded. Voice-activated digital assistants are not among the devices or technologies for which NTIA asks about adoption. This technology appears to be poised for rapid growth in the coming years. Gartner predicts digital assistant technology will be in 10 million homes by the end of 2017. See <http://www.gartner.com/smarterwithgartner/gartner-predicts-a-virtual-world-of-exponential-change/>. Moreover, this technology may have wide ranging implications, both economic (impact on devices with traditional user interfaces) and policy (e.g.,

privacy). USTelecom recommends that Census and NTIA add a question to track this technology early on its adoption curve.

4. LAPTOP and TABLET – Detachable Devices. It may be unclear to respondents and interviewers whether detachable hybrid tablet / laptop devices belong in the laptop or tablet category. In the TABLET question, should standalone e-readers be included in the same group with general-purpose tablets? With respect to detachable hybrids, we have no view on which category is appropriate, but it should be explicit to ensure consistent results. With respect to standalone e-readers, it seems they would warrant separate treatment.

5. WEARAB – Wearable Devices. USTelecom raises two issues with respect to wearables. First, respondents may interpret the question to include certain other devices which are not specifically mentioned. Digital glasses and virtual reality devices are examples that come to mind. These types of devices appear to be gaining traction in the marketplace and therefore we believe it makes sense for Census and NTIA to seek information about these devices. Second, it may not make sense to lump together different types of wearable technologies into a single category. For example, results may not be meaningful if single-purpose devices, such as health and exercise monitors, are included in the same category as general-purpose smart watches. Therefore, we believe these devices warrant separate treatment. Additionally, if other types of wearables, such as glasses or virtual reality devices, are included in the survey, they appear to be of a different nature than watches and health monitors and, therefore, they should be treated separately.

6. INTRAV – Too Broad. There is a wide range of potential uses of the Internet while travelling, and the related policy concerns vary. For example, usage while travelling could encompass using a mobile device while driving; taking a train, bus, or airplane; or – increasingly in the future – while sitting in an autonomous vehicle. Unless Census and NTIA plan to disaggregate these potential uses, the results may offer little valuable insight and we recommend dropping the question.

7. INOTHR – Internet Use in “Other” Place. The survey asks if someone uses the Internet from some “other” location. It seems like a question asking where specifically would be useful here.

8. HOMTE - Type of Technology Used for Home Internet. The Draft excludes terrestrial fixed wireless service from the list of possible technologies used. Fixed wireless is a standard technology for which the Federal Communications Commission (FCC) collects data regarding connections and availability in its Form 477. Relegating the technology to “other” seems insufficient. According to FCC data, there were 939,000 residential fixed wireless subscribers at the end of 2015 and that figure grew 129 percent from 410,000 in 2008 and 23 percent from 763,000 in 2013. We recommend including fixed terrestrial wireless in either item (1) or (2) of the listed technologies. It may also be useful to include a “Don’t Know” or “Not Sure” option in this question, especially for those who get an Internet service building-wide or campus-wide bundled with their housing costs (see discussion of question HOMSU below).

9. HOMSU – Type of Provider of Home Internet Service. This list of illustrative company types in response (1) is too limited because it excludes satellite and

fixed wireless companies. In addition, the items listed in response (2) seem vague. It is likely that many respondents will not distinguish between a company under response (1) and cooperatives, non-profits, and possibly public agencies under response (2); and it seems to make little sense to lump together public agencies with cooperatives and non-profits. Moreover, “public agency” is a vague term. It could mean a municipal network provider or, for example, an educational network or a publicly owned electric utility. It is possible some respondents would not distinguish these entities from a company in response (1).

Furthermore, the distinction between response (1) and response (3) (“...provided for an entire ... building...and included in housing costs”) may not be mutually exclusive. The same may be the case for response (4) (“publicly available ... at no charge). In both cases, there is often a company providing the underlying service that is sold to the end user by a building or a municipality. There is some risk that the question overstates non-ISP provided broadband.

