Date: November 16, 2018
Subject: Public and Redacted Version of Request for Confidential Treatment and Complementary Exhibits
File Number: 0925-EX-CN-2018

Pursuant to 5 U.S.C. § 552 and Sections 0.457 and 0.459 of the Commission's Rules, QuayChain, Inc. (QuayChain) hereby requests that certain information contained in the above-referenced application for an Experimental License Market Trial and accompanying exhibits be treated as confidential and not subject to public inspection. The designated information constitutes confidential and proprietary information that, if subject to public disclosure, would cause significant commercial, economic, and competitive harm to QuayChain. As described below, QuayChain's request satisfies the standards for grant of such requests set forth in Sections 0.457 and 0.459 of the Commission's Rules, 47 C.F.R. §§ 0.457, 0.459.

In accordance with Section 0.459(b), 47 C.F.R. § 0.459(b), and in support of this request, QuayChain provides the following information:

1 IDENTIFICATION OF THE INFORMATION FOR WHICH CONFIDENTIAL TREATMENT IS SOUGHT

QuayChains's request for confidential treatment is limited to information that has been redacted from the Experimental License application and associated Exhibits. QuayChain requests confidential treatment of the information underlined and highlighted below and redacted from the publicly filed version of Exhibits A and B that contains confidential and proprietary information regarding the proposed market trial for which Commission authorization is requested in the instant application.

2 IDENTIFICATION OF THE CIRCUMSTANCE GIVING RISE TO THE SUBMISSION

QuayChain is submitting an application for an Experimental Market Trial to test certain aspects of prospective wireless operations in the 3.5 GHz band.

3 EXPLANATION OF THE DEGREE TO WHICH THE INFORMATION IS COMMERCIAL OR FINANCIAL OR CONTAINS A TRADE SECRET OR IS PRIVILEGED:

The information for which confidential treatment is requested has significant commercial and strategic value to QuayChain. The exhibits supporting the Experimental Market Trial discuss tests/experiments that include trade secret information. QuayChain's tests and experiments and proprietary wireless applications using particular radio frequency equipment and shared spectrum technology represent a "secret commercially valuable plan" within the meaning of a trade secret as recognized by the Commission, and thus justifies withholding such information from public inspection.

4 EXPLANATION OF THE DEGREE TO WHICH THE INFORMATION CONCERNS A SERVICE THAT IS COMPETITIVE:

QuayChain is planning to test its shared spectrum solutions, and operation of small cells in the 3.5 GHz band. The services and shared spectrum technologies that are the subject of this application have not been fully developed, but are expected to be implemented in hardware, software, and service offerings in the 3.5 GHz band. SAS Administrators, equipment manufacturers, and software developers and network operators will compete vigorously on the basis of their products in this band.

5 EXPLANATION OF HOW DISCLOSURE OF THE INFORMATION COULD RESULT IN SUBSTANTIAL COMPETITIVE HARM

The technology under test is very sensitive and confidential in nature. Disclosure of the redacted information could cause substantial competitive harm to QuayChain because it would provide competitors insight into confidential development, operational, and strategic information that would not otherwise be available, which would work to QuayChain's competitive disadvantage.

6 IDENTIFICATION OF ANY MEASURES TAKEN BY THE REQUESTING PARTY TO PREVENT UNAUTHORIZED DISCLOSURE.

QuayChain routinely treats the redacted information as highly confidential and exercises significant care to ensure that such information is not disclosed to its competitors or the public. QuayChain has taken steps to keep confidential the information set forth in the confidential exhibits by limiting the number of people involved in the tests/experiments to only those on a "need to know" basis, and by requiring that any third parties involved in the preliminary analysis execute robust nondisclosure agreements.

7 IDENTIFICATION OF WHETHER THE INFORMATION IS AVAILABLE TO THE PUBLIC AND THE EXTENT OF ANY PREVIOUS DISCLOSURES OF THE INFORMATION TO ANY THIRD PARTIES

The information contained in the confidential exhibits is not available to the public, and will only be disclosed to third parties pursuant to the restrictive safeguards described above.

8 JUSTIFICATION OF THE REQUESTED PERIOD OF CONFIDENTIALITY

QuayChain requests that the redacted information be treated as confidential on an indefinite basis as it cannot identify a date certain on which this information could be disclosed without causing competitive harm to QuayChain. Shared spectrum is a new technology that is being developed. As such, QuayChain expects that confidential treatment will be necessary for the length of the proposed experiment and thereafter in order to protect its evolving business and technology strategies.

