Name:	**Omnispace LLC**
Applicant:	Mindel De La Torre
Address:	7900 Tysons One Pl., Ste. 1250, Tysons, VA 22102
Phone:	202-930-5935
Email	mdelatorre@omnispace.com
Test Dates:	05/01/2021 – 4/31/2022

By the accompanying application and pursuant to Section 5.61 of the Rules and Regulations of the Federal Communications Commission ("FCC"), Omnispace LLC ("Omnispace") hereby requests an Experimental Authorization for operation of conventional experimental radio service stations for a period of 12 months. This Experimental Authorization is necessary in order to provide direct-to-satellite demonstrations of both standard U.S. military tactical radios, as well as narrowband prototype Internet-of-things (IoT) radios for the U.S. Government that will communicate with an existing Medium Earth Orbit ("MEO") satellite, *Omnispace F2*.

Description of Equipment and Testing

The MEO satellite with which the terminals will communicate, referred to as "F2," was launched in June 2001 by ICO Global Communications ("ICO") but is now owned and operated by Omnispace LLC.

The F2 satellite operates in two frequency bands: the Telemetry, Tracking, and Command ("TTC") frequencies and the payload frequencies. The TTC frequencies are in the C Band – i.e., 5150-5250 MHz uplink and 7000-7025 MHz downlink are licensed by the FCC for the Brewster, Washington, gateway – and are notified at the International Telecommunication Union by OFCOM of the United Kingdom. The payload frequencies are in the S Band – i.e., 1985-2015 MHz uplink and 2170-2200 downlink, which are notified at the ITU by the National Information and Communication Technology Authority of Papua New Guinea ("PNG").

By this STA request, Omnispace proposes to transmit and receive signals via F2 of both standard U.S. military tactical radios, as well as narrowband prototype Internet-of-things (IoT) radios.

Uplink (Tx):	2000.200-2014.900 MHz
Downlink (Rx):	2185.200-2199.900 MHz
Emission Designator:	5K0G1D and 25K0G1D
Max EIRP:	2W

The portion of the S Band to be used for prototype testing consists of uplink frequencies in the Personal Communications Service ("PCS") and AWS-4 downlink bands, and downlink frequencies in the AWS-3 and AWS-4 downlink bands. Omnispace will coordinate its operations with the local operators in these respective bands in the Carlsbad, CA area.

Upon grant of the requested STA, Omnispace will conduct testing within a ten-mile radius of the locations listed below. Omnispace will deploy no more than two (2) transmitters at any given time at this location:

Location	Address	County	Coordinates
Vulcan Wireless Laboratory	2218 Faraday Ave #110 Carlsbad, CA 92008	San Diego	N 33°08'05.6" W117°16'46.3"

Narrative Statement regarding the U.S. Government Contract

Omnispace is currently under a Small Business Innovation and Research (SBIR) contract with the U.S. Air Force's (USAF) Space and Missile Systems Center (SMC), contract number FA8808-20-C-0014 to assist with building future communications capabilities for the U.S. military and government in the furtherance of U.S. national security. Part of this contract includes the testing and demonstration of Omnispace's current capabilities for various units of the USAF and U.S. military, including the U.S. Space Force, (USSF), U.S. Marine Corps (USMC) and U.S. Navy. The defense community has shown extreme interest in the possibility for both currently deployed military radios and novel, small footprint IoT devices capable of communicating with non-geostationary satellites.

To our knowledge, these tests would be the first of their kind for Medium Earth Orbit (MEO) satellite communications. Per the attached letters of support from USAF and the Naval Information Warfare Center (NIWC) as Attachments 1 and 2, we believe this testing, which as noted above will be conducted on a non-interference basis, serves the public interest in furtherance of U.S. national security objectives.

If there are questions concerning this application, the FCC is asked to contact Mindel De La Torre, Chief Regulatory and International Strategy Officer for Omnispace, at mdelatorre@omnispace.com or 202-930-5935.

