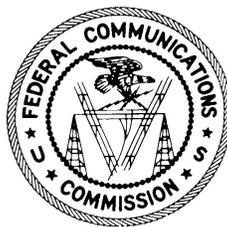


Voice Telephone Services: Status as of December 31, 2018

Industry Analysis Division
Office of Economics and Analytics
March 2020



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Voice Telephone Services: Status as of December 31, 2018

Introduction

The Commission has used FCC Form 477 to collect subscribership information from providers of voice telephone services – incumbent local exchange carriers (ILECs), competitive local exchange carriers (CLECs), and mobile voice providers – since December 1999.¹ The Commission has required interconnected Voice over Internet Protocol (“interconnected VoIP”) service providers to report subscribership information since December 2008.² Also, starting with the data reported for 2014, Form 477 has been modified to distinguish “over-the-top” (colloquially, “bring your own broadband”) interconnected VoIP subscriptions from other interconnected VoIP subscriptions.³

Comparison to Local Telephone Competition Report

This report was previously titled *Local Telephone Competition*. Reports under the earlier title summarized Form 477 data through December 31, 2013. Reports under the current title provide much of the summarized data as supplemental spreadsheet files, available at <https://www.fcc.gov/voice-telephone-services-report>. A crosswalk between data elements in this report and data elements in the *Local Telephone Competition* report is available at that page.

¹ An Incumbent Local Exchange Carrier is an entity that was providing local exchange telephone service in a particular area on February 8, 1996, the date on which the Telecommunications Act of 1996 was enacted into law. See 47 C.F.R. § 51.5.

² The FCC’s rules (at 47 C.F.R. § 9.3) state:

An interconnected Voice over Internet Protocol (VoIP) service is a service that:

- (1) Enables real-time, two-way voice communications;
- (2) Requires a broadband connection from the user’s location;
- (3) Requires Internet protocol-compatible customer premises equipment (CPE); and
- (4) Permits users generally to receive calls that originate on the public switched telephone network and to terminate calls to the public switched telephone network.

We note that the current interpretation of element (4) of the definition excludes certain VoIP services (e.g., those offered by Skype) and subscribers to those services are not reported on Form 477.

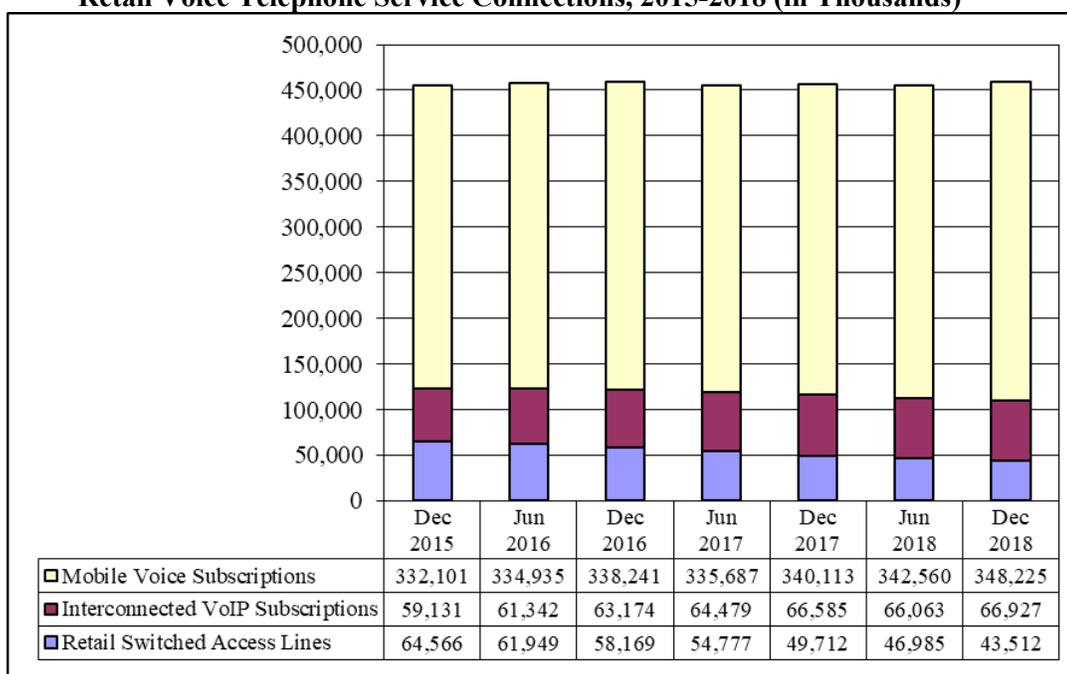
³ The Technical Notes and the Glossary that appear at the end of this report provide more-detailed information about the current Form 477 and the meaning of terms used in this report. To be consistent with modifications to Form 477 adopted in 2013 (to be effective for reporting June 2014 and later data), this report no longer uses the terms “standalone VoIP” and “broadband bundle.” Standalone VoIP in the earlier, *Local Telephone Competition*, reports has a different meaning from “over-the-top” VoIP in this report. In particular, subscriptions reported as standalone VoIP for December 2013 and earlier dates included over-the-top subscriptions as defined in this report and also video-plus-VoIP service subscriptions sold by cable TV system operators and other entities that own last-mile facilities to end-user premises. We note that, accordingly, 13% of total interconnected VoIP subscriptions were categorized as standalone VoIP in December 2013 and, by contrast, 10% of total interconnected VoIP subscriptions were categorized as over-the-top VoIP in December 2014.

