



PUBLIC NOTICE

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WIRELINER COMPETITION BUREAU RELEASES DATA SPECIFICATION FOR FORM 477 DATA COLLECTION

WC Docket No. 11-10

On June 27, 2013, the Federal Communications Commission (Commission) released a Report and Order modernizing and improving its collection of data on broadband and voice services through FCC Form 477 (Form 477).¹ The Commission stated in the *Order* that the Wireline Competition Bureau (Bureau) would release a data specification that reflects the changes necessary to implement the *Order*.² The attached specification fulfills this directive and provides more detailed information on the data that filers will need to submit pursuant to the revised Form 477.

The attached data specification provides direction to filers on the data they will be required to submit in accordance with the rule changes adopted in the *Order*. The specification provides an overview of each section of the data collection and lists each field that filers will need to fill out online or include in their data upload for each section. It also includes information on the required format of the data and a sample entry for each record.

The modifications to the Form 477 data collection adopted in the *Order* are subject to approval by the Office of Management and Budget (OMB) in accordance with the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13.³ The Bureau will submit information on the rule changes and the revised collection to OMB for review under section 3507(d) of the PRA. OMB, the general public, and other federal agencies will be invited to comment on the new and modified information collection requirements from the *Order* at that time.

The Bureau will announce the specific filing deadlines and other procedures for submitting Form 477 under the revised rules in a subsequent Public Notice. Until the rule changes in the *Order* are implemented, providers should continue to submit Form 477 data as required under the existing rules.⁴

¹ *Modernizing the FCC Form 477 Data Program*, WC Docket No. 11-10, Report and Order, 28 FCC Rcd 9887 (2013) (*Order*).

² *Id.* at 9897, para. 21.

³ *Id.* at 9926, para. 89.

⁴ Because implementation is contingent upon approval by OMB in accordance with the PRA, as well as system upgrades to the Form 477 filing interface, we cannot provide a precise implementation date at this time. However, as indicated in the *Order*, we anticipate that our first collection of deployment data on Form 477 will take place in September 2014, for data as of June 30, 2014. *Id.* at 9899, para. 25.

Additional information on the Form 477 data collection can be found on the Commission's Form 477 webpage at <http://transition.fcc.gov/form477/>. You can also contact the Form 477 staff in the Industry Analysis and Technology Division, Wireline Competition Bureau, by calling (202) 418-0940, (202) 418-0484 (tty). For additional information about this data specification, please contact Ken Lynch at (202) 418-7356 or Kenneth.Lynch@fcc.gov, or Chelsea Fallon at (202) 418-7991 or Chelsea.Fallon@fcc.gov.

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APPENDIX

Form 477 Data Specification

1. Filer Identification
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1. Filer Identification

Record Format for Filer Identification Data

Field	Description	Type	Example
FRN	Provider FCC Registration Number	Integer	8402202
Study Area Codes	USAC-issued 6-digit study area code(s) covered by the filing (if filing entity is an ETC)	Text	579999,578888
Filer 499 IDs	USAC-issued 6-digit 499 IDs of operations entirely or partially covered by this filing	Text	899999
Provider Name	Provider Name	Text	ABC Co.
Operations	ILEC or Non-ILEC Operations	Text	Non-ILEC
Holding Company / Common Control Name	Name of holding company or common control	Text	Superfone, Inc.
URL	Provider's website address	Text	www.superfone.com
Emergency Operations Contact Name	Name of the person who can be contacted for information on network status in case of a natural disaster or other emergency	Text	Alex Bell
Emergency Operations Contact Phone Number	Phone number of the person who can be contacted for information on network status in case of a natural disaster or other emergency	Text	202-418-0940
Emergency Operations Contact Phone Number, Extension	Phone number extension of the person who can be contacted for information on network status in case of a natural disaster or other emergency	Text	040
Emergency Operations Contact Email Address	Email Address of the person who can be contacted for information on network status in case of a natural disaster or other emergency	Text	Econtact@fcc.gov
Data Contact Name	Name of the person who prepared the submitted data	Text	John Pender
Data Contact Phone Number	Phone number of the person who prepared the submitted data	Text	202-418-0940

