

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of	)	Call Sign:
	)	
Application of Alaska Communications Internet LLC for an Earth Station License to Operate a Very Small Aperture Terminal (“VSAT”) Network in the C-band	)	File No.
	)	

**APPLICATION FOR C-BAND VSAT NETWORK LICENSE**

Pursuant to Section 25.115 of the rules of the Federal Communications Commission (the “FCC” or “Commission”), 47 C.F.R. § 25.115, Alaska Communications Internet LLC (“Alaska Communications Internet”) respectfully seeks an earth station license to operate a network of up to one hundred (100) very small aperture terminals (“VSATs”) and an associated hub earth station in portions of the 3700-4200 MHz (space-to-Earth) and 5925-6425 MHz (Earth-to-space) bands (collectively, the “C-band”) at fixed locations in Alaska while communicating with the EUTELSAT 115WB satellite located at the 114.9° W.L. orbital position.

This initial application identifies two of those VSAT remote terminals and the associated hub. Alaska Communications Internet was recently granted 60-day special temporary authorization (“STA”) to permit near-term provisioning of critical satellite communications services at those initial sites, and this application serves as Alaska Communications Internet’s request for regular authority to operate those sites as part of a larger C-band VSAT network.<sup>1</sup>

Grant of this application will serve the public interest by allowing Alaska Communications Internet to provide broadband communications services to Alaska Native and other remote

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<sup>1</sup> See Alaska Communications Internet, LLC, SES-STA-20170925-01054 (granted on September 28, 2017).

communities and businesses in the Alaska Bush that are unable to receive affordable broadband connectivity through other means.<sup>2</sup>

### **Background**

Alaska Communications Internet is an affiliate of Alaska Communications Systems Group, Inc. (“Alaska Communications”), a publicly-traded company that, together with its affiliates, provides terrestrial wireline telecommunications and broadband-enabled services throughout Alaska as the largest incumbent local exchange carrier in the state.<sup>3</sup> Alaska Communications Internet provides essential broadband and voice-over-Internet Protocol (“VoIP”) services to enterprise, business, educational, health care, and residential customers throughout the state.

This C-band VSAT network application is required to enable provisioning of broadband satellite services to users in remote locations, where traditional communication services are generally unavailable. Initially, Alaska Communications Internet will support the Tanadgusix Corporation (“TDX”), an Alaska Native corporation created pursuant to the Alaska Native Claims Settlement Act (“ANCSA”). In doing so, Alaska Communications Internet will provide improved and innovative broadband communication services to the primarily Alaska Native population of St. Paul Island., St. Paul Island is the largest of the Pribilof Islands, at roughly 40 square miles. It is located in the Bering Sea, some 300 miles west of Alaska’s mainland, and is one of the most

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<sup>2</sup> Unlike Alaska’s three largest population centers, and the surrounding rural communities, Alaska Bush communities are isolated geographically from infrastructure resources commonly available elsewhere in the state, and the nation as a whole. Most Bush communities cannot be accessed by road, and are not connected to the state’s power grid. Access to these communities is exclusively via plane, barge, snow machine, all-terrain vehicle, or other off-road transportation means. Communications services in these communities generally must rely on satellite or terrestrial point-to-point microwave transport links to Anchorage, Fairbanks, or Juneau.

<sup>3</sup> The incumbent local exchange carrier (“ILEC”) subsidiaries of Alaska Communications are: ACS of Anchorage, LLC; ACS of Fairbanks, LLC; ACS of Alaska, LLC; and ACS of the Northland, LLC. *See also* ACS Long Distance, Inc., File No. ITC-214-19960612-00248 (granted Aug. 2, 1996) (International Section 214 authorization).

remote locations in the nation. In addition, Alaska Communications Internet will operate a small test earth station at the Alaska Communications headquarters building in Anchorage, Alaska.