Retail Voice Telephone Service Connections

Retail voice telephone service customers are served by two wireline technologies – end-user switched access lines and interconnected VoIP subscriptions – and by mobile wireless subscriptions.⁴

- In December 2018, there were 44 million end-user switched access lines in service, 67 million interconnected VoIP subscriptions, and 348 million mobile subscriptions, for a total of 459 million retail voice telephone service connections in the United States. See Figure 1.
- Over the three-year period presented in Figure 1, interconnected VoIP subscriptions increased at a compound annual growth rate of 4%, mobile voice subscriptions increased at a compound annual growth rate of 2%, and retail switched access lines declined at a compound annual growth rate of 12% per year.⁵

Figure 1
Retail Voice Telephone Service Connections, 2015-2018 (in Thousands)



Note: Some previously published data have been revised.

- Of the 110 million wireline retail voice telephone service connections (including both switched access lines and interconnected VoIP subscriptions) in December 2018, 56 million (or 51%) were residential connections and 54 million (or 49%) were business connections.⁶ See Figure 2.

⁴ The presentation of mobile wireless telephone subscriber counts in this report does not constitute, or imply, Commission analysis of the extent to which wireline and mobile wireless telephone services are demand substitutes or complements in general or in any particular situation.

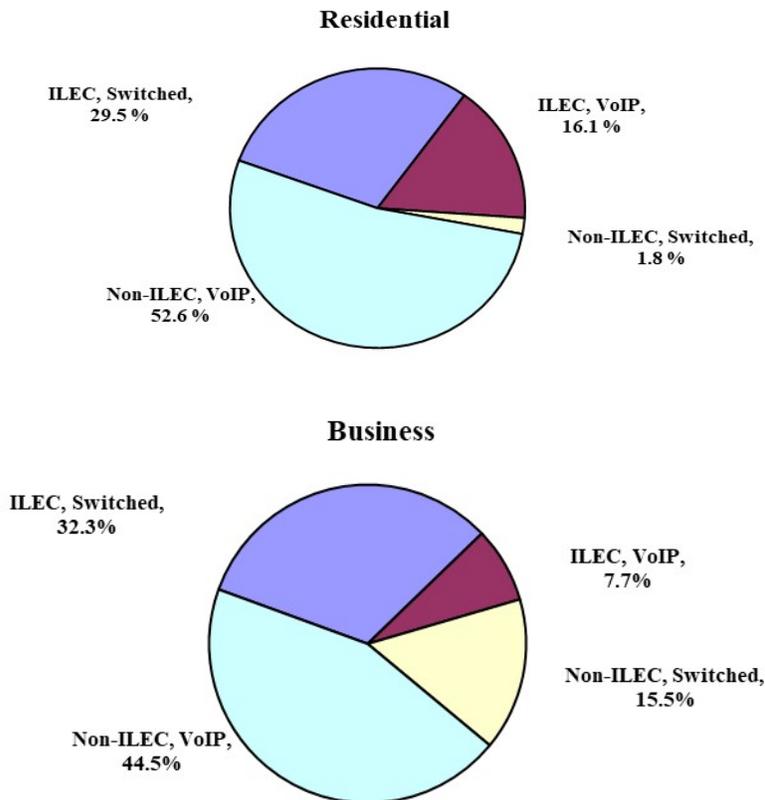
⁵ The compound annual growth rate (CAGR) is a smoothed rate of growth calculated in three steps. First, divide the ending value by the beginning value. Second, raise the result of that division to a power equal to one divided by the number of years in the period (in this case, 3 years, so the power is 1/3). Third, subtract the number one from the result of the second step.

⁶ FCC Form 477 does not distinguish between residential and business subscribers to mobile *voice* service. The information that Form 477 collects about mobile *broadband* service is summarized elsewhere; see *Internet Access Services Reports*, available at <https://www.fcc.gov/internet-access-services-reports>.

