

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

<i>In the Matter of</i>	)	
	)	
Quintillion Subsea Operations, LLC	)	
	)	File No. SCL-LIC-20160325-00009
Application for a License to Construct, Land	)	
and Operate a Private Fiber Optic Cable	)	
System Linking Points Within Alaska, and	)	
Request for Streamlined Treatment	)	
	)	
Quintillion Subsea Cable System	)	

**REVISED APPLICATION FOR SPECIAL TEMPORARY AUTHORITY**

Quintillion Subsea Operations, LLC (“Quintillion” or the “Company”), by its attorneys and pursuant to Federal Communications Commission (“FCC” or the “Commission”) rule 63.25(b), 47 C.F.R. § 63.25(b), and the Cable Landing License Act, 47 U.S.C. §§ 34-39, (the “Act”) hereby requests special temporary authority (“STA”) to construct, land, and test the Quintillion System during the pendency of the Commission’s review of Quintillion’s Application for a Submarine Cable license for the Quintillion System.<sup>1</sup> Quintillion seeks special temporary authority for 180 days issued no later than April 15, 2016, to enable construction of the Quintillion System during the limited Alaskan construction season and avoid costly delays which could result in Quintillion, potentially, missing the 2016 construction season in its entirety. By this Application, Quintillion seeks authority only to construct, land, and test the Quintillion

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<sup>1</sup> See *In re: Quintillion Subsea Operations, LLC Application for a License to Construct, Land and Operate a Private Fiber Optic Cable System Linking Points Within Alaska, and Request for Streamlined Treatment*, SCL-LIC-2016-000778 (filed March 24, 2016) (“Quintillion SCL Application”).

System. Quintillion will neither operate nor initiate service on the System until its submarine cable license application is granted.<sup>2</sup>

Quintillion acknowledges that the grant of this STA Application will not prejudice any action the Commission may take on the underlying Quintillion SCL Application. Quintillion further acknowledges that this STA can be modified or revoked by the Commission upon its own motion without a hearing.

## **I. BACKGROUND**

On March 24, 2016, Quintillion submitted its Application for a license to Construct, Land, and Operate the Quintillion System. In addition to alerting the Commission, Quintillion has notified and been in continuous contact with the Department of State, Department of Justice, Department of Defense, and Department of Homeland Security regarding the submarine cable application and this Application for an STA.

The Quintillion System, a multi-stage high capacity fiber optic cable system wholly within the United States and extending between Nome, Alaska, and Prudhoe Bay, Alaska, is the first stage of a larger submarine cable system that the Company intends will, in later stages, land in foreign points. Authority is currently only being sought for the first stage, which will land exclusively in Alaska, although sections of the Quintillion System will be laid outside of U.S. territorial waters. Quintillion seeks to have the Quintillion System fully constructed by October 2016 and operational by the first quarter 2017.

Quintillion's System will be deployed as a trunk and branch configuration with landings into Nome, Kotzebue, Point Hope, Wainwright, Barrow, and Prudhoe Bay, all points

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<sup>2</sup> Commission rule Section 63.25 authorizes the Commission to grant the STA to construct, land, and test the Quintillion System. The Act does not prohibit or limit the Commission's authority to issue an STA pending grant of the submarine cable license application.

within Alaska. The first five of these landings will be backhauled to Prudhoe Bay, where the initial power source for the Quintillion System will be located. There, the Quintillion System will interface with a state-of-the-art broadband terrestrial fiber system extending from Prudhoe Bay to Fairbanks, Alaska, which, in turn, will connect to existing third-party fiber-based networks that will, among other features, be capable of providing access to the worldwide web via Points of Presence in Anchorage, Hillsboro, and Seattle. The Quintillion System will span over 1176 miles and deploy advanced coherent multi-terabit technology with optical add-drop multiplexing capabilities. The Quintillion System will utilize dense wavelength-division multiplexing and will be comprised of three (3) fiber pairs, each with an initial capacity of 10 terabits-per-second (10Tb/s).<sup>3</sup> All segments of the Quintillion System are designed to initially carry up to 100 wavelengths at 100 Gb/s and the system will be monitored and controlled from a network management system permitting preventive maintenance and external fault localization.