Data Contact Phone Number, Extension	Phone number extension of the person who prepared the submitted data	Text	040
Data Contact Email Address	Email Address of the person who prepared the submitted data	Text	Dcontact@fcc.gov
Certifying Official Name	Official (corporate officer, managing partner, or sole proprietor) whose signature certifies that he/she has examined the information contained in this Form 477 and that, to the best of his/her knowledge, information and belief, all statements of fact contained in this Form 477 are true and correct	Text	Jane Anderson
Certifying Official Title	Job title of certifying official	Text	Sole Proprietor
Certifying Official Phone Number	Phone number of the certifying official	Text	202-418-0940
Data Contact Phone Number, Extension	Phone number extension of the certifying official	Text	040
Certifying Official Email Address	Email address of the certifying official	Text	Cofficial@fcc.gov
Non-disclosure	Indicate whether you request non-disclosure of some or all of the information in this submission because you believe that this information is privileged and confidential and public disclosure of such information would likely cause substantial harm to the competitive position of the filer.	Y/N	N

2. Fixed Broadband Deployment

Each facilities-based provider of fixed broadband connections to end users shall provide a list, uploaded as a delimited, plain text file, of all census blocks in which broadband service is available to end users in the provider’s service area, along with the associated service characteristics identified below.

For purposes of this data collection, a provider of fixed broadband connections to end user locations is considered “facilities-based” if any of the following conditions are met: (1) it owns the portion of the physical facility that terminates at the end user location; (2) it obtains unbundled network elements (UNEs), special access lines, or other leased facilities that terminate at the end user location and provisions/equips them as broadband, or (3) it provisions/equips a broadband wireless channel to the end user location over licensed or unlicensed spectrum. “Broadband connections” are wired “lines” or fixed wireless “channels” that enable the end user to receive information from and/or send information to the Internet at information transfer rates exceeding 200 Kbps in at least one direction. A broadband “end user” is a residential, business, institutional, or government entity that uses broadband services for its own purposes and does not resell such services to other entities or incorporate such services into retail Internet-access services. Fixed broadband service is “available” in a census block if the provider does, or could, within a typical service interval (7 to 10 business days) without an extraordinary commitment of resources, provision two-way data transmission to and from the Internet with advertised speeds exceeding 200 Kbps in at least one direction to end users in the block.

Record Format for Fixed Broadband Deployment Data

Field	Description	Type	Example
Block	15-digit FIPS Code for the census block (see note 1 below)	Text	110010062021037
DBA Name	Name of the entity customers could contact to purchase service in this block with the characteristics below	Text	CableTown
Technology of Transmission	Category of technology for the provision of Internet access service (see note 3 below and Codes, Table 1)	Integer	41
Consumer	Mass market / consumer broadband service is available in this block (1=Yes; 0=No)	Integer	1
Maximum Advertised Downstream Bandwidth, Consumer	For mass market / consumer broadband services, the maximum advertised downstream bandwidth available in the census block in Mbps	Float	7
Maximum Advertised Upstream Bandwidth, Consumer	For mass market / consumer broadband services, the maximum advertised upstream bandwidth that is offered with the above maximum advertised downstream bandwidth available in the census block in Mbps	Float	1.5
Business/Government	Business / enterprise / government broadband service is available in this block (1=Yes; 0=No)	Integer	1
Maximum Contractual Downstream Bandwidth (Business/Government)	For business / government broadband services, the maximum downstream contractual or guaranteed data throughput rate available in the census block in Mbps	Float	7
Maximum Contractual Upstream Bandwidth (Business/Government)	For business / government broadband services, the maximum upstream contractual or guaranteed data throughput rate offered with the above maximum downstream contractual or guaranteed data throughput rate available in the census block in Mbps	Float	3

Fixed Broadband Deployment Record Format Details:

1. **Block** – Each census block must be identified using the 2010 block identifier from the 2010 TIGER/Line Block State-based Shapefile or Block County-based Shapefile. The block identifier is a concatenation of Census 2010 state FIPS code, Census 2010 county FIPS code, Census 2010

census tract code and Census 2010 tabulation block number. Please see the 2010 TIGER/Line Shapefiles Technical Documentation, Chapter 5, Part 5.2 at <http://www.census.gov/geo/maps-data/data/pdfs/tiger/tgrshp2010/TGRSHP10SF1CH5.pdf> for more information.

2. Any variation in **Block**, **DBA name**, or **Technology of Transmission** necessitates the creation of a new record. For example, if a provider indicates that broadband service is available in a particular census block via two technologies, then the data should contain two records for that census block. Records should be unique by **Block**, **DBA name**, and **Technology of Transmission**.
3. **Technology of Transmission** – For reporting the technology of transmission, report the technology used by the portion of the connection that would terminate at the end-user location. If different technologies could be used in the two directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on the reference found in *Codes, Table 1*.