Figure 2
Wireline Retail Voice Telephone Service Connections by Technology, Regulatory Status, and Customer Type as of December 31, 2018 (in Thousands)

Total	Switched Access Lines	Interconnected VoIP	Total
ILEC	34,060	13,201	47,261
Non-ILEC	9,453	53,726	63,178
Total	43,512	66,927	110,439
Residential			
ILEC	16,573	9,036	25,609
Non-ILEC	1,038	29,571	30,609
Residential Total	17,612	38,607	56,219
Business			
ILEC	17,486	4,165	21,652
Non-ILEC	8,414	24,155	32,569
Business Total	25,901	28,320	54,220

Note: Figures may not sum to totals due to rounding. A voice service affiliate of an ILEC that is operating outside of the ILEC's traditional service area ("study area") is a Non-ILEC.



- Cross-classified by technology and the retailer’s regulatory status in Figure 2, the 56 million wireline residential connections in December 2018 were: 29.5% ILEC switched access lines, 52.6% non-ILEC interconnected VoIP subscriptions, 16.1% ILEC interconnected VoIP subscriptions, and 1.8% non-ILEC switched access lines. Similarly, the 54 million wireline business connections were: 32.3% ILEC switched access lines, 44.5% non-ILEC interconnected VoIP subscriptions, 7.7% ILEC interconnected VoIP subscriptions, and 15.5% non-ILEC switched access lines.

Retail Service Relationships

The revised Form 477 collects two types of information about retail service relationships.

- Interconnected VoIP service retailers distinguish over-the-top (“OTT”) interconnected VoIP subscriptions—where the end user accesses the service using a broadband connection from an entity that is not affiliated with the VoIP service retailer—from all other interconnected VoIP subscriptions.⁷ See Figure 3.
- Retailers of switched access lines and retailers of interconnected VoIP service distinguish between sales to end users who also purchase Internet access from them (including affiliates) and those who do not. See Figure 4.

⁷ A broadband connection may or may not provide the end user with internet access.

Figure 3
Interconnected VoIP Subscribership by Reported Service Features, Regulatory Status,
and Customer Type as of December 31, 2018 (in Thousands)

Total	Over-the-Top (OTT)	All Other VoIP	Total
ILEC	69	13,132	13,201
Non-ILEC	10,082	43,644	53,726
Total	10,152	56,776	66,927
Residential			
ILEC	2	9,034	9,036
Non-ILEC	2,325	27,246	29,571
Residential Total	2,327	36,280	38,607
Business			
ILEC	67	4,098	4,165
Non-ILEC	7,757	16,397	24,155
Business Total	7,825	20,495	28,320

Note: Figures may not sum to totals due to rounding.

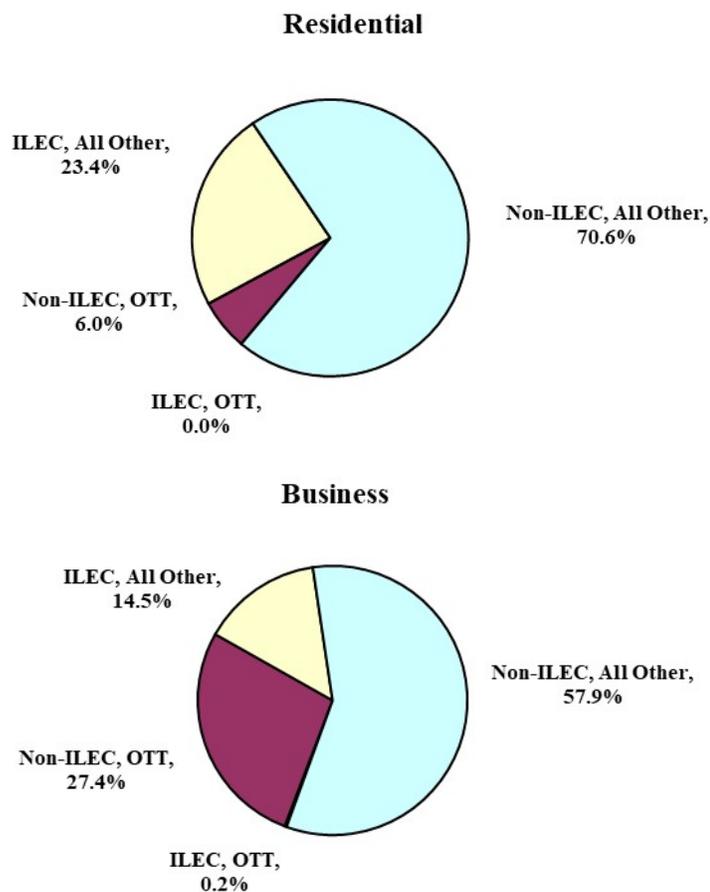
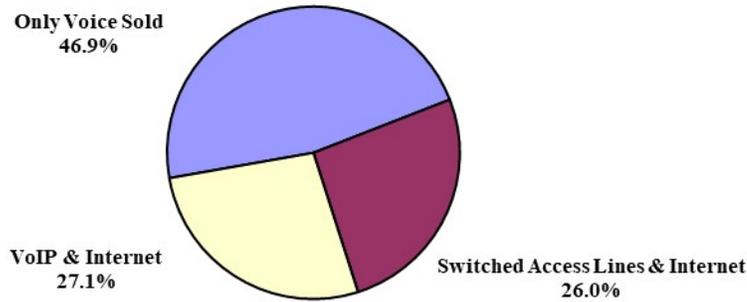


