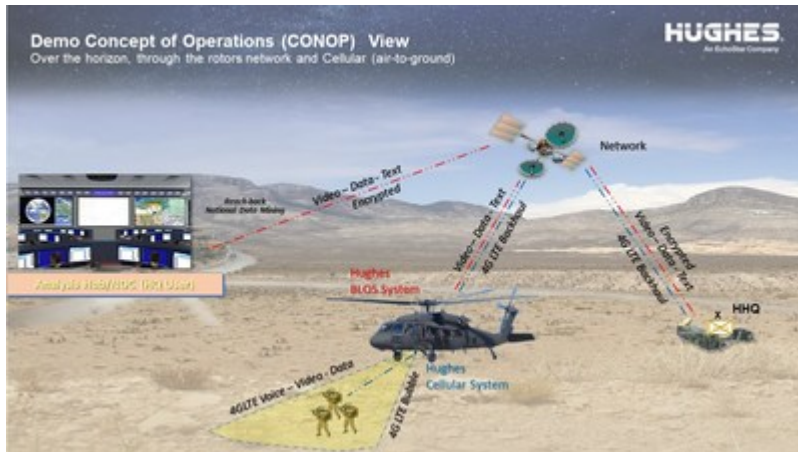


Hughes Partners with Startup to Create New Solutions for Extending LTE Coverage Using Helicopters, UAVs

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New Flexible Satellite & LTE Network Solutions Also Enable Mobile Network Operators to Expand into Unserved Markets

GERMANTOWN, Md., Aug. 20, 2019 /PRNewswire/ -- [Hughes Network Systems, LLC](#) (HUGHES), the global leader in broadband satellite networks and services, in partnership with Virtual Network Communications, Inc. (VNC), today announced new joint solutions to extend mobile network connectivity using an integrated combination of VNC's deployable LTE technology with Hughes JUPITER™ and HM satellite systems. The new solutions support various global applications for government, militaries, first responders, and commercial Mobile Network Operators (MNOs).



"We're excited to work with Hughes to help expand high speed 4G services cost-effectively in underserved parts of the world, as well as providing the tactical edge for military and first responders," said Mohan Tammiseti, chief executive officer of VNC. "VNC developed this innovative, edge-centric approach to positively impact lives and keep critical missions connected. Additionally, a new 5G solution is on our development roadmap and we look forward to integrating it with the Hughes JUPITER platform."

For Government & Military:

Designed to provide wireless coverage for soldiers or first responders, the new Hughes HeloCell™ Solution integrates VNC's LTE technology with the Hughes HeloSat™ Solution, which provides Beyond Line of Sight (BLoS) communications on rotary-wing aircraft. For military and emergency applications, the Hughes and VNC technologies combine to form an "airborne cell tower" when installed aboard a helicopter or an Unmanned Aerial Vehicle (UAV). The solution provides an extended cellular coverage radius of tens of kilometers, with the satellite terminal backhauling the mobile traffic to and from the network core. The solution can also scale to support more than 100 simultaneous active users on a single, layered system architecture.

"Adaptable for rotary-wing aircraft and UAVs, the HeloCell Solution is ideal for extending mobile connectivity in a disaster area or warzone," said Wayne Marhefka, senior director of business development for Hughes Defense Division. "Together with VNC, Hughes can extend connectivity to soldiers and first response teams who need wireless communications to carry out their missions, especially in remote and disconnected environments. Integrating with our innovative HM and JUPITER Systems technology, these new cellular capabilities will help the DoD build a layered and unified communications network architecture for faster and more-informed decision-making."

For Commercial Mobile Network Operators:

The VNC LTE technology can also be integrated with the JUPITER System to backhaul mobile traffic, enabling MNOs to quickly and cost-effectively provide 4G access to people in areas unserved or underserved by terrestrial connectivity – especially in remote and hard-to-reach areas. In tests, the integrated solution sent 4G LTE traffic to the core network at speeds of 200 Mbps.

"An economically efficient way for mobile network operators to reach new customers is by backhauling 4G LTE traffic over satellite in areas where it's too expensive to build terrestrial infrastructure," said Vinay Patel, senior director, International Division at Hughes. "Now, we can offer VNC's innovative 4G LTE technology integrated with our Hughes JUPITER™ System to offer operators a new and cost-effective option to expand their networks."

For more information about Hughes defense solutions, please visit [defense.hughes.com](#)

For more information about Hughes cellular backhaul solutions, please visit [www.hughes.com](#)

About Virtualnetcom

Virtual Network Communications, Inc. designs, develops, manufactures, markets, and supports a line of network products for wireless network operators, mobile virtual network operators (MVNO), cable TV system operators, and government and business enterprises that enable new sources of revenue and reduce capital and operating expenses. Our vision is to reinvent how wireless networks service mission critical communications for Public Safety, Homeland Security, Department of Defense and commercial Private Network users. We envision the future of virtualized MICRO networks blanket the Globe, without expensive Terrestrial based Radio Towers and Building installations. For more information, please visit the Virtualnetcom website at [www.virtualnetcom.com](#)

About Hughes Network Systems

Hughes Network Systems, LLC (HUGHES) is the global leader in broadband satellite technology and services for home and office. Its flagship high-speed satellite Internet service is HughesNet®, the world's largest satellite network with over 1.3 million residential and business customers across the Americas. For large enterprises and governments, the company's HughesON™ managed network services provide complete connectivity solutions employing an optimized mix of satellite and terrestrial technologies. The JUPITER™ System is the world's most widely deployed High-Throughput Satellite (HTS) platform, operating on more than 20 satellites by leading service providers, delivering a wide range of broadband enterprise, mobility and cellular backhaul applications. To date, Hughes has shipped more than 7 million terminals of all types to customers in over 100 countries, representing approximately 50 percent market share, and its technology is powering broadband services to aircraft around the world.

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. For additional information about Hughes, please visit www.hughes.com and follow [@HughesConnects](https://twitter.com/HughesConnects) on Twitter.

About EchoStar

EchoStar Corporation (NASDAQ: SATS) is a premier global provider of satellite communication solutions. Headquartered in Englewood, Colo., and conducting business around the globe, EchoStar is a pioneer in secure communications technologies through its Hughes Network Systems and EchoStar Satellite Services business segments. For more information, visit www.echostar.com. Follow [@EchoStar](https://twitter.com/EchoStar) on Twitter.

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