3. Mobile Wireless Broadband Deployment

We require that facilities-based providers of mobile wireless broadband service submit polygons in an ESRI shapefile format depicting their broadband network coverage areas. For purposes of this data collection, a mobile wireless broadband provider is considered “facilities-based” if it provides service to a mobile wireless broadband subscriber using the provider’s own facilities and spectrum for which it holds a license that it manages, or for which it has obtained the right to use via a spectrum leasing arrangement. In addition, a mobile wireless broadband network is one that allows end users to receive information from and send information to the Internet from a mobile device at information transfer rates exceeding 200 Kbps in at least one direction.

Mobile wireless broadband providers should submit polygons in an ESRI shapefile format representing geographic coverage nationwide (including U.S. territories) for each transmission technology (e.g., EV-DO, WCDMA, HSPA+, LTE, WiMAX – see Table 3, codes 80-88 for a complete list) deployed in each frequency band (e.g., 700 MHz, Cellular, AWS, PCS, BRS/EBS – see Table 4 for a complete list). The data associated with each polygon should indicate the minimum advertised upload and download data speeds associated with that network technology in that frequency band, and the coverage area polygon should depict the boundaries where, according to providers, users should expect to receive those advertised speeds. If a provider advertises different minimum upload and download speeds in different areas of the country using the same technology and frequency band (e.g., HSPA+ on AWS spectrum), then the provider should submit separate polygons showing the coverage area for each speed. A variation in technology, frequency band, or speed would require the submission of a separate polygon. If a provider does not advertise the minimum upload and/or download data speeds, the provider must indicate the minimum upload/download data speeds that users should expect to receive within the polygon depicting the geographic coverage area of the deployed technology in the given frequency band.

Given that the requested frequency band and speed parameters of the shapefiles may be used for internal network planning purposes, we will afford filers the opportunity to request confidential treatment of those elements of their coverage information. We plan, however, to make the coverage areas by technology and by an aggregated range of speeds available to the public.

Record Format for Mobile Wireless Broadband Deployment Data

Field	Description	Type	Example
DBA Name	Name of the entity customers could contact to purchase service in this area with the characteristics below	Text	Eastern Wireless
Technology of Transmission	Category of technology for the provision of service (see Codes, Table 3)	Integer	81
Spectrum Used	Code for spectrum used for the provision of service (see Codes, Table 4)	Integer	91
Minimum Advertised Downstream Bandwidth	The minimum advertised downstream bandwidth available in the census block in Mbps	Float	3
Minimum Advertised Upstream Bandwidth	The minimum advertised upstream bandwidth that is offered with the above minimum advertised downstream bandwidth available in the census block in Mbps	Float	0.768

Mobile Wireless Broadband Deployment Details:

1. All map areas must be closed, non-overlapping polygons with a single, unique identifier.

2. Any variation in any of the required fields necessitates the creation of a separate polygon showing the relevant coverage.
3. The shapefile must have an assigned projection with an accompanying .prj file.
4. The shapefile must use unprojected (geographic) WGS84 geographic coordinate system.
5. The coverage boundaries should have a resolution of 100 meters (approximately three arc-seconds) or better. An arc-second represents the distance of latitude or longitude traversed on the earth's surface while traveling one second (1/3600th of a degree). *See* <http://www.esri.com/news/arcuser/0400/wdside.html>. Three arc-seconds is a common resolution of terrain databases. *See* USGS Standards for Digital Elevation Models, Part 1-General, at 1-2, 1-4, <http://nationalmap.gov/standards/pdf/1DEM0897.PDF>.]
6. The shapefile should be submitted as a WinZip archive.
7. In addition to the shapefile, each zip must include metadata or a plain text “readme” file that contains a comprehensive explanation of the methodology employed to generate the map layer including any necessary assumptions and an assessment of the accuracy of the finished product.

4. Mobile Wireless Broadband Service Availability

Each facilities-based provider of mobile wireless broadband service to end users shall provide a list – uploaded as a delimited, plain text file – of all census tracts in which broadband service is advertised and available to actual and potential subscribers. These data are necessary to determine mobile wireless broadband service availability in cases where a provider’s mobile network deployment footprint (as described in Section 3) differs from its facilities-based service footprint, that is, where service is advertised and available to actual and potential subscribers.