Figure 4
Retail Relationships of Wireline Voice Telephone Service with Internet Access Service
By Regulatory Status as of December 31, 2018 (in Thousands)

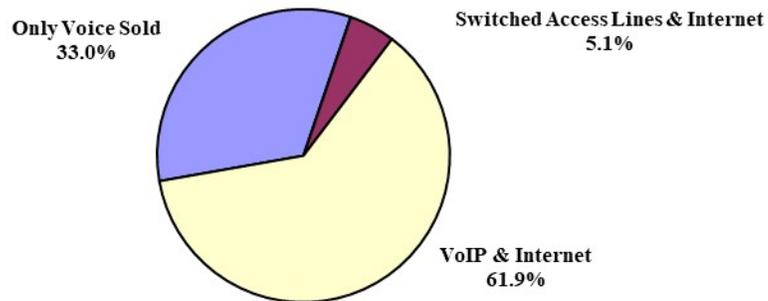
Total	ILEC	Non-ILEC	Total
Switched Access Lines	34,060	9,453	43,512
Over-the-Top VoIP	69	10,082	10,152
All Other VoIP	13,132	43,644	56,776
Total	47,261	63,178	110,439
Sold with Internet			
Switched Access Lines	12,288	3,224	15,512
Over-the-Top VoIP	0	0	0
All Other VoIP	12,828	39,099	51,927
Total	25,116	42,323	67,439
Sold Without Internet			
Switched Access Lines	21,772	6,229	28,000
Over-the-Top VoIP	69	10,082	10,152
All Other VoIP	304	4,545	4,849
Total	22,145	20,855	43,000

Note: Figures may not sum totals due to rounding.

ILEC



Non-ILEC



Detailed Voice Telephone Services Data

- Table 1 summarizes national-level voice telephone service subscription data for December 2017, and for June and December 2018, for individual data elements collected by FCC Form 477.
- Table 2 shows the number of entities that reported the national-level subscription data for December 2017, and for June and December 2018.

Table 1 and Table 2 are available in Excel format at <https://www.fcc.gov/voice-telephone-services-report>. Also available at that page are:

- State-level Subscriptions table in Excel format (data back to December 2017)
- State-level Number of Providers table in Excel format (data back to December 2017)
- County-level Subscriptions information in Excel format (data back to June 2014)
- CSV-format file of the consistent data series that are available back to December 2008, when interconnected VoIP retailers were first required to report subscription information on Form 477.

Earlier data, back to December 1999, are available in the Local Telephone Competition reports at <https://www.fcc.gov/general/local-telephone-competition-reports>. However, researchers using the complete data series for trend analysis should be aware of the following discontinuities in the data.

- Between December 1999 and December 2004, Form 477 collected state-by-state data only from local exchange carriers with at least 10,000 end-user switched access lines in service in the state, and from facilities-based mobile voice carriers with at least 10,000 mobile voice subscriptions in service in the state.
- Prior to December 2008, interconnected VoIP service retailers were not required to submit Form 477, but an unknown amount of interconnected VoIP service was included along with the switched access lines reported by some Form 477 filers.
- As discussed earlier in this report, the category standalone interconnected VoIP that was reported from December 2008 to December 2013 is different (that is, includes more subscriptions) than the category over-the-top interconnected VoIP that is reported starting with the June 2014 data.⁸

⁸ See footnote 3, above.

