U.S. Home Broadband & WiFi Usage Forecast, 2013-2018

Market Report Second Quarter 2014





U.S. Home Broadband & WiFi Usage Forecast, 2013-2018

Market Report

Published Second Quarter 2014 Version 1.0 Report Number: 02Q2014-06

*iG*R Inc. 12400 W. Hwy 71 Suite 350 PMB 341 Austin TX 78738

Table of Contents

Abstract	1
Executive Summary	3
Figure A: U.S. Bandwidth (GB) per HH per Month, 2013-2018	
Methodology	0
Background	7
Table 1: Broadband Usage Among Survey Respondents, 2013 & 2014	
Figure 1: Broadband Usage Among Survey Respondents, 2014	8
Table 2: Speed of Wired Broadband Connection, 2014	
Figure 2: Speed of Wired Broadband Connection, 2014	9
Figure 3: Presence of WiFi at Home, U.S.	
Table 3: Number of WiFi Access Points in Home, U.S. 2014	11
Figure 4: Number of WiFi Access Points in Home, U.S. 2014	11
Table 4: Most Common Home Computing Devices, 2014	12
Figure 5: Most Common Home Computing Devices, 2014	
Table 5: Connected TV Devices, 2014	
Figure 6: Connected TV Devices, 2014	15
Table 6: Where Mobile Devices are Most Used	15
Figure 7: Where Mobile Devices are Most Used	
Table 7: Activities Using the Home Broadband Connection	17
Figure 8: Activities Using the Home Broadband Connection	19
Table 8: How Devices Connect to Home Broadband	19
Figure 9: How Devices Connect to Home Broadband	20
Content Consumption (TV)	21
Table 9: TV Watching per Day, U.S	
Figure 10: TV Watching per Day, U.S.	
Table 10: Type of Content Watched	
Figure 11: Type of Content Watched	23
Table 11: Series Viewed by Streaming Service, Index	23
Table 12: Movies Viewed by Streaming Service, Index	24
Table 13: Child-/Family-Shows by Streaming Service, Index	24
Formats for Watching Video	25
Table 14: Formats for Watching Video	25
Figure 12: Formats for Watching Video	26
Streaming and Downloading Video	26
Table 15: Downloading or Streaming Video	26
Figure 13: Downloading or Streaming Video	27
On-demand Services	28
Table 16: On-demand Services	28
Figure 14: On-demand Services	28
Streaming Service Subscriptions	29

Quoting information from an *iG*illottResearch publication: external — any *iG*illottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from *iG*illottResearch. *iG*illottResearch reserves the right to deny approval of external usage for any reason. Internal-quoting individual sentences and paragraphs for use in your company's internal communications activities does not require permission from *iG*illottResearch. The use of large portions or the reproduction of any *iG*illottResearch document in its entirety does require prior written approval and may have some financial implications.

Copyright © 2014 *iG*illottResearch, Inc. Reproduction is forbidden unless authorized.