Record Format for Mobile Wireless Broadband Service Availability Data			
Field	Description	Type	Example
Tract	11-digit FIPS Code for the census tract (see note 1 below)	Text	11001006202
DBA Name	Name of the entity advertising and making service available to actual and potential subscribers in this tract	Text	Eastern Wireless

Mobile Wireless Broadband Service Availability Details:

1. **Tract** – Each census tract must be identified using the 2010 tract identifier from the 2010 TIGER/Line Census Tract State-based Shapefile or Census Tract County-based Shapefile. The tract identifier is a concatenation of Census 2010 state FIPS code, Census 2010 county FIPS code and Census 2010 census tract code. Please see the 2010 TIGER/Line Shapefiles Technical Documentation, Chapter 5, Part 5.4 at <http://www.census.gov/geo/maps-data/data/pdfs/tiger/tgrshp2010/TGRSHP10SF1CH5.pdf> for more information.
2. Filers should indicate that service is available if the provider is advertising and actively making mobile broadband service available to actual and potential subscribers anywhere in the tract. If a provider offers network coverage in a tract only to provide service for its customers roaming or traveling to the tract from another location, then the provider should not indicate that service is marketed and sold in the tract.
3. Any variation in **Tract** or **DBA Name** necessitates the creation of a new record. For example, if a provider indicates that broadband service is marketed in a particular tract under two unique DBA names, then the data should contain two records for that tract. Records should be unique by **Tract** and **DBA Name**.

5. Mobile Wireless Voice Deployment

Facilities-based providers of mobile wireless voice service to end users should provide polygons in an ESRI shapefile format depicting their network coverage areas representing commercially-available mobile voice service. The polygons should reflect where users should expect to be able to make, maintain and receive voice calls. A filer should submit a separate polygon for each technology that it uses to provide mobile voice coverage (e.g., GSM, CDMA, HSPA, LTE) and should indicate which frequency bands it uses to provide voice service using that technology, according to the instructions below. A mobile wireless voice service provider is considered “facilities-based” if it serves a subscriber using the provider’s own facilities and spectrum for which it holds a license that it manages, or for which it has obtained the right to use via a spectrum leasing arrangement.

Record Format for Mobile Wireless Voice Deployment Data

Field	Description	Type	Example
DBA Name	Name of the entity customers could contact to purchase service in this area with the characteristics below	Text	Eastern Wireless
Technology of Transmission	Category of technology for the provision of service (see Codes, Table 3)	Integer	84
Spectrum Used	Code for spectrum used for the provision of service (see Codes, Table 4 and note 7 below)	Integer	91

Mobile Voice Deployment Details:

1. All map areas must be closed, non-overlapping polygons with a single, unique identifier.
2. Any variation in any of the required fields necessitates the creation of a separate coverage polygon.
3. The shapefile must have an assigned projection with an accompanying .prj file.
4. The shapefile must use unprojected (geographic) WGS84 geographic coordinate system.
5. The coverage boundaries should have a resolution of 100 meters (approximately three arc-seconds) or better. An arc-second represents the distance of latitude or longitude traversed on the earth's surface while traveling one second (1/3600th of a degree). *See* <http://www.esri.com/news/arcuser/0400/wside.html>. Three arc-seconds is a common resolution of terrain databases. *See* USGS Standards for Digital Elevation Models, Part 1-General, at 1-2, 1-4, <http://nationalmap.gov/standards/pdf/1DEM0897.PDF>.
6. The shapefile should be submitted as a WinZip archive.
7. **Spectrum** – Spectrum Used should be entered as an integer based on the coding scheme shown in Codes, Table 4.
8. In addition to the shapefile, each zip file should include metadata or a plain text “readme” file that contains a comprehensive explanation of the methodology employed to generate the map layer including any necessary assumptions and an assessment of the accuracy of the finished product.

6. Fixed Broadband Subscription

Each facilities-based provider of fixed broadband connections to end users shall provide a list of census tracts in which broadband service is provided to end users, along with the associated service characteristics identified below.

For the purposes of this data collection, a provider of broadband connections to end-user locations is considered “facilities-based” if any of the following conditions are met: (1) it owns the portion of the physical facility that terminates at the end user location; (2) it obtains unbundled network elements (UNEs), special access lines, or other leased facilities that terminate at the end user location and provisions/equips them as broadband, or (3) it provisions/equips a broadband wireless channel to the end user location over licensed or unlicensed spectrum. “Broadband connections” are wired “lines” or fixed wireless “channels” that enable the end user to receive information from and/or send information to the Internet at information transfer rates exceeding 200 Kbps in at least one direction. A broadband “end user” is a residential, business, institutional, or government entity that uses broadband services for its own purposes and does not resell such services to other entities or incorporate such services into retail Internet-access services.

