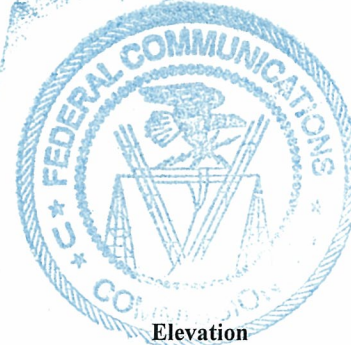




**UNITED STATES OF AMERICA  
FEDERAL COMMUNICATIONS COMMISSION  
RADIO STATION AUTHORIZATION**

Name: ThinKom Solutions Inc.  
Authorization Type: License  
Non Common Carrier

Call Sign: E120174  
File Number: SES-LIC-20120822-00768  
Grant date: 03/08/2013 Expiration Date: 03/08/2028



Nature of Service: Fixed Satellite Service  
Class of Station: Other

**A) Site Location(s)**

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	1	20000 Mariner Ave Suite 500 Torrance, Los Angeles, CA 90093	0°0'0.0"N	0°0'0.0"W	0	83

Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.

*Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning March 8, 2013 (3 AM Eastern Standard Time) and ending March 8, 2028 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is March 8, 2014 (3 AM Eastern Standard Time). Grantee must file with the Commission a certification upon completion of construction and commencement of operation.*

**B) Particulars of Operations**

The General Provision 1010 applies to all receiving frequency bands.  
The General Provision 1900 applies to all transmitting frequency bands.  
For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
1)	14000.0000-14500.0000	H,V	6M00G7D	Tx	50.00	18.40	1		B/QPSK R1/2 Transmit
2)	11700.0000-12200.0000	H,V	6M00G7D	Rx	0.00	0.00	1		B/QPSK R1/2 Receive

**C) Frequency Coordination Limits**

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
1)	11700.0000-12200.0000	79.0W	129.0W	15.0	15.0	124.0	250.0		1
2)	14000.0000-14500.0000	79.0W	129.0W	15.0	15.0	124.0	250.0	1.5	1



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**D) Points of Communications**

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

- 1) 1 to HORIZONS 1 (S2475) @ 127 degrees W.L. (Japan-licensed)
- 2) 1 to GALAXY 16 (S2687) @ 99 degrees W.L. (U.S.-licensed)
- 3) 1 to Permitted Space Station List
- 4) 1 to AMC 1 (S2445) @ 101 degrees W.L.(U.S.-licensed)
- 5) 1 to GALAXY 18 satellite @ 123 W.L.(U.S.-licensed satellite)
- 6) 1 to GALAXY 25 (S2154) satellite @ 93.1 W.L. (U.S.-licensed)
- 7) 1 to GALAXY 28 (S2160) @ 89 degrees W.L. (U.S.-licensed)
- 8) 1 to AMAZONAS 2 (S2793) @ 61 degrees W.L. (Brazil-licensed)
- 9) 1 to AMC-6 (S2347) @ 83degrees W.L. (U.S.-licensed)

**E) Antenna Facilities**

Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1	1	1	0.74	Thinkom	Thinsat300	0	3 AGL/ 3 AMSL	
Max Gains(s):            32.0 dBi @ 12.2000 GHz    32.0 dBi @ 12.9500 GHz    32.0 dBi @ 11.7000 GHz    35.8 dBi @ 14.5000 GHz    35.8 dBi @ 14.2500 GHz    35.8 dBi @ 14.0000 GHz								
Maximum total input power at antenna flange (Watts) =					25.00			
Maximum aggregate output EIRP for all carriers (dBW) =					50.00			

**G) Antenna Structure marking and lighting requirements:**

None unless otherwise specified under Special and General Provisions

**H) Special and General Provisions**

- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
- 1010 --- Applicable to all receiving frequency bands. Emission designator indicates the maximum bandwidth of received signal at associated station(s). Maximum EIRP and maximum EIRP density are not applicable to receive operations.
  - 1900 --- Applicable to all transmitting frequency bands. Authority is granted to transmit any number of RF carriers with the specified parameters on any discrete frequencies within associated band in accordance with the other terms and conditions of this authorization, subject to any additional limitations that may be required to avoid unacceptable levels of inter-satellite interference.



