U.S. Home Broadband & WiFi Usage Forecast, 2011-2015

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Abstract

Always-on connectivity is becoming synonymous with modern living across U.S. users. Even within the home, U.S. users want access to cloud-based music services, streaming video and movie content, and Internet connectivity. As such, bandwidth usage per U.S. household is on the rise.

One way to assess residential bandwidth traffic is to measure home WiFi usage. U.S. in-home WiFi connections are worth noting as they are often low latency and fast (11g or 11n), subject to heavy use activities on laptops, tablets and smartphones alike, and a user's in-home bandwidth use can predict that user's bandwidth use on the go. As operators and OEMS provide the networks and devices that users employ in these uses cases, home WiFi utilization is a topic relevant to the wireless community. For instance, even for lighter user households in the U.S. (i.e., lower connection speed, basic Internet usage for email and minor web browsing), *iG*R predicts a rise from 18.3 GB per month consumed in 2011 to 45 GB per month by 2015. Heavier use households will also see an increase.

The following report estimates the amount of "at home" bandwidth consumed via WiFi in the United States. *iG*R describes the types of users/ households consuming bandwidth in the U.S., examines the differences in user/ household types and the resultant impact on device and network usage, presents its forecast for bandwidth usage per month per U.S. household from 2011-2015, and discusses the impact of WiFi on at home bandwidth traffic.

Key Questions Addressed:

- What is the difference between a light, medium, heavy and extreme household's WiFi usage in the U.S.?
- What WiFi use trends exist among current U.S. users?
- How does at home WiFi usage influence overall Internet usage in U.S. users?
- What kinds of fixed broadband and WiFi devices are in U.S. households?
- How are movies and TV consumed over at home WiFi in the U.S.?
- What kinds of at home broadband connections exist across U.S. users?
- How does bandwidth consumption vary based on at home connection type or speed across U.S. users?
- How will light, medium, heavy and extreme users compare by bandwidth consumed across U.S. users from 2011-2015?
- How will bandwidth consumption vary by household connection speed across U.S. users from 2011-2015?

This report is recommended for:

- Cellular carriers, particularly those in the U.S.
- Internet service providers, particularly those in the U.S.
- Network infrastructure vendors, particularly those that service the U.S. market
- Mobile device OEMs interested in the U.S. market
- Financial and investment analysts.

Executive Summary

The goal of this report is to estimate the amount of "at home" bandwidth that flows over – and/or is driven by – WiFi in the United States. U.S. in-home WiFi usage is important for several reasons:

1) It tends to be very high quality – 11g or 11n – so users are accustomed to very low latency and high connection speeds

2) It's wireless and users, as this report suggests, are increasingly accustomed to bandwidth-intensive activities to laptops, smartphones and, increasingly, tablets.

3) In-home usage is a precursor to outside-the-home usage. If I stream Pandora while doing homework, I'll want to stream Pandora while going for a run.

So, why do wireless operators (or OEMs) care? Because they provide the networks and devices that subscribers will use as blithely as today's 40-somethings used Sony Walkmans a decade and more ago. Today's users are coming to 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.

As a first step in determining how much WiFi is used in the home, Figure A presents our forecast of bandwidth usage per month per household through 2015. A household belonging to the "Light" usage category will use about 18.3 GB / month in 2011. We forecast that usage level rising to about 45 GB / month by 2015.