

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
ZII Fixed VSAT Terminal STA Application

1. Applicant

Name:	Systems and Software Enterprises, LLC	Phone Number:	7142030733
DBA Name:		Fax Number:	
Street:	2929 E. Imperial Highway Suite 170	E-Mail:	dave.gibson@zii.aero
City:	Brea	State:	CA
Country:	USA	Zipcode:	92821 -6729
Attention:	Mr Dave M Gibson		



File # SES-19-20190517-00634
Call Sign 6-6-19 Grant Date 6-6-19
(or other identifier)
From: 6-6-19 To: 8-5-19
Approved: [Signature]

2. Contact			
Name:	Dave M. Gibson	Phone Number:	7142030733
Company:		Fax Number:	
Street:	2929 E. Imperial Highway Suite 170	E-Mail:	dave.gibson@zii.aero
City:	Brea	State:	CA
Country:	USA	Zipcode:	92821 -
Attention:		Relationship:	Same
(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)			
3. Reference File Number or Submission ID			
4a. Is a fee submitted with this application?			
☒ If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114). ☐ Governmental Entity ☐ Noncommercial educational licensee ☐ Other (please explain):			
4b. Fee Classification CGV – Fixed Satellite VSAT System			
5. Type Request			
☒ Use Prior to Grant ☐ Change Station Location ☐ Other			
6. Requested Use Prior Date 05/20/2019			
7. City/Brea		8. Latitude (dd mm ss.s h) 33 43 43.0 N	

9. State	CA	10. Longitude (dd mm ss.s h)	117 51 22.0 W
11. Please supply any need attachments.		Attachment 1: Exhibit A	Attachment 2:
12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)		Attachment 3:	
60 day Use Prior to Grant STA for a Ka-Band uplink that is used in conjunction with Inmarsat's Global Xpress satellite system.			
13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes. Yes ☒ No ☐			
14. Name of Person Signing	15. Title of Person Signing		
Jim Snover	SVP-Quality and Facilities		
WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).			

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THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

Applicant: Systems and Software Enterprises, LLC-
Call Sign: N/A
File No.: **SES-STA-20190517-00634**
Special Temporary Authority (STA)



File # SES-STA-20190517-00634
Call Sign _____ Grant Date 6-6-19
(or other identifier)
From: 6-6-19 Term Dates To: 8-5-19
Approved: Paul E. Huch

Systems and Software Enterprises, LLC- is granted special temporary authority for 60 days, beginning June 06, 2019, to operate its Brea, CA, earth station (MCS-8200 terminal) for testing land based stations and communicating with Inmarsat-5 F2 at the 55.0° W.L. orbital location using the 29.5-30.0 GHz (Earth-to-space) and 19.7-20.2 GHz (space-to-Earth) frequency bands under the following conditions:

1. Operations under this grant of special temporary authority must be on an unprotected, non-harmful interference basis, *i.e.*, while operating under this temporary authority Systems and Software Enterprises, LL- must not cause harmful interference to, and must not claim protection from interference caused to it by, any other lawfully operating radiocommunication system. Systems and Software Enterprises, LLC- must cease operations immediately upon notification of such interference and must immediately inform the Commission, in writing, of such an event.
2. Systems and Software Enterprises, LLC- must operate within the power limits below.

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Frequency	Emission Designator	Max. EIRP Density/Carrier (dBW)
29.5 – 30.0 GHz	7M34G7W	12
29.5 - 30.0 GHz	460KG7W	24

3. Systems and Software Enterprises, LLC- must take all necessary measures to ensure that the antenna does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR §§ 1.1307(b) and 1.1310 wherever such exposures might occur. Measures must be taken to ensure compliance with limits for both occupational controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. Requirements for restrictions can be determined by predictions based on calculations, modeling or by field measurements. The FCC's OET Bulletin 65 (available on-line at www.fcc.gov/oet/lrfsafety) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for workers. The licensee shall ensure installation of terminals on aircraft by qualified installers who have an understanding of the antenna's radiation environment and the measures best suited to maximize protection of the general public and persons operating the aircraft and equipment. A terminal exhibiting radiation exposure levels exceeding 1.0 mW/cm² in accessible areas, such as at the exterior

surface of the radome, shall have a label attached to the surface of the terminal warning about the radiation hazard and shall include thereon a diagram showing the regions around the terminal where the radiation levels could exceed 1.0 mW/cm^2 .