Table 17: Streaming Service Subscriptions	29
Figure 15: Streaming Service Subscriptions	30
Table 18: How Streaming Service is Accessed, 2014	31
Figure 16: Devices Used for Streaming Service	32
Devices Used While Watching TV	32
Table 19: Devices Used While Watching TV, U.S.	33
Figure 17: Devices Used While Watching TV, U.S	34
Table 20: Time Periods when Device Usage Occurs	34
Figure 18: Time Periods when Device Usage Occurs	35
Key Stats on Streaming Services	35
Notes on Data Amounts Associated with Online Activities	36
Number of In-Home Devices	39
Table 21: Devices per Household, 2013-2018	39
Figure 19: Devices per Household, 2013-2018	40
Wired Broadband Forecast	43
Table 22: Residential Connections, U.S., December 2012	44
Table 23: Internet Access by Age of U.S. Residents, 2011	45
Speed of Broadband Connections	45
Table 24: Example Connection Speed Data for Cable at All Hours, U.S	
Table 25: Example Connection Speed Data for Cable at Peak Hours, U.S	
Table 26: FCC Data Rates by iGR Usage Category, 2013	
Figure 20: U.S. Household Distribution of Connections, by Speed of Connection, 2013.	49
Trend Toward Higher Speeds	49
Tiena Towara Tilgiler Specas	
iGR's Usage Categories	
	50
iGR's Usage Categories	50 50
iGR's Usage Categories	50 50 51
iGR's Usage Categories	50 50 51 52
iGR's Usage Categories	50 50 51 52
iGR's Usage Categories	50515252
iGR's Usage Categories	5051525252
iGR's Usage Categories	505152525455
iGR's Usage Categories Table 27: Light User, U.S. Table 28: Medium Bandwidth Users, U.S. Table 29: Heavy Bandwidth Users, U.S. Table 30: Extreme Bandwidth Users, U.S. Total Wired Broadband Usage Estimate Table 31: Forecast of BW Usage by Usage Category, 2013-2018 Figure 21: Forecast of BW Usage by Usage Category, 2013-2018	50515252545556
iGR's Usage Categories Table 27: Light User, U.S. Table 28: Medium Bandwidth Users, U.S. Table 29: Heavy Bandwidth Users, U.S. Table 30: Extreme Bandwidth Users, U.S. Total Wired Broadband Usage Estimate Table 31: Forecast of BW Usage by Usage Category, 2013-2018 Figure 21: Forecast of BW Usage by Usage Category, 2013-2018 Table 32: Number of U.S. HHs per Usage Category, 2013-2018	5050515254555656
iGR's Usage Categories Table 27: Light User, U.S. Table 28: Medium Bandwidth Users, U.S. Table 29: Heavy Bandwidth Users, U.S. Table 30: Extreme Bandwidth Users, U.S. Total Wired Broadband Usage Estimate Table 31: Forecast of BW Usage by Usage Category, 2013-2018 Figure 21: Forecast of BW Usage by Usage Category, 2013-2018 Table 32: Number of U.S. HHs per Usage Category, 2013-2018 Figure 22: Number of U.S. HHs per Usage Category, 2013-2018	50505152555555555657
iGR's Usage Categories Table 27: Light User, U.S. Table 28: Medium Bandwidth Users, U.S. Table 29: Heavy Bandwidth Users, U.S. Table 30: Extreme Bandwidth Users, U.S. Total Wired Broadband Usage Estimate Table 31: Forecast of BW Usage by Usage Category, 2013-2018 Figure 21: Forecast of BW Usage by Usage Category, 2013-2018 Table 32: Number of U.S. HHs per Usage Category, 2013-2018 Figure 22: Number of U.S. HHs per Usage Category, 2013-2018 Table 33: Percent of U.S. HHs per Usage Category, 2013-2018	50 51 52 52 55 56 56 57 57
iGR's Usage Categories Table 27: Light User, U.S. Table 28: Medium Bandwidth Users, U.S. Table 29: Heavy Bandwidth Users, U.S. Table 30: Extreme Bandwidth Users, U.S. Total Wired Broadband Usage Estimate. Table 31: Forecast of BW Usage by Usage Category, 2013-2018. Figure 21: Forecast of BW Usage by Usage Category, 2013-2018. Table 32: Number of U.S. HHs per Usage Category, 2013-2018. Figure 22: Number of U.S. HHs per Usage Category, 2013-2018. Table 33: Percent of U.S. HHs per Usage Category, 2013-2018. Figure 23: Percent of U.S. HHs per Usage Category, 2013-2018.	50 50 51 52 54 55 56 56 57 57 58
Table 27: Light User, U.S. Table 28: Medium Bandwidth Users, U.S. Table 29: Heavy Bandwidth Users, U.S. Table 30: Extreme Bandwidth Users, U.S. Table 31: Forecast of BW Usage Estimate Table 31: Forecast of BW Usage by Usage Category, 2013-2018 Figure 21: Forecast of BW Usage by Usage Category, 2013-2018 Table 32: Number of U.S. HHs per Usage Category, 2013-2018. Figure 22: Number of U.S. HHs per Usage Category, 2013-2018. Table 33: Percent of U.S. HHs per Usage Category, 2013-2018. Figure 23: Percent of U.S. HHs per Usage Category, 2013-2018. Figure 23: Percent of U.S. HHs per Usage Category, 2013-2018. Table 34: Total U.S. HH Fixed Data Usage per Month, 2013-2018.	50 50 52 52 55 56 56 57 57 58 59