Table 1. Voice Subscriptions (in Thousands) - Total for US

Reference	Data element	Dec 2018	June 2018	Dec 2017
1	Mobile telephony	348,225	342,560	340,113
2	Directly-billed or prepaid	308,512	303,993	301,362
3	Not directly-billed or prepaid	39,713	38,567	38,752
4	Wireline End-User Switched Access Lines and Interconnected VoIP Subscriptions	110,439	113,047	116,297
5	Incumbent LECs	47,261	50,093	53,022
6	Other (Non-ILECs) - Note: ILEC voice-service affiliate operating outside ILEC's study area is included here.	63,178	62,955	63,275
7	Consumer-grade service	56,219	58,018	60,440
8	Incumbent LECs	25,609	27,231	28,964
9	Other (Non-ILECs)	30,609	30,787	31,476
10	Business & Government-grade service	54,220	55,030	55,856
11	Incumbent LECs	21,652	22,862	24,057
12	Other (Non-ILECs)	32,569	32,168	31,799
13	Local exchange telephone service (Switched Access Lines)	43,512	46,985	49,712
14	Incumbent LECs	34,060	36,669	39,309
15	Other (Non-ILECs) - Note: ILEC voice-service affiliate operating outside ILEC's study area is included here.	9,453	10,316	10,403
16	Consumer-grade service	17,612	18,862	20,434
17	Incumbent LECs	16,573	17,774	19,180
18	Other (Non-ILECs)	1,038	1,088	1,254
19	Business & Government-grade service	25,901	28,123	29,278
20	Incumbent LECs	17,486	18,895	20,129
21	Other (Non-ILECs)	8,414	9,228	9,149
22	Interconnected VoIP Subscriptions - Note: Includes both Over-the-top (OTT) and All Other sub-categories.	66,927	66,063	66,585
23	Incumbent LECs	13,201	13,424	13,713
24	Other (Non-ILECs) - Note: ILEC voice-service affiliate operating outside ILEC's study area is included here.	53,726	52,638	52,872
25	Consumer-grade service	38,607	39,156	40,006
26	Incumbent LECs	9,036	9,457	9,785
27	Other (Non-ILECs)	29,571	29,699	30,222
28	Business & Government-grade service	28,320	26,906	26,578
29	Incumbent LECs	4,165	3,967	3,928
30	Other (Non-ILECs)	24,155	22,940	22,650
31	Over-the-top interconnected VoIP	10,152	9,411	8,783
32	Incumbent LECs	69	67	71
33	Other (Non-ILECs) - Note: ILEC voice-service affiliate operating outside ILEC's study area is included here.	10,082	9,344	8,712
34	Consumer-grade service	2,327	2,051	2,100
35	Incumbent LECs	2	2	3
36	Other (Non-ILECs)	2,325	2,049	2,097
37	Business & Government-grade service	7,825	7,360	6,683
38	Incumbent LECs	67	65	68
39	Other (Non-ILECs)	7,757	7,295	6,615
40	All Other interconnected VoIP	56,776	56,652	57,802
41	Incumbent LECs	13,132	13,357	13,642
42	Other (Non-ILECs) - Note: ILEC voice-service affiliate operating outside ILEC's study area is included here.	43,644	43,295	44,160
43	Consumer-grade service	36,280	37,105	37,907
44	Incumbent LECs	9,034	9,455	9,782
45	Other (Non-ILECs)	27,246	27,650	28,125
46	Business & Government-grade service	20,495	19,546	19,895
47	Incumbent LECs	4,098	3,902	3,860
48	Other (Non-ILECs)	16,397	15,644	16,035
49	Local exchange telephone service by last-mile delivery medium	43,512	46,985	49,712
50	Fiber-to-the-premises	5,705	5,803	5,930
51	Incumbent LECs	3,845	3,732	3,886
52	Other (Non-ILECs)	1,860	2,072	2,043
53	Coaxial cable	478	532	639
54	Incumbent LECs	56	55	59
55	Other (Non-ILECs)	422	478	579

