World's First 5G Backhaul Demo over LEO Satellite

Successful 5G trials conducted with Vodafone and Telesat's LEO backhaul technology installed at University of Surrey's 5G Innovation Centre

OTTAWA CANADA and WASHINGTON, DC, May 7, 2019 –Telesat, a leading global satellite operator, Vodafone Group and the University of Surrey have successfully demonstrated that Low Earth Orbit (LEO) satellites can provide effective backhaul transport for mobile network operators (MNOs), including advanced backhaul solutions for 5G.

The world's first live test of 5G services using a LEO satellite was conducted last month with Telesat's Phase 1 LEO satellite connected to the University of Surrey's 5G test bed network. Specialist Vodafone engineers supported the trial and the company provided some funding and arranged licensing.

Test results confirmed a network reaction time (round trip latency) of 18-40 milliseconds, among the lowest ever for a satellite connection. The demonstration supported video chatting, web browsing and simultaneous streaming of up to 8K video. The team also transferred 4K video to the edge of the 5G network, demonstrating a key 5G future use case.

John Miller, Senior manager, satellite demand and customer design for Vodafone Group, said: "The use of LEO satellites provides an additional mobile backhaul option and can be an important part of the delivery system particularly to customers in our markets who live in rural areas."

"The University of Surrey is very pleased to have participated with Vodafone and Telesat, two of the most innovative companies in their respective industries, in live 5G testing over a LEO satellite," said Professor Barry Evans, University of Surrey. "The University's 5G Innovation Centre has a mission to bring together leading academics and industry partners to help define and develop 5G infrastructure that will affect the way we communicate, work and live our everyday lives in the future. The recent testing in which we conducted live transmissions of 4K and 8K video via Telesat's Phase 1 LEO satellite connected to our 5G network is a great example of how the University of Surrey is fulfilling this mission in practice. The University is proud to be part of this achievement and looks forward to continuing to support industry as we all work to unlock the potential of 5G services for the world's mobile subscribers."

"Providing cost effective, high performance backhaul services to MNOs seeking to extend their 4G and 5G networks is an important market for Telesat's LEO program," said Erwin Hudson, Vice President, Telesat LEO. "Telesat is collaborating with leading

customers like Vodafone, who are experts in their markets, to perform tests and demonstrations on our Phase 1 LEO satellite that help us optimize the design of our LEO system to most effectively meet their future requirements. This collaboration enables Telesat to integrate features and solutions into our LEO constellation that will give our customers a powerful competitive advantage and allow them to best serve their end-users. We congratulate Vodafone and the University of Surrey in achieving this important industry first and we thank them for their participation and support throughout this test program."

About Telesat LEO
Telesat's LEO constellation will leverage the company's global, priority spectrum rights in Ka-band and patent-pending LEO architecture to transform global communications. It will offer a combination of capacity, speed, security, resiliency and affordability with ultra-low latency that is equal to, or better than, the most advanced terrestrial networks. Able to serve the entire globe, Telesat LEO will help satisfy many of the world's most challenging communications requirements. It will bridge the digital divide with fiber-like high speed services into rural and remote communities, accelerate 5G expansion and set new levels of performance for commercial and government broadband connectivity on land and in key maritime and aeronautical markets, which are among the fastest growing in today's satcom industry.

About Telesat www.telesat.com
Telesat is a leading global satellite operator, providing reliable and secure satellite-delivered communications solutions worldwide to broadcast, telecom, corporate and government customers. Headquartered in Ottawa, Canada, with offices and facilities around the world, the company's state-of-the-art fleet consists of 17 GEO satellites, the Canadian payload on ViaSat-1 and one Phase 1 LEO satellite which is the start of Telesat's planned advanced global LEO satellite constellation that will offer ultra-low latency, extremely high throughput, affordable broadband services. Telesat is also a leading technical consultant providing high value expertise and support to satellite operators, insurers and other industry participants on a global basis. Privately held, Telesat's principal shareholders are Canada's Public Sector Pension Investment Board and Loral Space & Communications Inc. (NASDAQ: LORL).

Forward-Looking Statements Safe Harbor
This news release contains statements that are not based on historical fact and are ''forward-looking statements'' within the meaning of the Private Securities Litigation Reform Act of 1995. When used in this news release, the words "can", "future", "will", "planned", or other variations of these words or other similar expressions are intended to identify forward-looking statements and information. Actual results may differ materially from the expectations expressed or implied in the forward-looking statements as a result of known and unknown risks and uncertainties. Detailed information about some of the known risks and uncertainties is included in the "Risk Factors" section of Telesat Canada's Annual Report on Form 20-F for the fiscal year ended December 31, 2018 which can be obtained on the SEC website at http://www.sec.gov. Known risks and uncertainties include but are not limited to: risks associated with operating satellites

and providing satellite services, including satellite construction or launch delays, launch failures, in-orbit failures or impaired satellite performance, the ability to successfully deploy an advanced global LEO satellite constellation, volatility in exchange rates and risks associated with domestic and foreign government regulation. The foregoing list of important factors is not exhaustive. The information contained in this news release reflects Telesat's beliefs, assumptions, intentions, plans and expectations as of the date of this news release. Except as required by law, Telesat disclaims any obligation or undertaking to update or revise the information herein.

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