

Media Networks Latin America (MNLA)

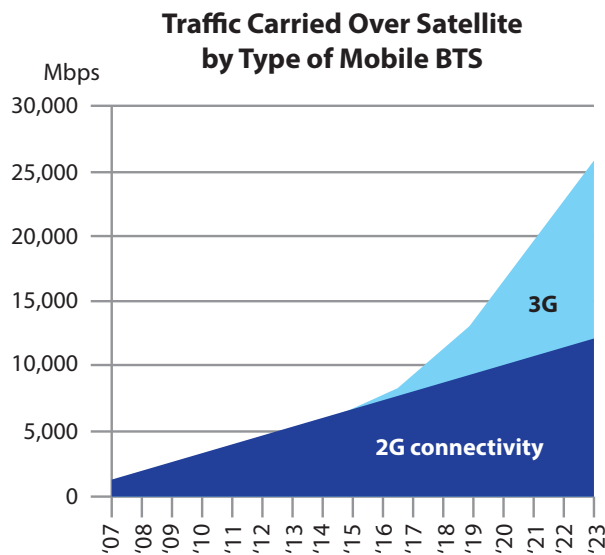
Small Cell Satellite Backhaul

Media Networks Latin America (MNLA), a B2B unit of Telefonica Digital, empowers mobile operators using Small Cells to extend 3G and LTE coverage over Latin America using Hughes JUPITER™ High Throughput System (HTS).

Mobile phone penetration in urban centers in Latin American countries is nearing one hundred percent, but there is a lot of potential for growth with respect to providing coverage to rural and hard-to-serve areas and providing a quality mobile broadband user experience to all subscribers regardless of location. According to a market forecast by Euroconsult most of the mobile growth in the Latin American region will be coming from 3G and LTE coverage extension and expansion.



Hughes JUPITER VSAT Remote



Euroconsult — Prospects for Cellular Backhaul in Fast-Growing Economies

In 2013, MNLA decided to add high-speed Ka-band satellite Internet service to its portfolio to help commercial partners further grow their residential and other wireless access businesses. The company was already Latin America's largest wholesale distributor of Ku-band satellite Internet service and Direct to Home (DTH) television. By operating over a new Ka-band, high throughput satellite (HTS), MNLA is able to offer

high-bandwidth applications, such as music downloads, video streaming, and Voice over IP (VoIP) at a cost-effective price.

Subsequently, in 2014 MNLA extended the services provided by its Ka HTS system to include cost-effective broadband backhaul for Small Cells. Small Cells are "small," low-powered, low-cost radio access base stations that operate in licensed and unlicensed spectrum and have a range of 10 meters to 1 or 2 kilometers, used by mobile operators to extend coverage and improve the user experience in indoor and outdoor locations. Following the certification of Alcatel-Lucent Small Cells backhauled via the Hughes JUPITER System, mobile operators can easily extend service to any area within the coverage of MNLA's Hispasat Amazonas-3 Ka-band satellite. The certification was based on a satellite link with Return Trip Time latency of approximately 600ms and Jitter of 15ms connecting to a Small Cell with approximate backhaul capacity of 20 Mbps DL and 3 Mbps UL used to provide excellent voice quality and data throughput to the mobile subscribers.

The Hughes JUPITER System for MNLA includes two gateway stations, remote terminals, and a comprehensive network management system, enabling MNLA to supplement its DTH offerings with high-performance satellite Internet access operating over the Hispasat Amazonas 3 Ka-band satellite to consumers across its service area. Powered by a VLSI System on a Chip (SoC), the JUPITER remote terminal is a high-performance VSAT with the ability to deliver more than 100 Mbps of IP throughput. The highly scalable architecture allows MNLA to cost-effectively expand as needed.



Pole mounted Small Cell (ALU 9363 Metrocell)

Among its many capabilities, the JUPITER System gateways are designed for “lights-out” operation and can be fully managed from MNLA’s Network Operations Center (NOC) in Lima, Peru. No personnel are required for daily operations at the gateway sites in Laredo, Texas and Arica, Chile. These locations are ideally located to provide coverage for the required regions and they experience the least amount of bad weather that could interrupt service.

About Hughes

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.

Features, such as remote commissioning, have allowed MNLA’s resellers to quickly install new sites and hand them over to customers in just a few hours. Another feature of the JUPITER System, known as the Onsite Verification Tool (OVT), ensures that revisits to sites are typically not needed because the installer can validate the installation prior to leaving the site by comparing it against adjacent sites.

Designed to scale to tens of thousands of users, the Hughes JUPITER System is opening new opportunities for MNLA and mobile operators to extend coverage and improve mobile services using Small Cells to subscribers within their HTS coverage area.



JUPITER Gateway

For additional information about Hughes, please visit www.hughes.com or email globalsales@hughes.com.

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