Background on CTIA's Wireless Industry Survey

CTIA's wireless industry survey develops industry-wide information drawn from operational member and non-member wireless service providers. It has been conducted since January 1985, originally as a cellular-only survey instrument, and now including the community of CMRS licensees (e.g., PCS, ESMR, AWS, BRS and 700 MHz license holders). No break-out of results specific to spectrum bands or licenses is performed. From January 1985 through December 2012, it was conducted as a semi-annual survey, and it is now conducted on an annual basis.

The information determined based on the survey includes: direct employment, number of cell sites, total service revenues, the average revenue per unit (ARPU), and various measures of usage (e.g., minutes and megabytes). The ARPU figure is not equal to the average monthly bill, which may reflect provision of service to multiple devices on a single account.

CTIA's survey develops information on the number of reported wireless service subscribers or connections for the responding systems, and an estimated total connections figure (taking into account non-responding systems). Because CTIA's survey is a voluntary survey, it cannot compel responses from wireless carriers. However, the survey has an excellent response rate. For the December 31, 2017, installment of the survey, CTIA aggregated data from companies serving 97.9 percent of all estimated wireless subscriber connections (excluding some machine-to-machine and other units not treated as subscriber connections for reporting purposes by some carriers).

Because not all systems do respond, CTIA develops an estimate of total wireless connections. The estimate is developed by determining the identity and character of non-respondents and their markets (e.g., RSA/MSA or equivalent-market designation, age of system, market population), and using surrogate penetration and growth rates applicable to similar, known systems to derive probable subscribership. These numbers are then summed with the reported subscriber connection numbers to reach the total estimated figures. No carrier-specific or market-specific information is maintained as a result of the survey. All such information is aggregated by an independent accounting firm to a nationwide level. The underlying source material for the survey is then destroyed per confidentiality agreements.

The following tables and charts reflect selected top-of-the-line data. Complete results of CTIA's survey are available for purchase in the comprehensive report, **CTIA's Wireless Industry Indices: 1985 – 2017**, including data on revenues, subscriber usage, investment, and other operational indicators and ratios.

The report is available for a member price of $850 and a non-member price of $1,075. Subsequent copies are available to members at $475 each and to non-members at $535 each. Two year subscriptions are available at a member price of $1,445 and non-member price of $1,825.

To order this report contact research@ctia.org or order online at store.ctia.org

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CTIA annualized wireless industry survey results – 2001 to 2017

Date	Estimated Total Subscriber Connections	Annual Services Revenues ($000s)	Cumulative CapEx ($000s)	Cell Sites	Direct Carrier Employees	Monthly Average Revenue Per Unit
2001	128,374,512	$65,316,235	$105,030,101	127,540	203,580	$49.79
2002	140,766,842	$76,508,186	$126,922,347	139,338	192,410	$51.00
2003	158,721,981	$87,624,093	$145,866,914	162,986	205,629	$51.55
2004	182,140,362	$102,121,210	$173,793,507	175,725	226,016	$52.54
2005	207,896,198	$113,538,220	$199,025,327	183,689	233,067	$50.65
2006	233,040,781	$125,456,825	$223,158,248	195,613	253,893	$49.07
2007	255,395,599	$138,869,304	$244,591,206	213,299	266,782	$49.26
2008	270,333,881	$148,084,170	$264,760,517	242,130	268,528	$48.87
2009	285,646,191	$152,551,854	$285,121,591	247,081	249,247	$47.97
2010	296,285,629	$159,929,649	$310,014,851	253,086	250,393	$47.53
2011	315,963,848	$169,767,314	$335,331,967	283,385	238,071	$46.11
2012	326,475,248	$185,013,935	$365,426,326	301,779	230,101	$48.99
2013	335,652,171	$189,192,812	$398,567,671	304,360	230,409	$48.79
2014	355,445,472	$187,848,447	$430,642,374	298,055	232,169	$46.64
2015	377,921,241	$191,949,025	$462,605,007	307,626	235,818	$44.65
2016	395,881,497	$188,524,256	$488,996,535	308,334	216,537	$41.50
2017	400,205,829	$179,091,135	$514,625,256	323,448	207,324	$38.66