Table 1. Voice Subscriptions (in Thousands) - Total for US

Reference	Data element	Dec 2018	June 2018	Dec 2017
56	Terrestrial fixed wireless	29	32	27
57	Incumbent LECs	14	15	15
58	Other (Non-ILECs)	15	17	13
59	Copper local loop	37,300	40,617	43,117
60	Incumbent LECs	30,145	32,868	35,349
61	Other (Non-ILECs)	7,155	7,749	7,768
62	All Other interconnected VoIP by last-mile delivery medium	56,776	56,652	57,802
63	Fiber-to-the-premises	8,841	8,589	8,626
64	Incumbent LECs	6,230	6,177	6,072
65	Other (Non-ILECs)	2,611	2,413	2,553
66	Coaxial cable	34,384	34,761	35,643
67	Incumbent LECs	7	6	6
68	Other (Non-ILECs)	34,378	34,755	35,637
69	Terrestrial fixed wireless or satellite	188	112	116
70	Incumbent LECs	0	0	0
71	Other (Non-ILECs)	188	111	116
72	Copper local loop	13,361	13,190	13,417
73	Incumbent LECs	6,895	7,175	7,564
74	Other (Non-ILECs)	6,466	6,015	5,853
75	Non-Incumbent LEC local exchange telephone service by means of provisioning	9,453	10,316	10,403
76	Provided over owned last-mile facilities	3,155	3,510	3,783
77	Provided over UNE-L obtained from unaffiliated entity	1,439	1,529	1,689
78	Provided over other services obtained from unaffiliated entity	4,859	5,277	4,931
79	Incumbent LEC local exchange telephone service provided to unaffiliated carriers for resale	4,919	4,941	5,159
80	Wholesale lines	3,210	3,196	3,295
81	UNE-L	1,709	1,745	1,863
82	Local exchange telephone service and long-distance service	43,512	46,985	49,712
83	Consumer-grade service	17,612	18,862	20,434
84	Incumbent LEC is preferred long-distance carrier for its local exchange service customer	11,189	11,840	12,425
85	Incumbent LEC is not preferred long-distance carrier for its local exchange service customer	5,385	5,933	6,754
86	Non-ILEC is preferred long-distance carrier for its local exchange service customer	859	941	1,034
87	Non-ILEC is not preferred long-distance carrier for its local exchange service customer	179	147	221
88	Business & Government-grade service	25,901	28,123	29,278
89	Incumbent LEC is preferred long-distance carrier for its local exchange service customer	9,613	10,280	10,919
90	Incumbent LEC is not preferred long-distance carrier for its local exchange service customer	7,873	8,615	9,210
91	Non-ILEC is preferred long-distance carrier for its local exchange service customer	5,997	6,949	7,102
92	Non-ILEC is not preferred long-distance carrier for its local exchange service customer	2,417	2,279	2,046
93	End user buys local exchange telephone service and Internet access service from same entity	15,512	16,384	17,475
94	End user buys both services from incumbent LEC or affiliates	12,288	13,006	13,918
95	End user buys both services from Non-ILEC or affiliates	3,224	3,378	3,558
96	End user buys interconnected VoIP and Internet access service from same entity	51,927	52,013	52,958
97	End user buys both services from incumbent LEC or affiliates	12,828	13,000	13,307
98	End user buys both services from Non-ILEC or affiliates	39,099	39,013	39,651

Table 2. Number of Providers Reporting Voice Subscriptions - Total for US

Reference	Data element	Dec 2018	June 2018	Dec 2017
1	Mobile telephony	72	74	88
2	Directly-billed or prepaid	70	73	87
3	Not directly-billed or prepaid	12	11	12
4	Wireline End-User Switched Access Lines and Interconnected VoIP Subscriptions	1,889	1,823	1,764
5	Incumbent LECs	727	731	732
6	Other (Non-ILECs) - Note: ILEC voice-service affiliate operating outside ILEC's study area is included here.	1,469	1,396	1,330
7	Consumer-grade service	1,259	1,233	1,228
8	Incumbent LECs	727	729	731
9	Other (Non-ILECs)	826	797	786
10	Business & Government-grade service	1,795	1,727	1,669
11	Incumbent LECs	723	726	725
12	Other (Non-ILECs)	1,374	1,297	1,235
13	Local exchange telephone service (Switched Access Lines)	989	995	993
14	Incumbent LECs	724	727	728
15	Other (Non-ILECs) - Note: ILEC voice-service affiliate operating outside ILEC's study area is included here.	509	515	507
16	Consumer-grade service	894	898	895
17	Incumbent LECs	724	727	728
18	Other (Non-ILECs)	404	410	402
19	Business & Government-grade service	971	976	975
20	Incumbent LECs	721	723	723
21	Other (Non-ILECs)	489	492	489
22	Interconnected VoIP Subscriptions - Note: Includes both Over-the-top (OTT) and All Other sub-categories.	1,297	1,207	1,137
23	Incumbent LECs	135	116	118
24	Other (Non-ILECs) - Note: ILEC voice-service affiliate operating outside ILEC's study area is included here.	1,242	1,160	1,089
25	Consumer-grade service	593	547	540
26	Incumbent LECs	77	55	60
27	Other (Non-ILECs)	549	513	504
28	Business & Government-grade service	1,207	1,118	1,045
29	Incumbent LECs	128	111	108
30	Other (Non-ILECs)	1,159	1,075	1,005
31	Over-the-top interconnected VoIP	803	738	682
32	Incumbent LECs	29	28	27
33	Other (Non-ILECs) - Note: ILEC voice-service affiliate operating outside ILEC's study area is included here.	792	726	672
34	Consumer-grade service	178	162	169
35	Incumbent LECs	13	11	12
36	Other (Non-ILECs)	171	155	162
37	Business & Government-grade service	762	700	636
38	Incumbent LECs	26	26	22
39	Other (Non-ILECs)	754	690	631
40	All Other interconnected VoIP	717	698	671
41	Incumbent LECs	125	108	108
42	Other (Non-ILECs) - Note: ILEC voice-service affiliate operating outside ILEC's study area is included here.	663	654	625
43	Consumer-grade service	478	445	433
44	Incumbent LECs	70	51	54
45	Other (Non-ILECs)	437	415	401
46	Business & Government-grade service	651	634	608
47	Incumbent LECs	119	103	100
48	Other (Non-ILECs)	603	594	568
49	Local exchange telephone service by last-mile delivery medium	989	995	993
50	Fiber-to-the-premises	755	752	738
51	Incumbent LECs	601	591	578
52	Other (Non-ILECs)	364	366	358
53	Coaxial cable	82	81	82
54	Incumbent LECs	23	19	20
55	Other (Non-ILECs)	68	70	72