At a minimum, Census and NTIA should drop the cooperative and non-profit items from response (2); and if the purpose of the “public agency” item is to identify, for example, municipal networks, the language should be more specific. If the distinction between response (1) on the one hand, and responses (3) and (4) on the other hand, is whether an ISP provides service directly to the consumer, then response (1) should explicitly say so. However, given the potential confusion created by all of these categories, it may make more sense to drop this question altogether.

10. PECOMP and MOBDAT– Perceptions of Competition for Home Internet.

This question poses several concerns. First, USTelecom assumes this question is only

asked of respondents who have stated they have home Internet service. Consumer perceptions about the presence of competitive options may not reflect the reality of competitive availability. For that, the U.S. government already collects Census-block level data from the former National Broadband Map / current FCC Form 477 broadband deployment data collection. Even in the absence of actual deployment data, it is unclear what role perceptions of competition would play in policymaking. Therefore, this question may be unnecessary.

Second, if Census and NTIA go forward with fielding the PECOMP question, the list of illustrative choices is too limited. Specifically, the Draft survey excludes satellite, fixed wireless, and mobile wireless as potential options. At a minimum, USTelecom recommends revising the last two sentences to include satellite and fixed wireless as options. In addition, USTelecom recommends that Census and NTIA consider, as one option, including mobile wireless as an option.

Third, as an alternative – and perhaps preferably – to listing mobile broadband as a “home” broadband option in PECOMP, Census and NTIA might instead ask whether consumers consider, or would consider, mobile broadband as an alternative to fixed broadband for their home internet or data needs. In addition, USTelecom recommends that Census and NTIA ask how usage is shifting among fixed and mobile access options. If Census and NTIA ask about fixed and mobile usage, it will be important for interviewers and respondents to have a clear understanding of the distinction between cellular access (i.e., mobile data) and Wi-Fi, which is merely an extension of a fixed service. In any case, there exist Wi-Fi only devices that do not use mobile data services.

USTelecom recommends that the language under MOBDAT specify that Wi-Fi only devices are not included under MOBDAT question.

Stepping back, the very structure of the Draft survey may implicitly prejudice the question of mobile as a competitive alternative to fixed Internet service. By separating the MOBDAT and HMINT1/HMINT2 sections, the survey presumes that mobile wireless broadband is of a different nature and is not an alternative to fixed broadband. As an aside, the structure of the Draft survey also implies a similar prejudgment with respect to satellite (by excluding it from the “high-speed Internet category” in the HOMTE question and listing it as a separate choice next to dial-up Internet) and fixed wireless (by excluding it from the HOMTE question altogether, as discussed above).

While data regarding actual practices, such as the portion of respondents that use mobile Internet access only, and the degree to which usage has shifted from fixed to mobile access, will be a more immediately useful concurrent indicator, data regarding perceptions and intentions may provide a leading indicator allowing policymakers to anticipate and adapt more quickly to changing conditions. As discussed in the section above regarding the frequency of the survey, such perceptions can change rapidly and annual surveys are more likely to capture such changes in a timely fashion.

Today, there is evidence that some consumers have already shifted to wireless broadband only. According to a 2015 survey by Pew Internet, 10 percent of respondents had only a smartphone for Internet access at home, and at least 3 percent of these respondents lived in areas where there was a fixed broadband alternative. See <http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/>. Meanwhile, trends suggest the likelihood of increasing migration to mobile broadband. The national mobile

carriers have moved to offer “all you can eat” mobile data plans, which will facilitate more data-intensive usage. Fifth generation (5G) wireless, which is predicted to offer very high speeds on par with today’s leading fixed services, is now in trials and widespread commercial deployment is expected over the next several years.

Here is an opportunity to see how this trend plays out and get in on the ground floor and see how perceptions change. It is also an opportunity to get early insight into a potentially important policy question – i.e., the extent to which consumers view mobile broadband as an alternative to fixed broadband – and track such perceptions over time.