In the FCC Form 312 Schedule B and Technical Appendix, Alaska Communications Internet provides relevant information relating to the proposed operations, including earth station operating parameters and performance information, frequency coordination reports and radiation hazard analyses. Each of the proposed earth station antennae are on the Commission's Approved Non-Routine Earth Station Antennas List ("Non-Routine Antenna List")<sup>4</sup> and Alaska Communications Internet will operate the earth stations below the maximum EIRP spectral density ("ESD") levels previously approved by the Commission.

To enable this network, Alaska Communications has entered into a contract for exclusive use of a full 72 MHz transponder on EUTELSAT 115WB. Below, Alaska Communications seeks a waiver of Section 25.115(c)(2)(i)(B) of the Commission's rules, 47 C.F.R. § 25.115(c)(2)(i)(B), to permit it to make full use of this transponder pursuant to this C-band network license.

### **Discussion**

This initial application seeks authority to operate a C-band VSAT network consisting of a single hub earth station and two VSAT remote terminals at previously coordinated locations.

#### **A. Site Locations and Operating Parameters**

The hub earth station – the 3.8m Prodelin GD Satcom Series 1383 (the "3.8m hub") – will be located at the Dimond D facility in Anchorage, Alaska (geographic coordinates: 61° 8' 28.4" N, 149° 52' 30.7" W), where it was previously authorized by the Commission for similar

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<sup>4</sup> See Approved Non-Routine Earth Station Antennas, <https://www.fcc.gov/approved-non-routine-earth-station-antennas>.

hub earth station operations.<sup>5</sup> The former owner, Futaris Inc., ceased operations at the Dimond D site, and surrendered its license to operate the facility early this year.<sup>6</sup> Alaska Communications Internet has now acquired the underlying equipment, and seeks to restore this lost service option, in order to offer improved broadband satellite services in the region.

The Prodelin 3.8m antenna is on the Commission's Non-Routine Antenna List and is authorized thereunder to operate at ESD levels substantially higher than those proposed in the attached draft FCC Form 312 Schedule B. The hub (and associated VSAT terminals) will be supported by transponder capacity on the EUTELSAT 115WB satellite, a Permitted Space Station List satellite whose operational parameters are well known to the Commission.<sup>7</sup>

One of the remote sites, St. Paul Island, Alaska (geographic coordinates: 57° 9' 35.99"N, 170° 13' 11.99"W) (the "3.8m remote"), will utilize an identical 3.8m Prodelin antenna to the 3.8m antenna located at the Dimond D hub. There, it will provide satellite connectivity to residents and businesses, improving the economic opportunities for the island population.

The second remote site will be located at the Alaska Communications headquarters (geographic coordinates: 61°11'10.50"N, 149°52'15.57"W), which is less than five miles from the 3.8m hub. That site will use a 2.4m Prodelin Model 1244 (the "2.4m remote"), an antenna that has been previously authorized for similar C-band operations and is on the Commission's Non-Routine Antenna List.<sup>8</sup> That site will be used to provide operational support and for testing purposes.

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<sup>5</sup> See Futaris, Inc., File No. SES-LIC-20151117-00847, Call Sign E150139 (granting authority to operate the 3.8m Hub to support fixed C-band operations in Alaska).

<sup>6</sup> See Futaris, Inc., File No. SES-LIC-20151117-00847, Call Sign E150139, Surrender of Authorization Letter (filed on March 31, 2017).

<sup>7</sup> See Satélites Mexicanos, S.A. de C.V., File No. SAT-PPL-20150227-00008, Call Sign S2938.

<sup>8</sup> See Approved Non-Routine Earth Station Antennas, *supra* n.4; see also, e.g., Harris Corporation, File No. SES-LIC-20060302-00342, Call Sign E060075.

Although these antennae do not comply with the gain mask in Section 25.209 of the Commission's rules, 47 C.F.R. § 25.209, Alaska Communications Internet demonstrates in the attached draft FCC Form 312 Schedule B that it will operate the terminals at maximum ESD levels below those previously approved by the Commission. Moreover, Alaska Communications Internet will operate the earth stations in compliance with the ESD mask set forth in Section 25.218(d) of the Commission's rules, 47 C.F.R. § 25.218(d).