4. Systems and Software Enterprises, LLC- must maintain a point of contact available 24 hours per day, seven days per week, with the authority and ability to terminate operations authorized, for discussing interference concerns with other licensees and U.S. Government agencies. Currently, the 24/7 number is 626-232-4645.
5. Antenna elevation for all operations must be at least 5 degrees above the geographic horizon while the aircraft is on the ground.
6. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at Systems and Software Enterprises, LLC 's risk.
7. Grant of this authorization is without prejudice to any determination that the Commission may make regarding future applications or future special temporary authority requests from Systems and Software Enterprises, LLC-

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This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective immediately. Petitions for reconsideration under Section 1.106 or applications for review under Sections 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be med within thirty days of the date of the public notice indicating that this action was taken.

Exhibit A

Land-Based Ka-Band Request for Special Temporary Authority

Systems and Software Enterprises, LLC, dba Zodiac Inflight Innovations ("*Zodiac*") seeks Special Temporary Authority ("STA"), pursuant to Section 25.120 of the Commission's Rules, for immediate operation for a period of 60 days (or until the subsequent license application is granted), commencing on May 23, 2019 or such other date provided by the Commission, in order to perform testing of a single unit of a land-based earth station in advance of a license application and grant. The STA, if granted, will provide for the testing of Zodiac's earth station, of an in-flight entertainment system that is used in conjunction with Inmarsat's Ka-band Global Xpress satellite system. ISAT US already holds a blanket license authority for what it describes as ESIMs (Earth Stations in Motion) that provide broadband communications on maritime and aeronautical platforms utilizing the Inmarsat 5F2 and Inmarsat 5F3 satellite networks. The instant STA proposal and a subsequent license application will cover operations in the 29.5-30.0 GHz (Earth-to-space) and 19.7-20.2 GHz (space-to-Earth) frequency bands. As indicated, *Zodiac* intends to apply promptly for a license to add the terminal for regular operations and, at that time, request any waivers of FCC technical rules that may be deemed necessary.

Allowing for operation pursuant to the requested STA is in the public interest because Zodiac has several enhancements to its in-flight entertainment and passenger information systems and need to test them immediately in order to make them available in a manner that will benefit the significant number of airline passengers that utilize those systems on a daily basis.

Land-Based Earth Station Description

This application seeks a 60 day STA for testing and demonstration of the same GTX Terminal that has previously been licensed by the FCC for ISAT, US¹. The uplink terminal will be operated at a

¹ See Call Signs E140114 and E140029.

single fixed location in Brea, Orange County, California. Even though this STA is requested for a 60-day period, Zodiac is currently preparing a license application for permanent use of this terminal. The terminal, which employs a 65cm x 19.5cm Honeywell 8200 VSAT antenna, will operate on the same frequencies and with the same parameters as the ISAT US “Aero 1” in-flight terminals already licensed by the Commission: 19.7-20.2 GHz (space-to-Earth) and 29.5-30.0 GHz (Earth-to-space).

Operations in the frequency bands requested herein are subject to the U.S. Table of Frequency Allocations in Section 2.106 of the Commission’s rules (“U.S. Table”) and the Ka-band plan adopted by the Commission. The FCC’s Ka-band plan designates the 19.7-20.2 GHz band and the 29.5-30.0 GHz band to GSO FSS on a primary basis. The Commission recently adopted rules for ESIM use of the Ka-band FSS frequency bands requested in this application².

Consequently, Zodiac submits that a satisfactory basis exists for the granting of the request by it for an STA to operate this land-based earth station on an immediate and short-term basis pending action on a permanent application for such a license.

² *Amendment of Parts 2 and 25 of the Commission’s Rules to Facilitate the Use of Earth Stations in Motion Communicating with Geostationary Orbit Space Stations in Frequency Bands Allocated to the Fixed Satellite Service*, Report and Order and Further Notice of Proposed Rulemaking, FCC 18-138 (rel. Sept. 27, 2018).