

Exhibit A – Narrative Supplement
FCC Form 312/Schedule B – Modification Application
Licensee: Kongsberg Satellite Services AS
Call Sign: E120025

Kongsberg Satellite Services AS (“KSAT”) provides this narrative supplement to its application (Form 312, Main Form and Schedule B) for a license modification in order to permanently change the remote control point for its transmit/receive satellite earth station in Fairbanks, Alaska (call sign E120025) (“Station”) from the facility operated by Terra Bella Technologies Inc. (“Terra Bella”) to KSAT’s Tromsø Network Operations Center (“TNOC”) in Tromsø, Norway. KSAT submits this application pursuant to Section 25.117¹ of the Commission’s rules.

The Station is currently being operated from the TNOC pursuant to a 60-day grant of special temporary authority (“STA”),² following the consummation of the assignment of the Station (“Assignment”),³ and pending permanent license modification. The STA became effective on May 3, 2017 and expires on July 1, 2017. KSAT will apply for an extension of the STA to prevent expiration of the STA before this application is granted.

1. Response to Question 43 – Description of the Request

KSAT requests authorization to permanently change (1) the remote control point⁴ for the Station from Terra Bella’s headquarters in Mountain View, CA to KSAT’s TNOC in Tromsø, Norway, and (2) the contact information for the Station, as provided in Form 312, Schedule B⁵ and in Section 4, below. The change in (1) makes permanent the conditions currently existing under the STA. The contact information in Section 4, particularly the U.S. 24/7 contact, is modified slightly from the STA. No other changes to the operational parameters for the Station are being requested.

KSAT seeks this change to fully effectuate the assignment⁶ of the Station (including making permanent the transfer of the Station’s remote control point) from Terra Bella to

¹ 47 C.F.R. § 25.117 (2015). *See also* The International Bureau Provides Guidance Concerning the Relocation of Earth Station Remote Control Points, DA 06-978 (FCC rel. May 4, 2006).

² *See* Kongsberg Satellite Services AS STA Application to Change Remote Control Point for E120025, IBFS File No. SES-STA-20170112-00045 (granted Apr. 4, 2017, effective from May 3, 2017 to July 1, 2017).

³ *See* Kongsberg Satellite Services AS Application to Assign Satellite Earth Station E120025 from Terra Bella Technologies Inc. to Kongsberg Satellite Services AS, IBFS File No. SES-ASG-20170112-00044 (granted Feb. 28, 2017, consummation notice filed May 17, 2017).

⁴ Form 312, Schedule B, Items E61-E66.

⁵ Form 312, Schedule B, Items E2-E6.

⁶ Prior to the *Assignment* and *STA*, Terra Bella operated the station from a control point in Mountain View, CA pursuant to FCC licenses: Skybox Imaging, Inc. Modification Application, IBFS File No.

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KSAT, authorized by the commission on February 28, 2017 and consummated on May 17, 2017.⁷

2. Public Interest Statement

Grant of this license modification request will serve the public interest in accordance with Section 25.156(a) of the Commission’s rules.⁸ Permitting KSAT to operate the Station remotely from Tromsø enables KSAT to provide efficient and cost effective service to its customer, Terra Bella. At the TNOC, KSAT maintains a 24-hour staff of skilled technicians that operate dozens of earth stations for customers across the globe,⁹ including several for Terra Bella. Terra Bella in turn will be able to pass on the benefits of these efficiencies to its customers.

3. Compliance with Sections 25.271 and 25.272 for Control of Earth Stations

As the licensee for the Station and operator of the proposed remote control point in Tromsø, Norway, KSAT will comply with the Commission’s rules for control of transmitting stations in Section 25.271¹⁰ and inter-system coordination in Section 25.272.¹¹

(a) Section 25.271

KSAT will be responsible for the proper operation and maintenance of the Station,¹² and for ensuring that a trained operator is present at the earth station site, or at the

SES-MOD-20150728-00475 (FCC, granted Nov. 4, 2015); Skybox Imaging, Inc. Application for Fairbanks Earth Station, IBFS File No. SES-LIC-20120131-00120 (FCC, granted Dec. 6, 2012). Terra Bella was formerly known as Skybox Imaging, Inc.

⁷ See *Assignment*, *supra* note 3, Letter from Amund Nylund, Programs Director, Kongsberg Satellite Services AS, to Marlene H. Dortch, Sec’y, FCC (May 16, 2017, filed May 17, 2017), available at http://licensing.fcc.gov/myibfs/download.do?attachment_key=1226254.

⁸ See 47 C.F.R. § 25.156(a) (requiring “that grant of the application will serve the public interest”); 47 U.S.C. § 309(a) (2015).

⁹ KSAT is a global leader in ground station operations for non-geostationary satellites. It operates a global network of ground stations for satellite data acquisition and TT&C, and launch and early orbit phase services. Ground stations are located in Norway (Spitsbergen, Tromsø, Jan Mayen, Grimstad), Antarctica, Dubai, South Africa, Singapore, Mauritius, and the U.S.

¹⁰ 47 C.F.R. § 25.271.

¹¹ *Id.* § 25.272.

¹² *Id.* § 25.271(a).

