Hughes Debuts Multi-Transport Satellite-LTE Capability, Unveils Groundbreaking New Flat Panel Antenna Technology for OneWeb Service

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GERMANTOWN, Md., March 22, 2022 /PRNewswire/ -- Hughes Network Systems, LLC (HUGHES), an innovator in satellite and multi-transport technologies and networks for more than 50 years, successfully demonstrated two new technologies at the SATELLITE 2022 trade show in Washington, D.C. Hughes executives showcased new technology that seamlessly integrates Geostationary (GEO) satellite and LTE transports into a single, reliable, low-latency broadband internet connection for consumers. Hughes then revealed its new technology for electronically steerable, flat-panel antennas, including a prototype for delivering OneWeb Low Earth Orbit (LEO) connectivity services.



"With our hybrid JUPITER™ satellite-LTE capability and our innovative flat panel LEO antenna, Hughes is realizing a multi-transport vision for our customers and partners," said Pradman Kaul, President and CEO, Hughes. "The Hughes technology demonstrations at SATELLITE 2022 are proof positive of our continued engineering leadership on the path to an integrated, worldwide ecosystem of terrestrial and multi-orbit satellite connectivity."

New Hughes Capability Offers Best of GEO Satellite and LTE to Consumers

As owner and operator of HughesNet®, the leading satellite internet service in the world, Hughes continues to enhance its offerings with faster speeds, more data and network optimizations. To help shorten the time it takes for an internet signal to transmit (the latency), Hughes developed the integrated GEO satellite-LTE capability that employs Hughes ActiveTechnologies™ to route data intelligently and seamlessly over the optimal transport path.

The demonstration, which was recorded in January, mimicked a typical home by running six different applications, including streaming video and interactive data, simultaneously over the Hughes JUPITER 2 GEO high-throughput satellite and a commercial LTE service. Of note, the hybrid service delivered average latency of 40 milliseconds and provided a noticeably snappier response while browsing the web and enjoying a multi-player video game.

"The new satellite and LTE hybrid technology underscores our commitment to innovate the best available connectivity to meet customer needs, especially for people who live beyond the reach of cable and fiber broadband," said Paul Gaske, Executive Vice President and General Manager, North America Division, Hughes. "We continue to evolve and enhance the satellite experience through technologies like this and our upcoming JUPITER™ 3 ultra-high density satellite, which will enable service plans with speeds up to 100 Mbps."

Following a successful beta test in 2021, Hughes intends to offer the hybrid capability to consumers in select U.S. markets later this year.

Hughes Develops a First-of-its-Kind Antenna for OneWeb

In a surprise announcement, Hughes followed its hybrid consumer service demonstration at SATELLITE 2022 by revealing a new electronically steerable flat panel antenna, engineered for OneWeb LEO connectivity services. As a technology partner, investor

and service provider for OneWeb, Hughes designed and is deploying the gateway electronics for the worldwide ground system and also developed and manufactures the core module used in every user terminal.

The phased array antenna is low-profile and contains no moving parts, making it ideal for fixed and mobile connectivity. The antenna seamlessly hands off signals from one satellite beam to another every 11 seconds, and from one satellite to the next every three minutes. Over a series of tests, the antenna technology has been proven to support LEO connectivity at speeds of 190 Mbps down and 20 Mbps up; the technology also delivered average roundtrip latency of 55 ms.

"The Hughes flat panel LEO antenna technology is unlike any developed to date," said Adrian Morris, Executive Vice President, Engineering, Hughes. "Combining our decades of experience working on Low Earth Orbit systems with our intimate understanding of the OneWeb system, our engineers created an entirely new design that delivers high performance that will change the paradigm for LEO service implementations worldwide."

"We are proud of our longstanding and mutually supportive partnership with Hughes," said Neil Masterson, CEO, OneWeb. "This new antenna is the latest example of Hughes' engineering expertise and its commitment to working in close collaboration with OneWeb to enhance our service offering for enterprise and mobility customers. OneWeb continues to accelerate our momentum in reaching a wide range of markets and customers, and in the strategic development of ground technology that will be vital in scaling up to global coverage."

Hughes aims to make its antenna technology for OneWeb services available by early 2023.

About Hughes Network Systems
Hughes Network Systems, LLC (HUGHES), an innovator in satellite and multi-transport technologies and networks for 50 years, provides broadband equipment and services; managed services featuring smart, software-defined networking; and end-to-end network operation for millions of consumers, businesses, governments and communities worldwide. The Hughes flagship internet service, HughesNet®, connects more than 1.5 million subscribers across the Americas, and the Hughes JUPITER™ System powers internet access for tens of millions more worldwide. Hughes supplies more than half the global satellite terminal market to leading satellite operators, in-flight service providers, mobile network operators and military customers. A managed network services provider, Hughes supports nearly 500,000 enterprise sites with its HughesON™ portfolio of wired and wireless solutions. Headquartered in Germantown, Maryland, USA, Hughes is owned by EchoStar. To learn more, visit www.hughes.com or follow HughesConnects on Twitter and LinkedIn.

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