



April 14, 2014

Hughes-sponsored Frost & Sullivan Report: Satellite Backhaul of 3G/LTE Cellular Provides Best Way to Bridge the Hard-to-Reach Coverage Gap

Study says satellite offers significant cost savings and performance advantages to meet consumer demand for ubiquitous coverage

GERMANTOWN, Md., April 14, 2014 /PRNewswire/ -- Satellite backhaul is the best way for 3G/LTE cellular providers to extend their networks in hard-to-reach areas where terrestrial facilities are limited or cost-prohibitive, such as rural or even ex-urban communities, according to a new Market Insight report from Frost & Sullivan.



The report-entitled *Satellite Backhaul of 3G and LTE Radio Access Networks*[1]-examined various technologies for backhauling Radio Area Network (RAN) traffic from cell towers to the core network and concluded that satellite offers cost savings, better performance, and logistical advantages over fiber, microwave, and other options in filling coverage gaps of cellular mobile networks. Analysis was based on the HX Satellite Backhaul solution from [Hughes Network Systems](#), LLC (Hughes).

"Satellite backhaul is rapidly growing as a solution for filling in the gaps of a cellular mobile network," said Peter Finalle, senior analyst, Satellite & Mobile Communications at Frost & Sullivan. "As carriers around the world continue to expand their networks and get closer to 100 percent points of presence (POP) coverage, the need to connect remote and difficult locations increases significantly, and the limitations of fiber or other terrestrial solutions such as microwave are already apparent. Frost & Sullivan anticipates satellite will be the technology of choice for bridging these coverage gaps for the foreseeable future."

The findings are significant because RAN costs typically account for over 36 percent of a mobile provider's total operating expenses. As consumers' expectations continue to grow for more bandwidth and uninterrupted service wherever they go, reducing RAN infrastructure costs while expanding coverage can give cellular providers a significant competitive advantage in this hard-fought market. Frost & Sullivan researchers also dispelled the misconception that RAN backhauled over satellite lessens the user experience for real-time applications such as voice and video due to the roundtrip signal delay. The report points out that Hughes has been providing successful satellite backhaul solutions for many of the world's leading 2G, 3G, and LTE service providers for years.

"Hughes offers a full range of satellite-based RAN backhaul solutions that have been specifically designed for mobile operators to enable rapid and cost-effective service expansion into rural or hard-to-serve markets. These solutions provide high-quality links while optimizing space segment resource utilization by coupling the appropriate satellite technology with intelligent traffic optimization," according to Finalle.

Satellite also significantly reduces the time and expense to implement a backhaul connection, researchers noted. Once installed, the service can be turned on immediately.

"The beauty of satellite is that it's everywhere: unlike having to use many multi-hop microwave towers or other solutions, the cost of satellite access is independent of distance," said Vince Onuigbo, senior marketing director at Hughes. "The longer the distance, the more attractive satellite becomes."

To download a free copy of the *Satellite Backhaul of 3G and LTE Radio Access Networks* Market Insight report, go to [Satellite Backhaul](#) or visit [Hughes.com](#).

About Hughes Network Systems

Hughes Network Systems, LLC (Hughes) is the world's leading provider of satellite broadband for home and office, delivering innovative network technologies, managed services, and solutions for enterprises and governments globally. HughesNet® is the #1 high-speed satellite Internet service in the marketplace, with offerings to suit every budget. To date, Hughes has

shipped more than 4 million systems to customers in over 100 countries, representing approximately 50 percent market share. Its products employ global standards approved by the TIA, ETSI and ITU organizations, including IPoS/DVB-S2, RSM-A, and GMR-1.

Headquartered outside Washington, D.C., in Germantown, Maryland, USA, Hughes operates sales and support offices worldwide, and is a wholly owned subsidiary of EchoStar Corporation (NASDAQ: SATS), a premier global provider of satellite operations and digital TV solutions. For additional information about Hughes, please visit www.hughes.com.

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[1] Hughes is a sponsor of the Frost & Sullivan report.

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