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designated remote control point, at all times that transmissions are being conducted.¹³ As the operator of the remote control point, KSAT will have the ability to remotely monitor and control the transmissions and operational functions of the Station to ensure compliance with the Station authorization, and will in the event of detection or notification of harmful interference be able to suspend immediately the operation of the Station until the interference is corrected.¹⁴

Both the Station and the TNOc are protected by appropriate security measures to prevent unauthorized access or operations.¹⁵ KSAT has secured the network with firewalls and strict configuration on all communications equipment. KSAT has established security zones wherever KSAT put antenna control systems so that only authorized KSAT employees like operators and system engineers can access those parts of the network.

From KSAT's HQ in Tromsø, where the TNOc is located, KSAT has established a secure virtual private network (VPN) connection to the Station so that all traffic between KSAT's HQ and the Station is encrypted. KSAT also monitors all KSAT equipment at the Station to see if any abnormal incidents occur and can take appropriate actions as necessary.

Both KSAT's HQ and the Station have locked doors and access control to the buildings and server room where each facility's equipment is located. Personnel that need access to the equipment at a facility have to register before being granted access. An escort is normally required at both facilities, but unescorted access may be permitted in special cases where an extra security assessment is performed in advance.

Technical personnel will be available at all times to perform the technical servicing and maintenance of the Station and the remote control point.¹⁶ KSAT retains the Station hosting arrangement that the previous licensee established with GCI Communications Corp., a local teleport operator in Fairbanks, to ensure that technical personnel are available locally at the Station to carry out these tasks at the licensee's instruction. The proposed remote control point, the TNOc, is staffed by trained KSAT operators 24 hours a day, every day.

¹³ *Id.* § 25.271(b).

¹⁴ *Id.* § 25.271(c)(1), (3).

¹⁵ *Id.* § 25.271(c)(2) and (d).

¹⁶ *See supra* note 10, § 25.271(c)(4).

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The Station antenna transmits signals only during satellite data transmissions initiated by Terra Bella’s satellite control facility, the Mission Operations Center (MOC). If communications with the satellite fails, the data transmissions will cease and the Station antenna will automatically halt transmissions.¹⁷

(b) Section 25.272

There will be continuously available communications links between the Station, the remote control point (the TNOC), and the satellite network control center that Terra Bella maintains for its satellite constellation (call sign S2862),¹⁸ and KSAT will maintain an up-to-date list of contact telephone numbers and emergency telephone numbers for key personnel for each at each facility.¹⁹ KSAT shall provide Terra Bella, the operator of the satellites to which the Station is authorized to transmit, with contact telephone numbers for the TNOC and the Station. (See contacts below.)

KSAT, as the licensee and operator of the TNOC, will notify and receive permission from the satellite network control center before transmitting to the satellites or changing the basic characteristics of a transmission.²⁰ Only the satellite operator has the capability to generate and issue the commands for controlling the satellite system. The satellite operator will send any commands for the satellites to KSAT’s TNOC by VPN, which will in turn relay the commands to the satellites from the Station. The satellite operator will be informed of all actual and planned usage of the Station.²¹

4. Contact Information

Please note that this information is changed slightly from the information provided by KSAT in its STA application, SES-STA-20170112-00045.

¹⁷ *Id.* § 25.271(g).

¹⁸ The Station currently operates with Terra Bella’s satellite constellation (call sign S2862). *See* Skybox Imaging Application for EESS Satellite System, IBFS File No. SAT-LOA-20120322-00058 (FCC, granted Sept. 20, 2012). Terra Bella maintains another ground station in Half Moon Bay, CA (call sign E130037), which is independently capable of providing tracking, telemetry, and control for the SkySat satellite constellation.

¹⁹ *See* 47 C.F.R. § 25.272(c)(2), (d)(1).

²⁰ *Id.* § 25.272(d)(2).

²¹ *Id.* § 25.272(d)(3).

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U.S. Point of Contact (available 24/7):²²

GCI Communications Corp. (the Station hosting company)
Combined Network Control Center
2550 Denali Street, Suite 1000
Anchorage, Alaska 99503
Phone: 1-800-975-2622
Email: cncc@gci.com / bts@gci.com

Note: The U.S. point of contact has the ability to shut down the earth station upon notification of harmful interference by powering down the antenna system from the main power switch at the Station. It would be preferable for the FCC to contact KSAT's TNOC, below, to request cessation of transmissions, as KSAT will then contact Terra Bella's MOC to gracefully disable transmissions to the satellite.

Fairbanks local address:²³

GCI Colocation Room
Fairbanks Distribution Center
1300 Van Horn Road
Fairbanks, AK 99701

KSAT's Tromsø Network Operations Center (available 24/7):²⁴

Street address:

Prestvannveien 38
Tromsø 9011, Norway
Phone: (+47) 77 60 02 50 (KSAT main); (+47) 77 60 02 68 (direct for TNOC)
Email: tnoc-operator@ksat.no

Mailing address:

P.O. Box 6180 Langnes
9291 Tromsø, Norway

²² This information is also in the Site Identifier Contact fields in Form 312, Schedule B, Items E2 and E6.

²³ This information is also in the Site Identifier Contact fields in Form 312, Schedule B, Items E3, E4, and E7-E9.

²⁴ This information is also in the Remote Control Point Location fields in Form 312, Schedule B, Items E62 to E68.