Report connections to end users that you (including affiliates) equipped to enable the end user to receive information from and/or send information to the Internet at information transfer rates exceeding 200 Kbps in at least one direction. Report only in-service connections. The end user’s Internet access service may be provided by you (including affiliates) or by an unaffiliated entity. Categorize the connection based on the technology employed by the part of the connection that terminates at the end user location. (Do not report anywhere in Form 477 any high-capacity connections between two locations of the same end user customer, ISP or communications carrier).

Record Format for Fixed Broadband Subscription Data

Field	Description	Type	Example
Tract	11-digit FIPS Code for the census tract (see note 1 below)	Text	11001006202
Technology of Transmission	Category of technology for the provision of service (see Codes, Table 2)	Integer	1
Downstream Bandwidth	Downstream bandwidth of the service as sold in Mbps	Float	3
Upstream Bandwidth	Upstream bandwidth of the service as sold in Mbps	Float	1.5
Connections	Number of connections in this census tract for this combination of technology code, upstream bandwidth and downstream bandwidth	Integer	100
Consumer Connections	Number of connections in this census tract for this combination of technology code, upstream bandwidth and downstream bandwidth provided in consumer-grade service plans	Integer	57

Fixed Broadband Subscription Details:

1. **Tract** – Each census tract must be identified using the 2010 tract identifier from the 2010 TIGER/Line Census Tract State-based Shapefile or Census Tract County-based Shapefile. The tract identifier is a concatenation of Census 2010 state FIPS code, Census 2010 county FIPS code and Census 2010 census tract code. Please see the 2010 TIGER/Line Shapefiles Technical Documentation, Chapter 5, Part 5.4 at <http://www.census.gov/geo/maps-data/data/pdfs/tiger/tgrshp2010/TGRSHP10SF1CH5.pdf> for more information.
2. Records should be unique by **Tract, Technology of Transmission, Downstream Bandwidth and Upstream Bandwidth**. For example, if a provider has broadband connections in service in a

particular census tract via two technologies, then the data should contain two records for that census tract.

3. **Technology of Transmission** – For reporting the technology of transmission, report the technology used by the portion of the connection that would terminate at the end-user location. If different technologies could be used in the two directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on the reference found in *Codes, Table 2*.

7. Mobile Wireless Broadband Subscription

Report the number of subscribers whose device and subscription permit them to access the lawful Internet content of their choice at information transfer rates exceeding 200 Kbps in at least one direction. For purposes of this part, providers must exclude subscribers whose choice of content is restricted to only customized-for-mobile content, and exclude subscribers whose subscription does not include, either in a bundle or as a feature added to a voice subscription, a data plan providing the ability to transfer, on a monthly basis, either a specified or an unlimited amount of data to and from the Internet. Filers should include directly-billed subscribers, pre-paid subscribers, and subscribers served via resellers.

Record Format for Mobile Wireless Broadband Subscription Data – Bandwidths by State

Field	Description	Type	Example
State	2-digit FIPS Code for the state (see note 1 below)	Text	01
Downstream Bandwidth	Downstream bandwidth of the service as sold in Mbps	Float	3
Upstream Bandwidth	Upstream bandwidth of the service as sold in Mbps	Float	0.768
Subscribers	Subscribers whose billing address is in this state and whose device and subscription permit the subscriber to access the lawful Internet content of the subscriber's choice at information transfer rates exceeding 200 Kbps in at least one direction	Integer	100
Subscribers, Consumer	Of the total number of subscribers, the number that are not billed to a corporate, non-corporate business, government or institutional customer account	Integer	57

Mobile Wireless Broadband Subscription Details:

1. **State** – Each state must be identified using the 2010 state identifier from the 2010 TIGER/Line State and Equivalent Entity Nation-based Shapefile or State and Equivalent Entity State-based Shapefile. Please see the 2010 TIGER/Line Shapefiles Technical Documentation, Chapter 5, Part 5.17 at <http://www.census.gov/geo/maps-data/data/pdfs/tiger/tgrshp2010/TGRSHP10SF1CH5.pdf> for more information.
2. Records should be unique by **State, Downstream Bandwidth** and **Upstream Bandwidth**. For example, if a provider has mobile wireless broadband connections in service in a particular state at two different downstream bandwidths, then the data should contain two records for that state.

8. Mobile Local Telephone Subscription

Report mobile voice telephony subscribers in each state that you served over your own facilities. Include directly billed subscribers, pre-paid subscribers, and subscribers served via resellers. Count a subscriber as a mobile handset or other revenue-generating active voice unit that has a unique phone number and that can place and receive calls from the public switched telephone network.