### **B. Frequency Coordination**

Alaska Communications Internet has engaged Micronet Communications, Inc. ("Micronet") to perform frequency coordination in support of this application for a C-band VSAT network. Pursuant to Sections 25.115(c)(2)(ii) and 25.203 of the Commission's rules, 47 C.F.R. §§ 25.115(c)(2)(ii) and 25.203, Micronet has conducted a coordination analysis on behalf of Alaska Communications Internet and provided Prior Coordination Notices ("PCNs") to all existing, proposed and prior coordinated microwave facilities within the contours of each proposed earth station at the locations identified herein.

As demonstrated in the attached frequency coordination reports, the proposed operations have been coordinated and limited as necessary and there is no potential for interference into other users of the C-band spectrum sought herein by Alaska Communications Internet. At the Dimond D hub and St. Paul Island remote site, Alaska Communications Internet's proposed operations in the 3704-3776 MHz (space-to-Earth) and 5929-6001 MHz (Earth-to-space) bands are fully compatible with other FCC-licensed operations in the band.<sup>9</sup> At the Anchorage remote site, Alaska Communications Internet will receive in the 3704-3776 MHz band (space-to-Earth)

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<sup>9</sup> When transmitting from the Dimond D hub using a 3 MHz carrier bandwidth, Alaska Internet Communications will limit its operations to the 5929-5944.85 MHz band (Earth-to-space) to avoid potential interference to adjacent incumbent microwave operations.

and limit its transmit operations at all times to the 5929-5944.85 MHz band (Earth-to-space) to prevent interference to a nearby microwave site that is operating at 5974.85 MHz.<sup>10</sup> As discussed below, such site-specific spectrum limitations illustrate the need for Alaska Communications Internet for the operational flexibility that a waiver of the Commission's rules to permit use of the full 72 MHz transponder on EUTELSAT 115WB would provide.

To this date, no objections have been received from incumbent licensees and Alaska Communications Internet will coordinate any future hub or remote locations prior to bringing them into use as part of the C-band VSAT network described herein.

**C. Request for Waiver of Section 25.115(c)(2)(i)(B) of the Commission's Rules**

Alaska Communications Internet respectfully seeks a waiver of Section 25.115(c)(2)(i)(B) of the Commission's rules, which requires that a C-band VSAT network limit its operational bandwidth with a given satellite to 20 MHz of spectrum in each direction (i.e., 20 MHz for uplink and 20 MHz for downlink).<sup>11</sup> As part of its proposed VSAT network, Alaska Communications Internet has leased an entire EUTELSAT 115WB transponder, and seeks to operate this proposed network using the entire associated frequency bandwidth of 72 MHz in each direction of communication, specifically 5929-6001 MHz (Earth-to-space) and 3704-3776 MHz (space-to-Earth). Alaska Communications Internet seeks this waiver to ensure it has the operational flexibility and capacity to serve these remote Alaska communities, which is particularly important given the spectrum limitations already encountered during coordination.

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<sup>10</sup> Alaska Communications Internet reserves the right to modify its license to transmit in the entire 5929-6001 MHz band upon successful coordination with incumbent spectrum users.

<sup>11</sup> See *FWCC Request for Declaratory Ruling on Partial-Band Licensing of Earth Stations in the Fixed-Satellite Service That Share Terrestrial Spectrum*, Report and Order, FCC 01-177, RM-9649 (2001), ¶ 13 (“*CSAT Report & Order*”); 47 C.F.R. § 25.115(c)(2)(i)(B).

The Commission may waive its rules for “good cause shown”<sup>12</sup> and, as discussed below, good cause exists to grant this waiver, permitting Alaska Communications Internet to make full use of its assigned transponder on EUTELSAT 115WB, without undermining the purpose of the rule.

