

**U.S. Mobile Data  
Forecast by Spectrum  
Band, 2015-2020: *The  
Impact of  
Densification***

Market Study  
Second Quarter 2016





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# **U.S. Mobile Data Forecast by Spectrum Band, 2015 – 2020: *The Impact of Densification***

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## **A Market Study**

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## Abstract

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This report forecasts the U.S. mobile data traffic for the 2015 to 2020 period for each spectrum band used for LTE. In the U.S. today, LTE is predominantly in the 700 MHz, PCS, AWS-1 and 2.5 GHz bands, but over the next few years, the mobile operators will start to refarm 3G spectrum and decommission 2G networks entirely. This will free up additional spectrum in the 850 MHz and PCS bands for additional LTE capacity.

Furthermore, the mobile operators will also start significant densification of their networks using small cells, thus readying themselves for the deployment of 5G architectures toward the end of the decade. And the operators will also start to deploy LTE in the new AWS-3 and WCS spectrum they have acquired over the last few years. This will result in a shift of LTE traffic to the high-bands.

To prepare the mobile data forecast by spectrum band, *iGR* first forecast the overall mobile data market in the U.S. An assessment was made as to which bands each mobile operator was using for LTE, the relative size of the spectrum block, the use of carrier aggregation, and which bands would be deployed for LTE in future.

The forecast is shown for the amount of mobile data traffic in each band, the amount of traffic in high- and low-bands, and the share of traffic in each.

Key questions addressed:

- What are the drivers of mobile data traffic?
- What are some of the limiting factors on the amount of mobile data traffic?
- What is mobile data usage today in the U.S. and at what rate is mobile data usage expected to grow over the forecast period?
- How much mobile data traffic is used by an average mobile connection in the U.S. and at what rate is the average mobile data usage expected to grow over the forecast period?
- How much mobile data traffic is used by each quartile in the U.S.?
- How much mobile data traffic is sent over each of the spectrum bands used for LTE in the U.S.: 700 MHz, PCS, AWS-1, 2.5 GHz?
- How will the amount of traffic in each band change as mobile operators refarm 850 MHz and PCS bands for LTE?
- How will the amount of data traffic in each band change as the mobile operators deploy LTE in more AWS-1 spectrum and start to deploy AWS-3 and WCS bands?

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Who should read this report:

- Mobile operators
- Device OEMs
- Mobile infrastructure and equipment OEMs
- Content providers and distributors
- Financial analysts and investors.

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