A mobile telephony service is a real-time, two-way voice service that is interconnected with the public switched network using an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless handoff of subscriber calls. A mobile telephony service provider is considered “facilities-based” if it serves a subscriber using the provider’s own facilities and spectrum for which it holds a license that it manages, or for which it has obtained the right to use via a spectrum leasing arrangement.

Record Format for Mobile Local Telephone Subscription Data

Field	Description	Type	Example
State	2-digit FIPS Code for the state (see note 1 below)	Text	01
Subscribers	Mobile voice telephony subscribers in service and served over your own facilities	Integer	8201
Direct Subscribers	Of the total number of mobile voice telephony subscribers, the number that are directly billed or pre-paid	Integer	8001

Mobile Wireless Telephone Subscription Details:

State – Each state must be identified using the 2010 state identifier from the 2010 TIGER/Line State and Equivalent Entity Nation-based Shapefile or State and Equivalent Entity State-based Shapefile. Please see the 2010 TIGER/Line Shapefiles Technical Documentation, Chapter 5, Part 5.17 at <http://www.census.gov/geo/maps-data/data/pdfs/tiger/tgrshp2010/TGRSHP10SF1CH5.pdf> for more information.

9. Local Exchange Telephone Subscription

Report lines or wireless channels (hereafter, “lines”) in this state that you (including affiliates) use to provide local exchange or exchange access services that allow end users to originate and/or terminate local telephone calls on the public switched network, whether used by the end user for voice telephone calls or for other types of calls carried over the public switched network (for example, lines used for facsimile equipment or lines used occasionally or exclusively for “dial-up” connection to the Internet).

Do not report lines not yet in service, lines used for interoffice trunking, company official lines, or lines used for special access service. Do not report any lines that connect two locations of the same end user customer, ISP, or communications carrier. Where you are already reporting the portion of a circuit between the end user and your switching center, do not separately count the portion of that circuit between your switching center and a circuit switched, Internet protocol, or ATM network, irrespective of whether you multiplexed the circuit onto a higher-capacity facility between your switching center and that network.

Record Format for Local Exchange Telephone Subscription Data

Field	Description	Type	Example
State	State FIPS Code	Text	11
Local Exchange Telephone: Voice-grade equivalent lines and voice-grade equivalent wireless channels provided to Other Providers			
VGEs, Wholesale	Voice-grade equivalent lines you provided to unaffiliated communications carriers under resale arrangements including, among others, commercial agreements that replaced UNE-P and resold services such as local exchange, Centrex, and channelized special access	Integer	1
Wholesale, UNE-L	Lines you provided to unaffiliated communications carriers under any UNE loop arrangement where you did not also provide UNE switching for the line (Do not convert UNEs to VGEs)	Integer	50
Local Exchange Telephone: Voice-grade equivalent lines and voice-grade equivalent wireless channels provided to End Users			
VGEs, End User, Total	Voice-grade equivalent lines and voice-grade equivalent wireless channels in service to your (including affiliates) end-user customers	Integer	1000
VGEs, End User, Bundled	Voice-grade equivalent lines and voice-grade equivalent wireless channels in service that are bundled with a broadband service that can be used to access the Internet	Integer	0
VGEs, End User, Consumer & No PIC	Voice-grade equivalent lines and voice-grade equivalent wireless channels in service to your (including affiliates) end-user customers taking consumer-grade services AND for which you (including affiliates) are NOT the presubscribed interstate long distance carrier.	Integer	100
VGEs, End User, Consumer & PIC	Voice-grade equivalent lines and voice-grade equivalent wireless channels in service to your (including affiliates) end-user customers taking consumer-grade services AND for which you (including affiliates) are the presubscribed interstate long distance carrier	Integer	500
VGEs, End User, Business / Government & No PIC	Voice-grade equivalent lines and voice-grade equivalent wireless channels in service to your (including affiliates) end-user customers taking business-grade services AND for which you (including affiliates) are NOT the presubscribed interstate long distance carrier	Integer	50
VGEs, End User, Business / Government & PIC	Voice-grade equivalent lines and voice-grade equivalent wireless channels in service to your (including affiliates) end-user customers taking business-grade services AND for which you (including affiliates) are the presubscribed interstate long distance carrier	Integer	350