Cumulative Capital Investment Exceeded **$514 Billion** at Year-end 2017

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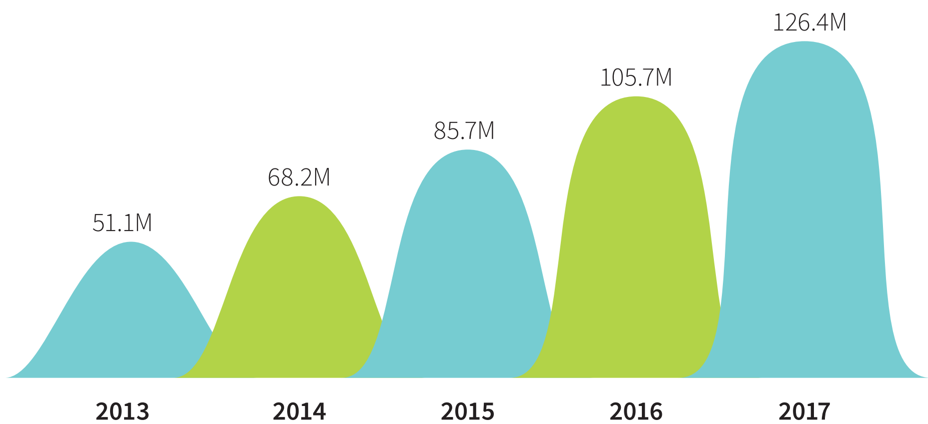
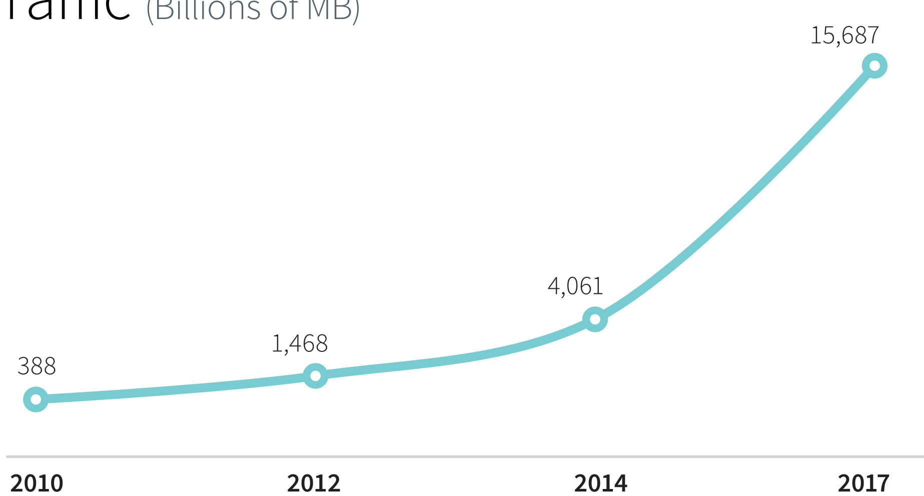
Data-Only Devices (Millions)



Data-Only Devices Grew **147%** Since 2013

Reported Wireless Data Traffic (Billions of MB)



Reported Annual Wireless Data Traffic Grew **40** Times Since 2010, Up **4x** from 2014

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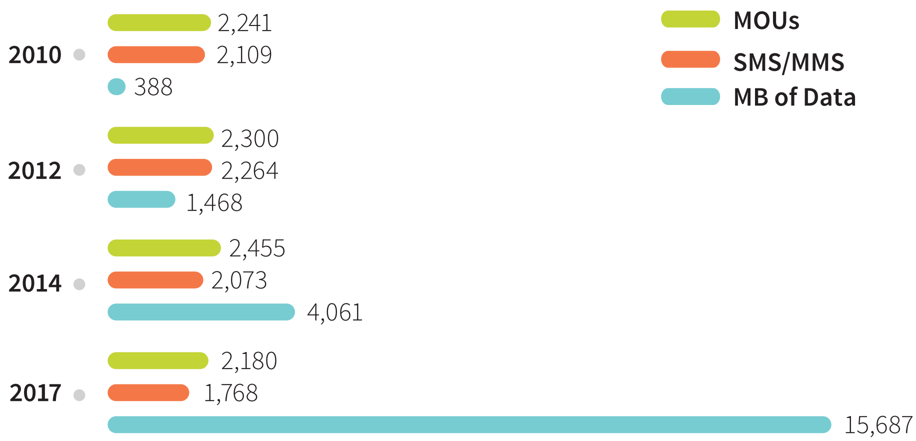
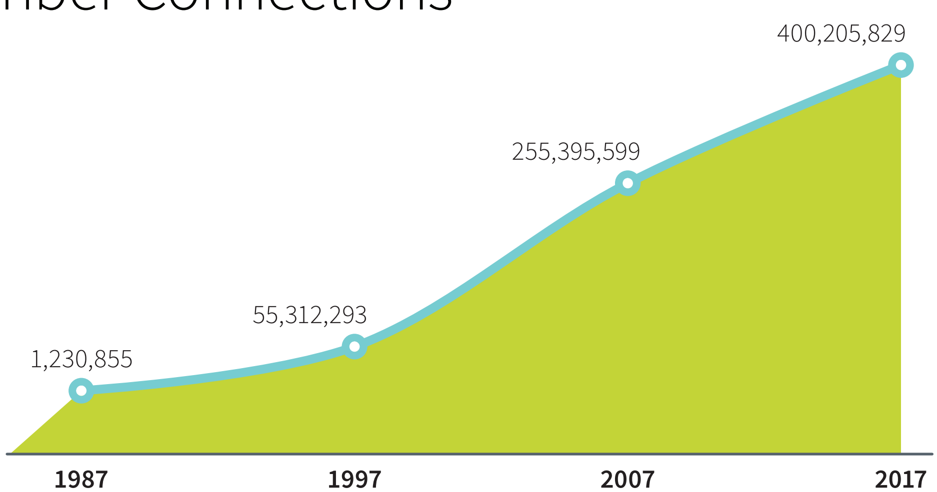
Annual minutes, messages and megabytes of wireless traffic (Billions of MOUs/Messages/MB)



