



Contact iGR

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New iGR study forecasts the number of Mobile Fronthaul and Backhaul Connections to support 5G

Study also discusses wired and wireless technology options and the growing importance of fiber

AUSTIN, Texas, March 1st, 2018 – 5G looms over the network strategies of mobile operators, as does the ongoing move toward Cloud RAN (CRAN), software defined networking (SDN) and network function virtualization (NFV). All of this – along with many other factors – drives the need for reliable, scalable and cost effective fronthaul and backhaul.

Fiber is the primary physical medium for backhaul, transporting control and user plane traffic among cell sites, the edge, the mobile core, data centers and the Internet. Wireless solutions have their place and scale reasonably well, but as traffic shifts from LTE to 5G and as mobile data demand grows, fiber is likely to remain the key medium for backhaul.

Remote radio heads (RRHs) are the mainstay of most RANs. Through fronthaul, fiber links the RRHs to the baseband processing units (BBUs) at the bottom of the tower. Increasingly, those BBUs are being centralized at a place other than the bottom of each macrocell tower. The current technology of choice for linking BBUs and radios is CPRI. BBU centralization is the first step on the road toward Cloud RAN (C-RAN). But, CPRI does not scale into tomorrow's world of MIMO and Massive MIMO. So, in the last few years, there has been a push to, essentially, rethink CPRI and create a new "functional split" between the radio and the baseband processing.

iGR, a market research consultancy focused on the wireless and mobile industry, has recently published a market study that analyzes fronthaul and backhaul requirements and provides a five-year forecast for the U.S. mobile market.

"The overall goal of fronthaul and backhaul is to meet the 5G requirements of approximately one millisecond latency (for some services) and gigabit-level throughput (for some services)," said Iain Gillott, president and founder of iGR. "And 5G is literally right around the corner."

iGR's new market study, [**U.S. Front/Backhaul Forecast, 2017-2022: The Functional Split**](#), discusses the wireless and wired front/backhaul technologies available and the main market drivers for each type of backhaul to support macrocells and small cells. It also presents iGR's U.S. forecast for

wired and wireless front/backhaul to support the radio access network (RAN) over the next five years. The forecast is provided for both macrocells and outdoor small cells and is further delineated by the type of technology used: fiber, copper and wireless. Finally, the market study forecasts the amount of mobile data demand that flows over those links by generation (5G and non-5G).

The following key questions are addressed in the new research study:

- What is the anticipated growth of front/backhaul in the U.S. through 2022?
- How is traffic split between 4G LTE and 5G?
- What is the difference between fronthaul and backhaul?
- How is the type of front/backhaul split between fiber, wireless and copper?
- What is the forecast for front/backhaul to support outdoor small cell deployments?
- What are the major concerns of the mobile operators with regard to each type of backhaul and how can these concerns be addressed?
- What is the role for wired and wireless front/backhaul in small cell architectures?
- How is wired and wireless front/backhaul deployed?
- How do PTP, PMP, NLOS, millimeter wave and traditional microwave solutions differ?
- How do fiber (point to point and passive), VDSL2 and coaxial (hybrid fiber coax) differ?
- How does wireless backhaul compare to fiber backhaul?
- How does wireless fronthaul compare to fiber fronthaul?
- What is CPRI and how may it change?

The information in this market study will be valuable for:

- Mobile operators, particularly those servicing the U.S. market
- Mobile backhaul providers, including telcos and cable MSOs
- Wired and wireless backhaul vendors and solution providers
- Mobile OEMs, particularly those servicing the U.S. market
- Wired and wireless infrastructure vendors, particularly those servicing the U.S. market
- Financial and investment analysts.

The new report can be [purchased](#) and downloaded directly from *iGR's* website at www.iGR-inc.com.

About *iGR*

iGR is a market strategy consultancy focused on the wireless and mobile communications industry. Founded by Iain Gillott, one of the wireless industry's leading analysts, in late 2000 as *iGillottResearch*, *iGR* is now in its eighteenth year of operation. *iGR* continuously researches emerging and existent technologies, technology industries, and consumer markets. We use our detailed research to offer a range of services to help companies improve their position in the marketplace, clearly define their future direction, and ultimately improve their bottom line.

iGR researches a range of wireless and mobile products and technologies, including: smartphones; tablets; mobile wearable devices; connected cars; mobile applications; bandwidth demand and use; small cell and het-net architectures; mobile EPC and RAN virtualization; 5G, DAS; LTE; VoLTE;

IMS; NFC; GSM/GPRS/UMTS/HSPA; CDMA 1x/EV-DO; iDEN; SIP; macro-, pico- and femtocells; mobile backhaul; WiFi and WiFi offload; and SIM and UICC.

A more complete profile of the company can be found at www.igr-inc.com.