VGEs, End User, Owned	Voice-grade equivalent lines and voice-grade equivalent wireless channels in service provided over your own (including affiliates) local loop facilities or the equivalent	Integer	1000
VGEs, End User, UNE-L	Voice-grade equivalent lines and voice-grade equivalent wireless channels in service provided over UNE loops obtained from an unaffiliated carrier without also obtaining that carrier's UNE switching for that line	Integer	0
VGEs, End User, Resale	Voice-grade equivalent lines and voice-grade equivalent wireless channels in service provided by reselling unaffiliated-carrier services including, among others, commercial agreements that replaced UNE-P and resold services such as local exchange, Centrex, and channelized special access	Integer	0
VGEs, End User, Optical Fiber	Voice-grade equivalent lines and voice-grade equivalent wireless channels in service provided over optical fiber at the end-user premises	Integer	0
VGEs, End User, Coax	Voice-grade equivalent lines and voice-grade equivalent wireless channels in service provided over coaxial cable at the end-user premises	Integer	0
VGEs, End User, TFW	Voice-grade equivalent lines and voice-grade equivalent wireless channels in service provided over fixed wireless at the end-user premises	Integer	0

Local Exchange Telephone Subscription Details:

Reporting Channelized Service: Count as one voice-grade equivalent line: traditional analog POTS lines, Centrex-CO extensions, and Centrex-CU trunks. Count lines based on how they are charged to the customer rather than how they are physically provisioned. That is, when a customer is charged for channelized service, report the number of activated, charged-for channels rather than the theoretical capacity of the line. Examples: Count Basic Rate Integrated (BRI) Services Digital Network (ISDN) lines as two voice-grade equivalent lines. Count fully-channelized PRI circuits (including PRIs that are used exclusively to provide local connectivity to "dial-up" ISPs) as 23 voice-grade equivalent lines. But report, for example, 8 voice-grade equivalent lines if a customer is charged for 8 trunks that happen to be provisioned over a DS1 circuit. If a customer is charged for a fully-channelized DS1 circuit, however, report 24 voice-grade equivalent lines. For **Wholesale, UNE-L**, however, any high-capacity UNEs should not be reported in voice-grade equivalents. UNEs should be reported as actual circuit counts.

10. Interconnected VoIP Subscription

Interconnected VoIP service is a service that enables real-time, two-way voice communications; requires a broadband connection from the user’s location; requires Internet-protocol compatible customer premises equipment; and permits users generally to receive calls that originate on the public switched telephone network and to terminate calls to the public switched telephone network. See 47 C.F.R. §9.3.

Interconnected VoIP providers should determine location based on the subscriber’s broadband connection or the subscriber’s “Registered Location” as of the data-collection date. “Registered Location” is the most recent information obtained by an interconnected VoIP service provider that identifies the physical location of an end user. See 47 C.F.R. § 9.3 (in the part of the FCC rules setting E911 requirements for interconnected VoIP).

Record Format for Interconnected VoIP Subscription Data

Field	Description	Type	Example
State	State FIPS Code	Text	11
Interconnected VoIP, Over the Top (OTT) Subscriptions: Service to End Users Provided Without Also Supplying Last-Mile Facilities			
VoIP, End User, OTT	VoIP subscriptions purchased from you (including affiliates) by end users	Integer	0
VoIP, End User, OTT, Consumer	Consumer-grade VoIP subscriptions purchased from you (including affiliates) by end users	Integer	0
Interconnected VoIP, All Other Subscriptions: Service to End Users Provided over Last-Mile Facilities Supplied by the Provider			
VoIP, End User	VoIP subscriptions purchased from you (including affiliates) by end users	Integer	500
VoIP, End User, Consumer	Consumer-grade VoIP subscriptions purchased from you (including affiliates) by end users	Integer	450
VoIP, End User, Bundled	VoIP subscriptions provided by you (including affiliates) to end users where you also provide that subscriber with a broadband service that can be used to access the Internet	Integer	410
VoIP, End User, Copper	VoIP subscriptions purchased from you (including affiliates) by end users and provided over a copper-wire based connection	Integer	0
VoIP, End User, FTTP	VoIP subscriptions purchased from you (including affiliates) by end users and provided over a fiber-to-the-premises connection	Integer	0
VoIP, End User, Cable	VoIP subscriptions purchased from you (including affiliates) by end users and provided over a cable connection	Integer	500
VoIP, End User, Wireless	VoIP subscriptions purchased from you (including affiliates) by end users and provided over terrestrial or satellite-based wireless connection	Integer	0
VoIP, End User, Other	VoIP subscriptions purchased from you (including affiliates) by end users and provided over some other type of connection	Integer	0

11. Voice Telephone Subscription Detail

In addition to state-level reporting of local exchange lines in service and / or VoIP subscriptions sold, providers or local exchange telephone services and / or interconnected VoIP services should report subscriber counts by census tract and provide an estimate of the share of lines and / or subscriptions sold in each tract that are provided under consumer-grade service plans.