## **II. AN STA IS NECESSARY TO AVOID COSTLY DELAYS**

Grant of the requested STA is critical to ensuring the construction and testing of the Quintillion System can be completed before the Alaskan construction season closes. Absent grant of the STA, Quintillion is likely to suffer costly delays. Quintillion must conduct construction operations during a limited window during the warmer months that typically ends in early-to-mid October. Even during the construction window, operations may be limited at certain times due to certain seasonal mammal migrations in certain areas spanned by the planned System, Native American fishing operations, weather conditions, and availability of the cable laying vessels. Accordingly, the lack of an STA may put into jeopardy the ability to complete

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<sup>3</sup> Quintillion anticipates using two of the fiber pairs to operate and provide redundancy between the six planned landing sites. In the near term, Quintillion may connect the third pair back to Nome and Prudhoe Bay to enable Quintillion to monitor the status and condition of this fiber pair, but long-term this fiber pair will be reserved for future use.

construction during the current construction season, and may push construction into 2017, a delay which will not only be extremely costly for Quintillion but which will postpone the delivery of wholesale capacity on the Quintillion System. Delayed availability of that capacity will mean a postponement of the significant benefits for the communities that the System will reach, as well as their neighbors, by enabling communications provider-customers of Quintillion to offer a plethora of high-capacity broadband services.

The construction season at the latitudes where the Quintillion System will be constructed is extremely short – lasting only from approximately mid-May, at the earliest, to mid-October each year – due primarily to marine mammal migrations and seasonal ice and storms. Quintillion and its supply contractor, Alcatel-Lucent (“Alcatel”) will need the entire 2016 construction season to complete construction. A key prerequisite to construction is the transportation of the cable and materials to Alaskan waters. Quintillion already has contracted with its turn-key vendor Alcatel and reserved Alcatel’s vessels to lay cable for the Quintillion System. The first vessel carrying the cable to the Alaskan waters is scheduled to leave port in France by April 18, 2016 and arrive in Nome by June 8, 2016. This sailing schedule ensures the vessel will be in position in a timely manner, given other commitments of Alcatel, by the beginning of planned construction in early-to-mid June 2016.

Quintillion anticipates shoreside cable installation will commence within a few days of the cable vessel’s arrival in Nome. Should the vessel be unable to begin construction upon arrival in Alaskan waters, Quintillion faces the risk, and expenses, of losing the vessels and having to renegotiate or delay the construction schedule, possibly delaying delivery on the system until late 2017 or even into the following year. Such delay would entail its own significant related costs including storing cable over the winter until construction can begin,

remobilizing employees, and carrying related overhead without the anticipated revenue stream for the Quintillion System until, potentially, first quarter 2018. Accordingly, Quintillion seeks an STA, granted by April 15, 2016, before the first Alcatel vessel leaves port, to manage the Company's risks and ensure the vessels can commence construction following arrival of the first ship in Alaskan waters in early June.

In addition to the scheduling and costs of cable laying vessels, Quintillion's construction window is limited by the annual seasonal mammal migrations which begins from late September to early October each year (with variance from year-to-year and location-to-location depending on conditions). Quintillion's planned construction schedule anticipates expected migration patterns and timeframes by following the typical bowhead whale migration pattern and beginning construction in Nome and moving northward in a "clockwise" direction. Quintillion's construction schedule, which is designed to limit interference with the annual whale migration, restricts Quintillion's ability to be flexible in its construction schedule and still achieve its objectives this year.

Moreover, seasonal weather patterns limit the construction window and necessitate strict adherence to Quintillion's proposed construction schedule. Overlapping the mammal migration season and moving in the opposite direction (*i.e.*, north to south) is the beginning of ice formation in the area in which construction takes place and, separate from the migrations, this ice formation will prevent further construction beyond mid-October. In the unusual event that weather patterns delay ice formations, the area in Alaska where the cable system will be constructed is typically subject to severe storms in November and it is extremely difficult, if not impossible, to lay cable during the storm season even without the typical ice formation.

Consequently, Quintillion requests the Commission grant an STA by April 15, 2016, at the latest, to allow the Company to commence and complete construction in a timely fashion and then conduct testing of the Quintillion System to in time to meet its first quarter 2017 coming-into-service target date. Absent the STA grant, Quintillion runs the very real risk of not completing construction this year, thereby incurring significant expense and delaying commencement of operations.

### **III. GRANT OF THE STA SERVES THE PUBLIC INTEREST**

Grant of an STA for construction and testing of the Quintillion System will advance the public interest. The Quintillion System will be the first submarine cable connecting the six proposed landing station points, and the first fiber optic facilities to the communities served by five of these landings, bringing a new source of reliable, secure, high-speed communications capability to these north and northwest Alaskan communities which other providers will have the opportunity to utilize to provide their broadband and other services. Businesses, local governments, and residents ultimately will benefit from their carrier's and ISP's access to the enhanced capacity and reliability on this new cable system delivering benefits that support education, healthcare, public safety, emergency response, and economic development. Moreover, the addition of the Quintillion System will add redundancy to telecommunications infrastructure, such as terrestrial fiber at Prudhoe Bay and microwave systems and satellite links, connecting these communities in Alaska and reducing the potential for communications failures during natural or other disasters.