Table 27: Light User, U.S. Table 28: Medium Bandwidth Users, U.S. Table 29: Heavy Bandwidth Users, U.S. Table 30: Extreme Bandwidth Users, U.S. Total Wired Broadband Usage Estimate Table 31: Forecast of BW Usage by Usage Category, 2013-2018 Figure 21: Forecast of BW Usage by Usage Category, 2013-2018. Table 32: Number of U.S. HHs per Usage Category, 2013-2018. Figure 22: Number of U.S. HHs per Usage Category, 2013-2018. Table 33: Percent of U.S. HHs per Usage Category, 2013-2018. Figure 23: Percent of U.S. HHs per Usage Category, 2013-2018. Figure 24: Total U.S. HH Fixed Data Usage per Month, 2013-2018. Figure 24: Total U.S. HH Fixed Data Usage per Month, 2013-2018.	50 50 52 52 55 56 56 57 57 58 59
Table 27: Light User, U.S. Table 28: Medium Bandwidth Users, U.S. Table 29: Heavy Bandwidth Users, U.S. Table 30: Extreme Bandwidth Users, U.S. Total Wired Broadband Usage Estimate Table 31: Forecast of BW Usage by Usage Category, 2013-2018 Figure 21: Forecast of BW Usage by Usage Category, 2013-2018 Table 32: Number of U.S. HHs per Usage Category, 2013-2018 Figure 22: Number of U.S. HHs per Usage Category, 2013-2018 Table 33: Percent of U.S. HHs per Usage Category, 2013-2018 Figure 23: Percent of U.S. HHs per Usage Category, 2013-2018 Figure 24: Total U.S. HH Fixed Data Usage per Month, 2013-2018. Figure 24: Total U.S. HH Fixed Data Usage per Month, 2013-2018. WiFi Contribution Estimates	50 50 51 52 54 55 56 56 57 58 59 59
Table 27: Light User, U.S. Table 28: Medium Bandwidth Users, U.S. Table 29: Heavy Bandwidth Users, U.S. Table 30: Extreme Bandwidth Users, U.S. Total Wired Broadband Usage Estimate. Table 31: Forecast of BW Usage by Usage Category, 2013-2018. Figure 21: Forecast of BW Usage by Usage Category, 2013-2018. Table 32: Number of U.S. HHs per Usage Category, 2013-2018. Figure 22: Number of U.S. HHs per Usage Category, 2013-2018. Table 33: Percent of U.S. HHs per Usage Category, 2013-2018. Figure 23: Percent of U.S. HHs per Usage Category, 2013-2018. Figure 24: Total U.S. HH Fixed Data Usage per Month, 2013-2018. Figure 24: Total U.S. HH Fixed Data Usage per Month, 2013-2018. WiFi Contribution Estimates Table 35: WiFi as Portion of Light HH's Total Wired Data Usage, 2013-2018.	50 50 52 52 55 56 56 57 57 59 59 60 61
Table 27: Light User, U.S. Table 28: Medium Bandwidth Users, U.S. Table 29: Heavy Bandwidth Users, U.S. Table 30: Extreme Bandwidth Users, U.S. Total Wired Broadband Usage Estimate Table 31: Forecast of BW Usage by Usage Category, 2013-2018 Figure 21: Forecast of BW Usage by Usage Category, 2013-2018 Table 32: Number of U.S. HHs per Usage Category, 2013-2018 Figure 22: Number of U.S. HHs per Usage Category, 2013-2018 Table 33: Percent of U.S. HHs per Usage Category, 2013-2018 Figure 23: Percent of U.S. HHs per Usage Category, 2013-2018 Figure 24: Total U.S. HH Fixed Data Usage per Month, 2013-2018 Figure 24: Total U.S. HH Fixed Data Usage per Month, 2013-2018 WiFi Contribution Estimates Table 35: WiFi as Portion of Light HH's Total Wired Data Usage, 2013-2018 Figure 25: WiFi as Portion of Light HH's Total Wired Data Usage, 2013-2018	50 50 52 52 55 56 56 57 57 59 59 60 61 62
Table 27: Light User, U.S. Table 28: Medium Bandwidth Users, U.S. Table 29: Heavy Bandwidth Users, U.S. Table 30: Extreme Bandwidth Users, U.S. Total Wired Broadband Usage Estimate. Table 31: Forecast of BW Usage by Usage Category, 2013-2018. Figure 21: Forecast of BW Usage by Usage Category, 2013-2018. Table 32: Number of U.S. HHs per Usage Category, 2013-2018. Figure 22: Number of U.S. HHs per Usage Category, 2013-2018. Table 33: Percent of U.S. HHs per Usage Category, 2013-2018. Figure 23: Percent of U.S. HHs per Usage Category, 2013-2018. Figure 24: Total U.S. HH Fixed Data Usage per Month, 2013-2018. Figure 24: Total U.S. HH Fixed Data Usage per Month, 2013-2018. WiFi Contribution Estimates Table 35: WiFi as Portion of Light HH's Total Wired Data Usage, 2013-2018. Figure 25: WiFi as Portion of Medium HH's Total Wired Data Usage, 2013-2018.	50 50 51 52 55 56 56 57 57 58 59 59 59 60 61 62 63
Table 27: Light User, U.S. Table 28: Medium Bandwidth Users, U.S. Table 29: Heavy Bandwidth Users, U.S. Table 30: Extreme Bandwidth Users, U.S. Total Wired Broadband Usage Estimate Table 31: Forecast of BW Usage by Usage Category, 2013-2018. Figure 21: Forecast of BW Usage by Usage Category, 2013-2018. Table 32: Number of U.S. HHs per Usage Category, 2013-2018. Figure 22: Number of U.S. HHs per Usage Category, 2013-2018. Table 33: Percent of U.S. HHs per Usage Category, 2013-2018. Figure 23: Percent of U.S. HHs per Usage Category, 2013-2018. Figure 24: Total U.S. HH Fixed Data Usage Per Month, 2013-2018. Figure 24: Total U.S. HH Fixed Data Usage per Month, 2013-2018. WiFi Contribution Estimates Table 35: WiFi as Portion of Light HH's Total Wired Data Usage, 2013-2018. Figure 26: WiFi as Portion of Medium HH's Total Wired Data Usage, 2013-2018. Figure 26: WiFi as Portion of Medium HH's Total Wired Data Usage, 2013-2018.	50 50 51 52 54 55 56 56 57 57 58 59 59 60 61 62 63

