



OneWeb 5G Pilot

“This capability will enable mobility customers such as airlines, train operators, and coach companies to leverage the power not only of the OneWeb LEO network, but also terrestrial 5G and legacy GEO satellite networks. A hybrid, multi-beam, multi constellation solution that ensures that passengers remain connected no matter where they are – be it mid-air, mid-ocean or in the most remote corners of the world.”

Massimiliano Ladovaz
OneWeb CTO



CGI enabled a world first 5G end-to-end link through the OneWeb satellite constellation

The global demand for better connectivity, as well as new applications to support remote working, automation, e-commerce, transport, education, and healthcare is continually increasing. To support the digitised economy a mixture of communications technologies will be needed to achieve universal coverage in a resilient and affordable way.

OneWeb are leading the way on how blended LEO satellite communications and 5G can deliver world-class universal internet access. To showcase the potential of a hybrid satcoms and 5G solution it is running demonstrations of real-world applications of its service.

Working with OneWeb, Satixfy and ESA, CGI were able to demonstrate 5G over the OneWeb service at the CGI-built 5G/6G Hub at ESA's ECSAT site. This validated the 5G end-to-end link communication over OneWeb's satellites and the full integration of space and ground networks using 5G links, with low latency and very high speed and quality performance.

Solution

CGI designed the overall 5G network architecture and integrated it with the OneWeb system.

We developed a lightweight 5G test rig that is portable, robust, and can be easily deployed in multiple environments to support the testing of the private 5G network across the commercial OneWeb satellite offering. The test rig was used as the basis of a test bed for OneWeb to enable continued experimentation and collaboration. It will support connectivity to various aspects of the OneWeb service.

CGI played a crucial part in the demonstration of the OneWeb service with Satixfy at an ESA outreach day in ECSAT, Harwell. A 5G private network connection was successfully established over the OneWeb network using the Satixfy terminal equipment.

In preparation for the future phases, CGI has carried out detailed investigation on the design of the 5G network private equipment to meet operator requirements for future aircraft trials.

Bring to life the promise of 5G

5G offers a real opportunity to do things differently, like enabling faster digital transformation, developing new approaches to connectivity solutions and changing a business culture.

As a 5G ecosystem integrator, we understand the importance of collaborative planning for the success of 5G. That is why we will work closely with you to define the right transformation journey for you to realise the opportunities that 5G can bring to your business and customers.

Contact us to find out more about delivering transformation with 5G.

“CGI is pleased to build on our long relationship with OneWeb and ESA to demonstrate how seamless 5G mobile services can be delivered over satellite constellations. This is an important step to enable everyone to have easy-to-use connectivity everywhere and allow businesses to take advantage of deployed private 5G networks to improve productivity.”

Jaime Reed

VP, Space Data Platforms and Applications



About CGI

Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are an IT Systems Integrator working to advise, build and operate bespoke, technically complex, mission-critical information systems. Bringing innovation to our clients using proven and emerging technologies, agile delivery processes and our expertise across space, defence, intelligence, aerospace and maritime, all underpinned by our end-to-end cyber capability.

For more information

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