Record Format for Voice Telephone Subscription Detail Data			
Field	Description	Type	Example
Tract	11-digit FIPS Code for the census tract (see note 1 below)	Text	11001006202
VoIP Indicator	Data in this record represent counts of: 0=VGEs (for local exchange services) or 1=VoIP subscriptions	Integer	0
VGEs or Subscriptions	Voice-grade equivalent lines and voice-grade equivalent wireless channels in service OR VoIP subscriptions	Integer	100
Consumer VGEs or Subscriptions	Number of VGEs or subscriptions that are provided in consumer-grade service plans	Integer	100

Voice Telephone Subscription Details:

1. **Tract** – Each census tract must be identified using the 2010 tract identifier from the 2010 TIGER/Line Census Tract State-based Shapefile or Census Tract County-based Shapefile. The tract identifier is a concatenation of Census 2010 state FIPS code, Census 2010 county FIPS code and Census 2010 census tract code. Please see the 2010 TIGER/Line Shapefiles Technical Documentation, Chapter 5, Part 5.4 at <http://www.census.gov/geo/maps-data/data/pdfs/tiger/tgrshp2010/TGRSHP10SF1CH5.pdf> for more information.
2. Records should be unique by **Tract** and **VoIP Indicator**. For example, if a provider has voice telephone connections in service in a particular tract via two technologies, then the data should contain two records for that tract.

Appendix: Codes

Table 1: Technology of Transmission Codes for Deployment of Fixed Services

Technology Code	Description	Details
10	Asymmetric xDSL	Asymmetric xDSL other than ADSL2 and VDSL
11	ADSL2	For example: ADSL2, ADSL2+
12	VDSL	For example: VHDSL, VDSL2
20	Symmetric xDSL	
30	Other Copper Wireline	All copper-wire based technologies other than xDSL (Ethernet over copper and T-1 are examples)
40	Cable Modem	Cable modem other than DOCSIS 1, 1.1, 2.0, and 3.0
41	Cable Modem – DOCSIS 1, 1.1, and 2.0	
42	Cable Modem – DOCSIS 3.0	
50	Optical Carrier/Fiber to the End User	Fiber to the home or business end user (does not include “fiber to the curb”)
60	Satellite	
70	Terrestrial Fixed Wireless	
90	Electric Power Line	
0	All Other	Any specific technology not listed above

Table 2: Technology of Transmission Codes for Subscription to Fixed Services

Technology Code	Description	Details
10	Asymmetric xDSL	
20	Symmetric xDSL	
30	Other Copper Wireline	All copper-wire based technologies other than xDSL (Ethernet over copper and T-1 are examples)
40	Cable Modem	
50	Optical Carrier/Fiber to the End User	Fiber to the home or business end user (does not include “fiber to the curb”)
60	Satellite	
70	Terrestrial Fixed Wireless	
90	Electric Power Line	
0	All Other	Any specific technology not listed above

Table 3: Technology of Transmission Codes for Mobile Wireless Services

Technology Code	Description	Details
80	Terrestrial Mobile Wireless – WCDMA/UMTS/HSPA	
81	Terrestrial Mobile Wireless – HSPA+	
82	Terrestrial Mobile Wireless – EVDO/EVDO Rev A	
83	Terrestrial Mobile Wireless – LTE	
84	Terrestrial Mobile Wireless – WiMAX	
85	Terrestrial Mobile Wireless – CDMA	
86	Terrestrial Mobile Wireless – GSM	
87	Terrestrial Mobile Wireless – Analog	
88	Terrestrial Mobile Wireless – Other	

Table 4: Spectrum Codes

Code	Spectrum Band
90	700 MHz Band
91	Cellular Band
92	Specialized Mobile Radio (SMR) Band
93	Advanced Wireless Services (AWS) Band
94	Broadband Personal Communications Service (PCS) Band
95	Wireless Communications Service (WCS) Band
96	Broadband Radio Service/Educational Broadband Service Band
97	Satellite (e.g. L-band, Big LEO, Little LEO, 2 GHz)
98	Unlicensed (including broadcast television “white spaces”) Bands
99	600 MHz
100	Other