### **IV. THE REQUESTED STA TO COMMENCE CONSTRUCTION AND TESTING OF THE QUINTILLION SYSTEM IS CONSISTENT WITH PRIOR COMMISSION STA GRANTS**

Quintillion seeks an STA permitting the Company to construct and test the Quintillion System. The Commission has the authority, pursuant to rule 63.25(b), to grant the

STA and has on numerous occasions exercised that authority to grant STAs permitting the same construction and testing activities for which Quintillion requests grant.<sup>4</sup> Quintillion submits that a similar result – grant of an STA – is equally warranted here. Quintillion, operating in Arctic or near-Arctic waters, is subject to a particularly restricted construction season, and it is critical that the STA be granted in time to permit Quintillion to fully utilize that construction season to meet its coming into operation target.<sup>5</sup> Moreover, coordinating the reservation and transport of cable laying vessels is an important aspect of the cable construction and that coordination process will be complicated or jeopardized absent some certainty regarding Quintillion’s receipt of a cable construction grant.<sup>6</sup> In addition, as noted in Section II *supra*, Quintillion faces significant limitations on its construction season including severe weather concerns associated with construction in the Arctic, mammal migrations, and Native American fishing operations.<sup>7</sup>

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<sup>4</sup> For example, *See, e.g.*, GU Holdings Inc., China Mobile International Limited, China Telecom Global Limited, Global Transit 2 Limited, KDDI Corporation, and Singapore Telecom USA Inc., Application for Special Temporary Authority, File No., SCL-STA-20150804-00025 (granted Aug. 12, 2015) (extension granted Feb. 17, 2016) (the “FASTER STA”); *GU Holdings Inc.*, Application for Special Temporary Authority, File No. SCL-STA-20090401-00007 (granted Apr. 16, 2009); *Cedar Cable Ltd.*, Application for Special Temporary Authority, File No. SCL-STA-20081209-00020 (granted Dec. 18, 2008); *Asia America Gateway Consortium*, Application for Special Temporary Authority, File No. SCL-STA-20080509-00213 (granted May 16, 2008); *Trans-Pacific Express Cable Network Consortium*, Application for Special Temporary Authority, File No. SCL-STA-20070906-00016 (granted Sep. 19, 2007).

<sup>5</sup> The FASTER STA was granted based on circumstances nearly identical to those raised by Quintillion in this request. Indeed, the FASTER system did not face as restricted a construction season that the Quintillion faces. *See* FASTER STA at 3-4.

<sup>6</sup> The FASTER consortium also highlighted the importance of coordinating the cable vessels as a basis for its STA request. *See* FASTER STA at 3.

<sup>7</sup> *Compare* FASTER STA at 3-4 (discussing construction period limitations due to seasonal fishing activities).

## V. CONCLUSION

The foregoing demonstrates that the public interest, convenience and necessity would be furthered by grant of an STA, no later than April 15, 2016 and for a period of 180 days, for construction and testing of the Quintillion System. A later grant creates the very real potential of delaying the coming-into-operation date until the third quarter of 2017, at the earliest, if not considerably longer, thereby postponing the introduction to the intended Alaskan markets of a new, competitive source of affordable, high capacity wholesale telecommunications.

Respectfully submitted,

**Quintillion Subsea Operations, LLC**



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*Its Attorneys*

Dated: April 5, 2016



**Verification**

I, Elizabeth Pierce, state that I am Chief Executive Officer of Quintillion Subsea Holdings, LLC (“Quintillion Holdings”); that I am authorized to represent Quintillion Subsea Operations, LLC (“Quintillion”), and to make this verification on its behalf; that the statements regarding Quintillion contained in the foregoing Revised Application for Special Temporary Authority, except as otherwise specifically attributed, are true and correct to the best of my knowledge and belief.

I declare under penalty of perjury that the foregoing is true and correct.

By: 

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For and on behalf of Quintillion Subsea Operations, LLC

Dated: April 4, 2016

## CERTIFICATE OF SERVICE

I hereby certify that the foregoing Quintillion Subsea Operations, LLC Revised Application for Special Temporary Authority was served by first-class mail on April 5, 2016.

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