Quoting information from an *iG*illottResearch publication: external — any *iG*illottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from *iG*illottResearch. *iG*illottResearch reserves the right to deny approval of external usage for any reason. Internal-quoting individual sentences and paragraphs for use in your company's internal communications activities does not require permission from *iG*illottResearch. The use of large portions or the reproduction of any *iG*illottResearch document in its entirety does require prior written approval and may have some financial implications.

Copyright © 2014 *iG*illottResearch, Inc. Reproduction is forbidden unless authorized.

Figure 28: WiFi as Portion of Extreme HH's Total Wired Data Usage, 2013-2018	65
Video Usage	66
Table 39: Split of Traffic by Video and Not Video, 2013-2018	67
Figure 29: Split of Traffic by Video and Not Video, 2013-2018	
Table 40: Video Traffic Growth, 2013-2018	
Figure 30: Video Traffic Growth, 2013-2018	
Table 41: Video over WiFi Growth, 2013-2018	68
Figure 31: Video over WiFi Growth, 2013-2018	
Survey Demographics	70
Demographic Profile of U.S. Consumer Respondents	70
Table 42: Age	70
Figure 32: Age	71
Table 43: Gender	71
Figure 33: Gender	72
Table 44: Ethnic Background	72
Figure 34: Ethnic Background	73
Table 45: Annual Household Income	73
Figure 35: Annual Household Income	74
Table 46: Level of Education	74
Figure 36: Level of Education	75
Table 47: Age of Children in Household	76
Figure 37: Age of Children in Household	76
Table 48: Marital Status	77
Figure 38: Marital Status	77
Definitions	78
General	78
Device Types	78
Services	79
Network Technology	80
About <i>iG</i> R	84
Disclaimer	84

Abstract

This study estimates the amount of data used by fixed broadband connections in U.S. households. This report also estimates the amount of data usage that is driven by devices that primarily connect via WiFi – laptops, tablets, smartphones, e-readers, game consoles, etc.

In the U.S., in-home WiFi usage is important for several reasons:

- 1) It tends to be high quality 11g or 11n so users are accustomed to very low latency and high connection speeds.
- 2) It is wireless and, as this report suggests, subscribers are increasingly accustomed to data-intensive activities on laptops, smartphones, tablets, etc.
- 3) In-home usage is a precursor to outside-the-home usage. If a user gets accustomed to streaming music over an in-home cable / WiFi network, then that same user is likely to stream their music when they step outside the home. And given that there is little effective drop-off in average throughput per user inside or outside the home, the experience can be very similar it primarily just differs on the form factor side. For example, music streamed through ear buds rather than a desktop computer's speakers, etc.
- 4) The key companies in the mobile space are making a concerted effort to get inside the home while also making the user experience as comparable across platforms as possible. For example, Apple's iOS and Mac OS X are increasingly converging in look and feel and capability. Google and its various services are essentially identical regardless of how they are accessed. (Windows Phones and the general failure of the Windows 8 UI is perhaps the best counter-example of this trend.)

And this, of course, is why wireless operators (and device OEMs) care about the inhome data usage: They provide the networks and devices that subscribers will use as blithely as today's 40-somethings used Sony Walkmans two decades ago. Today's users expect a world in which they always have high-speed access to anything they want – cloud music, cloud information, etc. Internet and data access is inextricably woven into the personal, social and business fabric of modern life.

Key questions addressed:

- Amount of in-home wired broadband usage per household
- Amount of in-home broadband usage that is driven by WiFi
- Forecasted in-home broadband usage per household

- Number of broadband-enabled U.S. households
- Key in-home usage metrics devices, applications.

Who should read this report?

- Mobile operators
- Cable MSOs and other fixed broadband providers
- Device OEMs
- Content providers and distributors
- Financial analysts and investors.