Table 2. Number of Providers Reporting Voice Subscriptions - Total for US

Reference	Data element	Dec 2018	June 2018	Dec 2017
56	Terrestrial fixed wireless	78	82	72
57	Incumbent LECs	49	50	42
58	Other (Non-ILECs)	42	47	42
59	Copper local loop	780	790	799
60	Incumbent LECs	581	591	601
61	Other (Non-ILECs)	327	330	328
62	All Other interconnected VoIP by last-mile delivery medium	717	698	671
63	Fiber-to-the-premises	469	438	411
64	Incumbent LECs	113	95	92
65	Other (Non-ILECs)	421	399	372
66	Coaxial cable	211	214	212
67	Incumbent LECs	9	9	11
68	Other (Non-ILECs)	207	210	207
69	Terrestrial fixed wireless or satellite	242	233	225
70	Incumbent LECs	12	12	10
71	Other (Non-ILECs)	233	224	217
72	Copper local loop	216	227	237
73	Incumbent LECs	52	48	51
74	Other (Non-ILECs)	189	200	208
75	Non-Incumbent LEC local exchange telephone service by means of provisioning	509	515	507
76	Provided over owned last-mile facilities	375	379	376
77	Provided over UNE-L obtained from unaffiliated entity	108	112	113
78	Provided over other services obtained from unaffiliated entity	199	200	196
79	Incumbent LEC local exchange telephone service provided to unaffiliated carriers for resale	67	54	49
80	Wholesale lines	62	52	47
81	UNE-L	25	13	11
82	Local exchange telephone service and long-distance service	989	995	993
83	Consumer-grade service	894	898	895
84	Incumbent LEC is preferred long-distance carrier for its local exchange service customer	677	677	676
85	Incumbent LEC is not preferred long-distance carrier for its local exchange service customer	670	678	678
86	Non-ILEC is preferred long-distance carrier for its local exchange service customer	380	384	378
87	Non-ILEC is not preferred long-distance carrier for its local exchange service customer	271	275	266
88	Business & Government-grade service	971	976	975
89	Incumbent LEC is preferred long-distance carrier for its local exchange service customer	676	674	672
90	Incumbent LEC is not preferred long-distance carrier for its local exchange service customer	645	657	654
91	Non-ILEC is preferred long-distance carrier for its local exchange service customer	446	447	449
92	Non-ILEC is not preferred long-distance carrier for its local exchange service customer	320	318	313
93	End user buys local exchange telephone service and Internet access service from same entity	902	907	894
94	End user buys both services from incumbent LEC or affiliates	707	710	707
95	End user buys both services from Non-ILEC or affiliates	432	438	421
96	End user buys interconnected VoIP and Internet access service from same entity	650	634	607
97	End user buys both services from incumbent LEC or affiliates	117	103	102
98	End user buys both services from Non-ILEC or affiliates	600	590	563

Technical Notes

General

Detailed information about the current Form 477 reporting requirements is available at <https://www.fcc.gov/general/form-477-resources-filers>.

See Glossary for definitions of terms used in this report.

Counting lines and subscribers

- Form 477 counts both switched access lines and interconnected VoIP subscriptions as the maximum number of calls that may be active, simultaneously, from the end user's location under the purchased service plan. All VoIP subscriptions discussed in this report are interconnected VoIP subscriptions.
- Form 477 data may not count all VoIP phone connections to Internet Protocol Private Branch Exchange (IP PBX) equipment that is owned by business end users because of the variety of ways the IP PBX may connect to the public switched telephone network.