The 20 MHz limitation was adopted by the Commission as part of its rulemaking to permit the licensing of C-band VSAT networks in the United States, wherein the Commission acknowledged that importance of the rule to enable the provisioning of satellite broadband communications to rural and underserved areas in the United States.<sup>13</sup> Moreover, the Commission noted that the 20 MHz limitation was not derived as a means to hinder C-band VSAT deployments, but rather as a streamlined licensing mechanism for C-band VSAT networks.<sup>14</sup> The Commission stated that applications that do not meet the specific criteria of the rule (e.g., the 20 MHz limitation) will be considered on a “case-by-case” basis.<sup>15</sup> Thus, Alaska Communications Internet’s request for a waiver is consistent with Commission policy of evaluating applications that do not meet the criteria in Section 25.115(c)(2) on a case-by-case basis.

Grant of this waiver will improve Alaska Communications Internet’s ability to more efficiently and effectively reach the underserved, rural areas of Alaska. It is more spectrally efficient to deliver broadband satellite service using a single, saturated transponder than it is to use a combination of smaller spectrum blocks. This waiver, in particular, will allow Alaska Communications Internet to utilize wider carriers with greater bandwidth capacity at the

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<sup>12</sup> See 47 C.F.R. § 1.3. *WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

<sup>13</sup> *CSAT Report & Order* ¶ 14.

<sup>14</sup> *Id.* ¶ 6 (“We will refer to the CSAT network licensing as a ‘streamlined licensing’ procedure . . . we believe that the streamlined procedures adopted here will provide much needed relief while preserving the ability of satellite and terrestrial services to share the C-band in an equitable manner.”).

<sup>15</sup> *Id.*

Anchorage hub, maximizing its ability to deliver high-speed service to meet the needs of commercial customers, schools, libraries, rural health care clinics, and other users in remote areas of Alaska. These wider carriers also operate with lower EIRP density, minimizing the potential for interference with other operations in the band.

Alaska Communications Internet also seeks to operate the C-band VSAT network with EUTELSAT 115WB utilizing a frequency bandwidth of 72 MHz in each direction from 5929-6001 MHz (Earth-to-space) and 3704-3776 MHz (space-to-Earth) to ensure the flexibility necessary to accommodate and co-exist with terrestrial microwave operations in the region. As demonstrated in the frequency coordination reports, Alaska Communications Internet has already encountered multiple co-frequency operations that has required it to limit its transmit operations with EUTELSAT 115WB at one of its proposed initial sites to avoid interference. Without full transponder flexibility, such limitations could sharply hinder, or effectively preclude, Alaska Communications Internet from providing vital communication services in a given region or to a specific customer site. Full transponder use is imperative for Alaska Communications Internet to be able to properly scale and offer the most reliable connectivity solutions to the remote communities of Alaska. Limiting operations with EUTELSAT 115WB to 20 MHz in each direction would greatly inhibit the promotion of broadband satellite services to rural United States, slowing “the delivery of earth station services, including broadband access, to rural Americans.”<sup>16</sup>

Based on the foregoing, grant of the requested waiver is in the public interest because it will allow Alaska Communications Internet the flexibility to dependably provide critical satellite communication services to the Alaskan Bush.

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<sup>16</sup> *Id.* ¶ 25.



### **Public Interest**

Grant of this application will strongly serve the public interest by allowing Alaska Communications Internet to ensure reliable and advanced broadband services to remote Alaskan communities that rely on these services for basic connectivity needs. Grant of this application for a C-band VSAT network will also allow Alaska Communications Internet to serve underserved Aleut communities in St. Paul Island, and help improve the local economy and well-being of its residents, helping to bridge the digital divide. This service will enable users to have broadband Internet access, e-mail, voice and data services, greatly enhancing economic opportunities in these remote locations.

This application will also create an additional competitive alternative for customers in the Alaska Bush, an undeserved area with little competition to existing terrestrial microwave and satellite providers. This additional competitive alternative will enhance Alaska Communications ability to serve schools, libraries, and rural health care clinics throughout Alaska, potentially lowering prices and reducing the level of support needed from the Commission's already strained E-rate and rural health care universal service support mechanisms.

### **Conclusion**

Based on the foregoing, Alaska Communications Internet respectfully requests that the Commission grant its request to for an earth station license to operate a C-band VSAT network in Alaska, including the waiver requested herein.