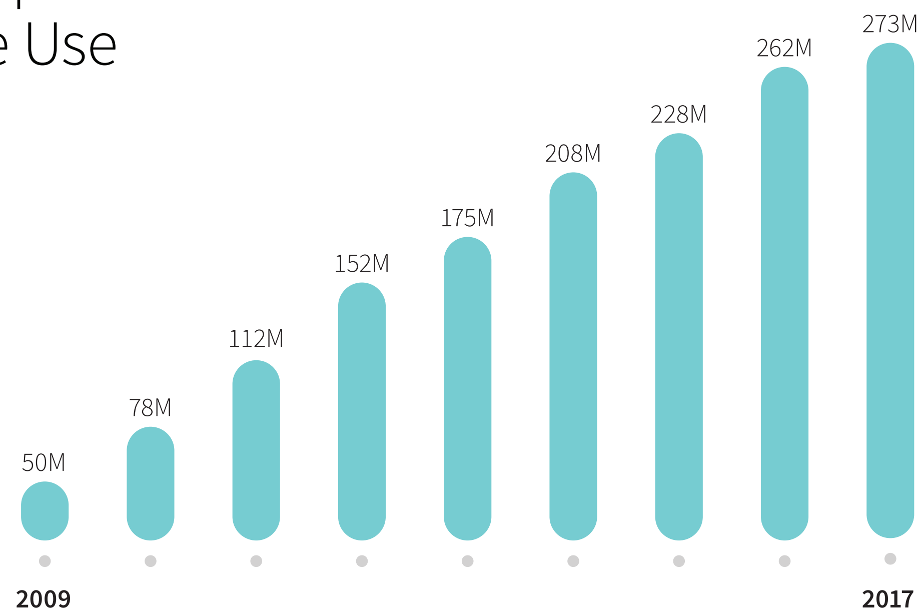
The Mix of Minutes, Messages and MBs Changes – Data Dominates

Estimated Wireless Subscriber Connections



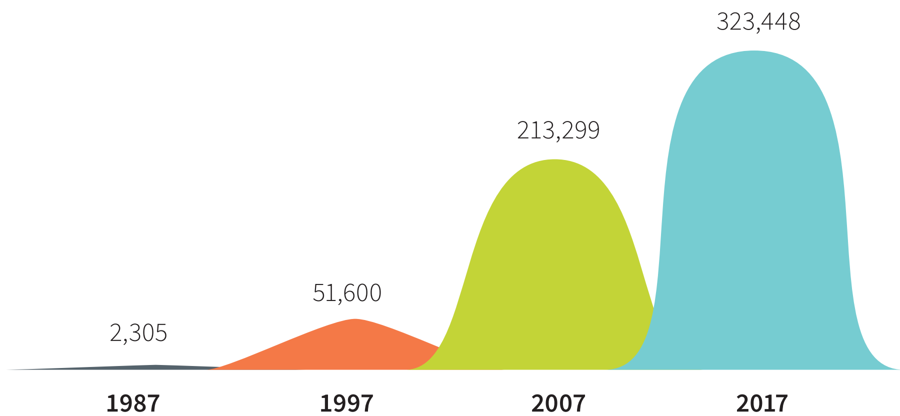
Estimated Connections Equal **120.7%** of U.S. Population

Smartphones in Active Use



Reported Smartphones Grew **5.5x** from 2009

Cell Sites in Service



A Record **323,448** Cells Sites Were in Operation in 2017, Representing **52% Growth** Over the Last Decade

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