Holding company-subsidary relationships

- When counting service providers that report voice telephone service in a particular geography, we count a holding company or common-control entity no more than once in any specified sub-category of total providers.
- Nationwide counts of providers are unique counts for any specified sub-category of total providers (for example, all non-ILECs or all interconnected VoIP providers); an entity operating in multiple states is counted only once.

ILEC-CLEC affiliations

- If a CLEC is affiliated with an ILEC and reports some end-user switched access lines or interconnected VoIP subscriptions in the ILEC's service area in the state, then the switched access lines or interconnected VoIP subscriptions reported by the CLEC are allocated between the ILEC and non-ILEC categories based on staff estimates.

Mobile voice subscriptions

- Commercial mobile radio service (CMRS) carriers that own or operate wireless networks report both their retail voice service subscriptions and the retail subscriptions of the mobile voice service resellers that use their network. Mobile voice service resellers do not file Form 477.

UNE-Platform lines replaced by commercial agreements

- UNE-Platform (UNE-P) was the combination of ILEC loop UNE, switching UNE, and transport UNE. The Commission directed CLECs to migrate their retail customers served by UNE-P to an alternative arrangement within 12 months of the effective date of the *Triennial Review Remand Order*, that is, by March 11, 2006. See C.F.R. § 51.319(d)(2)(ii). Such lines are reported on Form 477 as ILEC wholesale lines provided to unaffiliated providers for resale.

Glossary

Term	Definition
All Other interconnected VoIP	Interconnected VoIP service other than OTT interconnected VoIP. (See the definition of OTT VoIP, below.)
Broadband connection	A wired line or wireless channel that terminates at an end-user location and enables the end user to receive information from and/or send information to the Internet at information transfer rates exceeding 200 kilobits per second in at least one direction.
Circuit switching	A method of completing electronic communications in which a transmission path is established for dedicated use by a communication; the basis of the public switched telephone network (PSTN).
Coaxial cable	The technology widely used by cable system operators to terminate their services at the end user's premises.
Copper local loop	The technology widely used by telephone companies to terminate their service at the end user's premises.
CLEC	Competitive Local Exchange Carrier: A local exchange carrier (LEC) that operates within the traditional service area of an unaffiliated incumbent LEC.
End users	Residential, business, institutional, or government entities that use services for their own purposes and who do not resell such services to other entities.
Fixed wireless service	A radio communication service between specified fixed points.
FTTP or FTTH	Fiber to the Premises (Home): A network access architecture in which optical fiber is deployed all the way to the customer's premises (home).
Internet access service	Service that provides end users access to the Internet.
ILEC	Incumbent Local Exchange Carrier: A company or cooperative that was providing telephone service in a localized area, typically on a monopoly basis, prior to enactment of the Telecommunications Act of 1996.
Internet protocol or IP	A language and set of formal rules that govern how packets transit the Internet.
Interconnected VoIP or iVoIP	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.
LEC	Local Exchange Carrier: A company that provides telephone service within a localized area and access services that connect its customers to long-distance (Interexchange Carrier) networks.
Local loop	The physical connection between the customer's premises and the telephone company's local switching office, typically provided using copper, fiber, or a combination of copper and fiber facilities.
Mobile wireless service	A radio communication service between mobile and fixed stations, or between mobile stations.

Non-ILEC	Any provider of communications services who does not have ILEC regulatory status. A voice-service affiliate of an ILEC that is operating outside the ILEC's traditional service area ("study area") is a Non-ILEC.
OTT interconnected VoIP	Over-the-top interconnected VoIP: Service delivered to the end-user customer's premises over a high-capacity connection that the customer obtains (that is, buys), or has the use of, from an entity not affiliated with the interconnected VoIP service provider. (Colloquially, "bring-your-own-broadband.")
PBX	Private Branch Exchange: A communications switch that is owned or leased by the service provider's end-user customer and generally located on the customer's premises.
Packet switching	A method of completing electronic communications in which the information is disassembled into discrete packets that are transmitted independently and later reassembled; IP is an example.
Retail wireline voice telephone service	Switched access lines and interconnected VoIP subscriptions for which an end user is the customer.
Switched access line	A service connection between an end user and the local telephone company's switch; the basis of plain old telephone service (POTS).
UNE	Unbundled Network Element: A physical or functional element of an ILEC network that must be provided to a CLEC at a cost-based price, as provide for in the Telecommunications Act of 1996.
UNE-L	UNE-Loop: An ILEC unbundled local loop provided to a CLEC at a cost-based price.
Wholesale switched access lines	Local telephone service provided to an unaffiliated telephone company, which resells the service to end users; typically provided by an ILEC to a CLEC.

Customer Response

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