Attachment 1

DEPARTMENT OF THE AIR FORCE
UNITED STATES SPACE FORCE

21 April 2021

Ms. Mindel De La Torre
Chief Regulatory and International Strategy Officer, Omnispace LLC
7900 Tysons One Place, Suite 1250
Tysons, VA 22102 USA

TO: Ms. Mindel De La Torre

FROM: SMC/SATCOM Portfolio Architect Office

SUBJ: Omnispace LLC Special Temporary Authority Request

The U.S. Space Force, Space and Missile Center (SMC), Portfolio Architect Office provides this letter of support for Omnispace LLC ("Omnispace") for an experimental license from the Federal Communications Commission. SMC understands that Omnispace is seeking FCC authority to make its satellite frequencies available to its partner, Vulcan Wireless, to test certain software defined radios and internet-of-things (IoT) devices with the Omnispace F2 satellite launched by ICO Global Communications. The tests will be conducted on a non-interference basis using the F2 payload frequencies in the S Band – i.e., approximately 15 MHz between 2000-2015 MHz uplink and 2 MHz within 2185-2200 MHz downlink at remote sites in the vicinity of Carlsbad, CA. The terminals will be tested and operated in accordance with the parameters that Omnispace has developed with USSF and are set forth in Omnispace's application for the experimental license. The proposed testing will be conducted on a non-interference basis and for intermittent periods of time, not to exceed an overall period of twelve months, with a tentative start date of April 26, 2021, if possible.

The USSF, Space and Missile Systems Center (SMC) is working with Omnispace to test various unique capabilities in support of national security requirements. Temporary access to these frequencies would allow us to further that testing.

If there are any questions regarding this matter or additional information is required, please contact Lt. Col. James Nilsen at (310) 653-9648.

NILSEN.JAMES.K.1246884494
Digitally signed by NILSEN.JAMES.K.1246884494
Date: 2021.04.21 15:13:21 -07'00'

JAMES K. NILSEN, Lt Col, USSF
Chief, Future SATCOM Capability
Portfolio Architect Office

Attachment 2

DEPARTMENT OF THE NAVY
NAVAL INFORMATION WARFARE CENTER PACIFIC
53560 HULL STREET
SAN DIEGO, CALIFORNIA 92152-5001

2069
56271/001
23 March 2021

FROM: Commanding Officer, Naval Information Warfare Center Pacific
TO: Ms. Mindel De La Torre, Chief Regulatory and International Strategy Officer, Omnispace LLC 7900 Tysons One Place, Suite 1250 Tysons, VA 22102 USA

SUBJ: OMNISPACE LLC SPECIAL TEMPORARY AUTHORITY REQUEST

1. The Naval Information Warfare Center, Pacific (NIWC Pacific) Space Systems Engineering Branch provides this letter of support for Omnispace LLC (Omnispace) for Special Temporary Authority (STA) from the Federal Communications Commission (FCC). NIWC Pacific understands that Omnispace is seeking FCC authority to test terminals with the F2 satellite launched by ICO Global Communications. The tests will be conducted on a non-interference basis using the F2 payload frequencies in the S Band – i.e., approximately 2 MHz between 1995-2000 MHz uplink and 2 MHz within 2170-2200 MHz downlink to a remote terminal in the vicinity of Carlsbad, California. The terminal will be tested and operated in accordance with the parameters that Omnispace has developed with US Space Force and are set forth in Omnispace's application for the STA. The proposed testing will be conducted on a non-interference basis and for intermittent periods of time, not to exceed an overall period of six months, with a tentative start date of 1 April 2021, if possible.

2. The NIWC Pacific Space Systems Engineering Branch, Code 56271 endorses this effort with Omnispace to test various unique capabilities in support of national security requirements. Temporary access to these frequencies would allow us to further that testing. If there are any questions regarding this matter or additional information is required, please contact Jason Bousquet at (619) 553-1257 (desk).

BOUSQUET.JASON.T.1506107322 Digitally signed by BOUSQUET.JASON.T.1506107322 Date: 2021.03.24 11:43:46 -07'00'

JASON BOUSQUET
By direction