Consumer migration to wireless-only voice service provides an example of how consumer preferences can change quickly and how policy can lag. In 2003, approximately three percent of households were using mobile voice only in their home, according to data from the Centers for Disease Control (CDC) available at <https://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless200705.pdf>. Today more than half of households that have a telephone use only mobile voice, according to the CDC data, available at <https://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201612.pdf>. It is not certain when mobile telephony was widely considered an alternative to landline voice service. By the turn of the last decade, from 2009 to 2011, the rate at which American households were dropping landlines had accelerated to an average of approximately five percent per year and more than one-third of households used wireless only by the end of 2011. See, e.g., <https://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201206.pdf>. Yet it took the FCC until 2016 to rule that traditional “incumbents” were non-dominant providers of residential voice service (see [9](https://apps.fcc.gov/edocs_public/attachmatch/FCC-16-</a></p></div><div data-bbox=)

90A1.pdf), and it has still not acknowledged that wireless voice is a substitute for wireline voice. We knew the facts about wireless substitution, and could track it with semi-annual data; but we lacked information about consumer perceptions and attitudes. Such data might have enabled policymakers to conjure a faster, more rational policy response to actual marketplace developments.

11. AUDIO and EDTRAI – Types of Audio. First, within the AUDIO category, some types of audio downloads are not mentioned, such as audiobooks or “educational” material consumed for leisure. Second, Census and NTIA may wish to distinguish this latter category from educational content considered in the EDTRAI category, which would seem to pertain to career and skill development rather than leisure. Third, whatever is included in the AUDIO category will inevitably lump together certain types of content that may be different in nature. There are, of course, different types of podcasts and radio programs, e.g., long form, short form, fiction, non-fiction, news, sports, etc. It is probably beyond the scope of the Supplement to distinguish these types of programs. But music seems especially different from radio programs, podcasts, and possibly audiobooks and educational content for leisure. Therefore, USTelecom recommends that, at a minimum, music warrants having its own category.

12. PUBLISH – Limiting to Personal Content. Because corporate blogging or content is covered under telework (TELEWK), USTelecom recommends that Census and NTIA clarify that this question does not refer to such content, but may include content published for self-employment.

13. TELEWK – Frequency Dimension. It would be useful to understand not only whether people telecommute, but how much. Would it make sense to add a

frequency dimension to this question, such as daily, weekly, or less frequently? It would be useful if one could cross-tabulate this information with industry and employment data collected through the CPS.

14. USESVC, ESVCS, and ECOMME– Different Uses. These questions refer to the so-called “sharing economy.” It may be useful to understand overall how many people participate in the sharing economy; however, the list of examples includes only ride sharing and room rentals. Perhaps there are few other examples that respondents might use, such as performing chores, cooking or grocery shopping, or tutoring. In addition, while it is useful to understand overall participation in the sharing economy, it would seem more useful to know which services consumers are adopting at faster or slower rates. Ride sharing and room rentals are good examples that may warrant individual treatment. There may be others, though the range is probably too broad to afford individual treatment to more than a handful. Finally, will the distinction between sharing economy services and “other services” mentioned under ECOMME be clear to survey respondents?

15. MEDDOC – Different Types of Uses. There is a range of ways a patient might communicate with a doctor or other professional, from simple emails or texts to conducting an examination or other session over a video connection. This question should distinguish among these types of doctor-patient communications.

16. PSPRE. It seems that Census and NTIA would want to distinguish between consumers ceasing the various listed activities (such as financial transaction, posts to social networks, online purchases, etc.) versus ceasing activities associated with particular problematic vendors or providers. We recommend that Census and NTIA

either specify whether they intend to limit responses to instances where the respondent ceased activities altogether or whether they intend to include cases where the respondent ceased an activity only with selected vendors. In the alternative Census and NTIA could expand the question to ask about both.

17. PSCYBA, CBULLY, and EVROUT – Uncertainty. It would seem that a “Don’t Know” or “Not Sure” option would be a legitimate and possibly common response to these questions.

