

**U.S. WiFi Offload
Traffic Forecast, 2012
– 2017: *Relief for
Mobile Data
Networks?***

Market Study
Third Quarter, 2013





U.S. WiFi Offload Traffic Forecast, 2012 – 2017: *Relief for Mobile Data Networks?*

A Market Study

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Abstract

Once a pariah among wireless data networks, WiFi has emerged as a legitimate “other network” option for mobile operators. Granted, subscribers have to be within about 300 feet of a WiFi hotspot, or within a metro WiFi hotzone, but carriers are looking hard at “WiFi Offload” as a way to not only provide their customers with high-quality, reliable wireless data, but also to relieve some of the congestion on their 3G mobile data networks.

This report forecasts the amount of data traffic that is generated by mobile devices and then offloaded to WiFi. The foundation of the *iGR*'s WiFi Offload forecast is *iGR*'s mobile data traffic forecast, which is also presented, in part, in this report.

The categories of WiFi offload covered in this report include:

1. **WiFi Only:** This is data traffic that occurs on a WiFi network outside of the home or office on WiFi-only devices. *iGR*'s model estimates that in 2012, a total of about 0.38 gigabytes (GB) each month per active device among that subset of mobile connections that have WiFi-only devices (and use them outside the home or office). This is the smallest sub-set of WiFi offload usage.
2. **WiFi Offload (User Driven):** A subscriber/end user who chooses a WiFi connection (except one inside the home or office) rather than use their 3G/4G mobile broadband connection. If the non-home/non-work WiFi network did not exist, this traffic would have gone over the mobile operator's cellular data network. *iGR*'s model estimates that in 2012, a total of about 0.41 GB per month per active device was offloaded to WiFi. This is the predominant form of WiFi offload today.
3. **WiFi Offload (Carrier Driven):** This is user-generated data traffic that the operator diverts from its 3G/4G RAN to a carrier-managed WiFi network. As such, *iGR* counts this traffic as a fraction of mobile data since this is data the subscriber would have used regardless of the type of RAN they are on. (Note that this definition may change over time, as the actual technology required to “hotswitch” the end user from 3G/4G to WiFi becomes more transparent to the end user.) *iGR*'s model estimates that in 2012, a total of about 0.04 GB per month per active device was offloaded to WiFi. This type of WiFi offload is not widespread today, but *iGR* believes it will become more common over time.

Key questions addressed:

- What is WiFi?

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- Where is the WiFi standard headed?
- How is WiFi used?
- What is WiFi offload?
- What is the difference between user-driven WiFi offload and carrier-driven WiFi offload?
- What are some of the key standards efforts associated with WiFi offload?
- What are the potential benefits associated with WiFi offload?
- What are the potential issues associated with WiFi offload?
- What is WiFi only? How is it commonly used?
- How much WiFi offload traffic is expected through 2017?
- How much WiFi only traffic is expected through 2017?
- How do the two different types of WiFi data traffic inter-relate?
- How does WiFi offload usage split out by venue?

Who should read this report?

- Mobile operators, including those with WiFi networks
- Device OEMs
- Content providers and distributors
- Cable MSOs and those offering WiFi services
- Financial analysts and investors.

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