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## H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

- 2010 --- This authorization is issued pursuant to the Commission's Second Report and Order adopted June 16, 1972 (35 FCC 2d 844) and Memorandum, Opinion and Order adopted December 21, 1972 (38 FCC 2d 665) in Docket No. 16495 and is subject to the policies adopted in that proceeding.
- 2916 --- Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines.
- 2938 --- Upon completion of construction, each licensee must file with the Commission a certification including the following information: (1) name of the licensee, (2) file number of the application, (3) call sign of the antenna, (4) date of the license, (5) certification that the facility as authorized has been completed, (6) certification that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209, and (7) certification that the station is operational (including the date of commencement of service) and will remain operational during the license period unless the license is submitted for cancellation.
- 3219 --- All existing transmitting facilities, operations and devices regulated by the Commission must be in compliance with the Commission's radiofrequency (RF) exposure guidelines, pursuant to Section 1.1307(b)(1) through (b)(3) of the Commission's rules, or if not in compliance, file an Environmental Assessment (EA) as specified in Section 1.1311. See 47 CFR § 1.1307 (b) (5).
- 5216 --- All operations shall be on a non-common carrier basis.
- 90015 --- The licensee shall not operate in the band 14.0-14.2 GHz within 125 km of the NASA TDRSS facilities on Guam (latitude 13°36'55" N, longitude 144°51'22" E) and White Sands, New Mexico (latitude 32°20'59" N, longitude 106°36'31" W and latitude 32°32'40" N, longitude 106°36'48" W) unless and until the licensee enters into an agreement with NASA that NTIA has approved. The licensee must conform its operations to the terms of any coordination agreement with the NASA and must file a copy of the agreement with the Commission within 30 days of execution.
- 90016 --- The licensee shall cease authorized VMES operations in the 14.0-14.2 GHz band within 125 km of any new NASA TDRSS facilities that have been identified placed public notice by the Commission's International Bureau unless and until the licensee completes agreement for new TDRSS site with NASA that NTIA has approved. The licensee must conform its operations to the terms of any coordination agreement with the NASA and must file a copy of the agreement with the Commission within 30 days of execution.
- 90017 --- The licensee shall not operate in the vicinity of radio observatories of Radio Astronomy Service (RAS) in the band 14.47-14.50 GHz unless and until the licensee enters into an agreement with the National Science Foundation that has been approved by NTIA. The licensee must conform its operations to the terms of any coordination agreement with the National Science Foundation and must file a copy of the agreement with the Commission within 30 days of execution. The appropriate NSF contact point to initiate coordination is Electromagnetic Spectrum Manager, NSF, 4201 Wilson Blvd., Suite 1045, Arlington, VA 22203, fax 703-292-9034, e-mail esm@nsf.gov. See also a list of each applicable RAS site, its location, and the applicable coordination zone on Table-1: Applicable RAS Facilities and Associated Coordination Distances, 47 C.F.R. 25.226(d)(2).



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Non Common Carrier

Grant date: 03/08/2013

Expiration Date: 03/08/2028

## H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

90018 --- The licensee shall cease authorized VMES operations in the 14.47-14.50 GHz band within the relevant geographic zone (160 km for single-dish radio observatories and Very Large Array antenna systems and 50 km for Very Long Baseline Array antenna systems) of any new RAS sites that have been identified placed public notice by the Commission's International Bureau unless and until the licensee completes coordination agreement for the new RAS facility that NTIA/IRAC has approved. The licensee must conform its operations to the terms of any coordination agreement with NSF and must file a copy of the agreement with the Commission within 30 days of execution.

90019 --- The licensee shall use Global Positioning Satellite-related or other similar position location technology to ensure compliance with paragraphs (c) and (d) of this section.



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**B) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:**

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R. § 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station is not ready for operation by the required date of completion of construction unless an application for modification of authorization to request additional time to complete construction is filed by that date, together with a showing that failure to complete construction by the required date was due to factors not under control of the grantee.

**Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulatees is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993." These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.**