18. NOHM, PRINOH, NOOU, PRINOO, and PSENSI – Cost and Price Issues. In these questions, the “Can’t afford” and “Not worth the cost” responses do not specify whether the problem is the cost of service or the cost of devices. Since the NOHM and NOOU questions are not read to the respondent, the interviewer might need to probe further when cost is cited as a reason for not using the Internet. We also propose adding an option for “I don’t know how to use it,” which might be a useful thing for policymakers to understand.

The PSENSI question suffers from similar shortcomings with respect to the cost of devices and services. For example, one option might be for the interviewer to specify, “Putting aside the cost of devices used to access the Internet...would you buy home Internet if it were offered at a lower price.” Even then, at best, the responses to this question might indicate which consumers simply say they will not purchase Internet service at any price. Beyond that, the question may be of little value because it offers no sense for (a) what the price of Internet access is from which service providers; (b) whether the respondent knows what the price is; or (c) at what price the customer would be willing to buy Internet service. Given the limited information ascertainable from this

question, it is not clear what policymakers might do with it and, therefore, USTelecom suggests the Census and NITA should drop this question.

19. TVINT – Issues. The language in the section should be clear that “cable TV” includes services offered by telecommunications carriers. Verizon FiOS and AT&T U-verse are likely the most well-known, but many other small and mid-sized telecommunications companies offer similar services. A very short list of examples would include CenturyLink Prism TV, Windstream Kinetic TV, and Hawaiian Telcom TV.

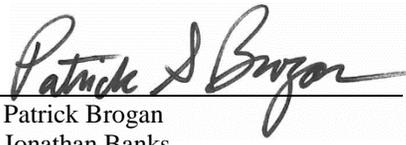
Some telecommunications companies’ television services, such as AT&T U-verse and others, are technically “Internet Protocol TV” or IPTV services. They are similar to, but not technically identical to, traditional cable TV service. The most significant difference is that these IPTV services distribute video programming on a switched basis via an IP broadband connection which is decoded by a set-top box. Cable TV services and fiber-based ones, such as Verizon FiOS, distribute their principal video programming on a bulk non-switched basis via a RF signal that is then tuned and decoded by a set-top box. Respondents may or may not be aware of this distinction. Many may simply consider IPTV service a “cable TV” service. But there is at least some risk of confusion between IPTV (cable-like) services and what the Draft refers to as “Internet-based video services,” which presumably means over-the-top subscription (or perhaps non-subscription) video services, such as Netflix, Hulu, Amazon Channels, Sling TV, HBO Now, AT&T DirecTV Now, and Verizon go90. Therefore, we suggest that the Census and NTIA review the language in the Draft to determine if there is a way to ensure clarity with respect to this distinction.

This set of questions addresses cable “cord cutting” in particular. Unless there is a space limitation issue, it is not clear why the survey should end if the respondent states that they have a subscription video service. Similar to the discussion of fixed and mobile broadband, it might be useful to ask whether consumers are considering switching to Internet-based video services only. It also seems worth asking if respondents consume Internet-based video services even if they have a TV subscription, and how much. Questions about usage, intentions, and time-shifting video consumption by use of on-demand, digital video recorder, and Internet-based video services might provide leading indicators of how consumers’ viewing habits and attitudes towards subscription video are changing.

In the NOTV question, response (7), “Can watch using an antenna,” should be moved to either the first or second slot because it is a threshold question, especially for those who never had subscription service. Also, in the NOTV questions, it seems it would be useful to include a follow up asking which is the most important reason for not subscribing.

20. Finally, it may be a worthwhile exercise to look at how past Supplemental results compare to other data series addressing similar issues. For example, Pew does surveys on Internet usage and home broadband adoption. Pew has also looked at smartphone-only households. The FCC Form 477 residential connections data can be combined with Census household data to estimate home broadband penetration. How do past results from the Supplement compare? Can Census and NTIA make any adjustments to the Supplement to address any differences?

Respectfully submitted,

By:   
Patrick Brogan  
Jonathan Banks  
United States Telecom Association  
607 14th Street, N.W., Suite 400  
Washington, D.C. 20005  
(202) 326-7300