Consistent with 47 C.F.R. § 0.459(d)(l), QuayChain requests notification if release of the information subject to this request is requested pursuant to the FOIA or otherwise, so that it may have an opportunity to oppose grant of any such request.

Exhibit A – Experimental License Market Trial Justification

Consistent with the standards set forth in Section 5.63(c)(1) of the Commission's Rules, 47 C.F.R. § 5.63(c)(1), QuayChain submits this statement in support of its application for an Experimental License to conduct a Market Trial, as defined under Sections 5.5 and 5.602, 47 C.F.R. §§ 5.5, 5.602, in the cities of Los Angeles and Long Beach, California. Operations under this Market Trial will be conducted in accordance with the Part 96 rules the Commission has adopted to govern use of the Citizen Broadband Radio Service (CBRS) in the 3550-3700 MHz band. The license is sought for a period of one (1) year, beginning on November 30, 2018. QuayChain outlines below its need for the requested licenseand the reasons that authorization should be granted expeditiously.

The license is needed to execute a Market Trial to evaluate the operation and performance of small cells in the CBRS band. The operation of small cell base stations will be consistent with the Commission's Part 96 rules, including protection of incumbent operators from harmful interference. QuayChain requests authorization to operate on the frequencies between 3650-3690 MHz in the cities of Los Angeles and Long Beach, California.

Planned Operations

QuayChain anticipates performing the following tests as part of the Market Trial:

- Small cell outdoor coverage and performance:
  - The coverage and performance of small cell base stations in dense industrial and port environments.
    - The frequency of operation will be limited to 3650-3690 MHz.
    - [redacted]
    - The base stations will be installed on [redacted]
  - The performance and operation of a CBSD when instructed by a SAS to switch frequency.
  - The impact on an end user when a CBSD has switched its frequency.
- SAS Management of Shared Spectrum:
  - QuayChain, in collaboration with its SAS Administrator and radio partners, will test spectrum sharing, including General Authorized Access (GAA) registration, CBSD spectrum grant request and SAS response, spectrum grant revocation, and simulated protection scenarios in an operational environment.

Non-Interference Analysis

Operation under the Experimental license will not adversely impact any authorized user of RF Spectrum.

Morphology of Test Site

The test site is surrounded by ocean, stacks of steel containers, cranes and often large containers ships, which will aid in limiting the propagation of signals. The test will include CBRS service provision to numerous businesses that are unserved with wireless service and fiber.

[redacted]

Radar Protection (Shoreline)

QuayChain will not operate within the frequency used by naval radar 3.55-3.65 GHz.

Federal Government Radiolocation Facilities

The trial location is outside of the 80 km restricted area for the Federal radiolocation facilities located in St. Inigoes, Maryland, Pensacola, FL, and Pascaguoula, MS.

Ground Based Radar

There are no known in-land radar locations in the area of the trial, and the nearest ground based radar is 192 km away.

International Border

The trial site is more than 200 km from the Mexican border and over 1700 km from the Canadian border. Therefore, no interference to international incumbent operations is expected.

In-Band FSS Protection

Fixed satellite service (FSS) operations in the 3600-3700 MHz band require protection under Part 96 of the Commission's rules. Part 96 requires coordination with any FSS operations using the 3600-3700 MHz band within a 150 km coordination contour.

There are licensed FSS operations in the area of the proposed market trial, with the nearest such operations in Malibu, CA, 70 km from the proposed trial location. Given the low power level requested herein and the morphology of the trial site, interference to in-band FSS operations is not expected. However, in accordance with the requirements of Part 96 of the Commission's rules, proper precautions and coordination activities will be taken to prevent interference.

Adjacent Band FSS Protection

Adjacent band FSS operations in the 3700-4200 MHz band also require protection under Part 96 of the Commission's rules. Part 96 requires adjacent band FSS protection within 40 km of the FSS site. Because there are a number of adjacent band FSS operators within 15 km of the trial site, operations under the market trial will not use the frequency range 3690-3700 MHz to prevent potential interference with those operators.

Part 90 Grandfathered Wireless Broadband Licensee (GWBL) Protection

There are no GWBLs near the trial site, with the nearest Grandfathered Wireless Protection Zone 52 km away. Given the low power level requested herein and the morphology of the trial site, interference to GWBL operations is not expected. However, in accordance with the requirements of Part 96 of the Commission's rules, proper precautions will be taken to prevent such interference.

No Sale of Equipment

QuayChain will retain ownership of all transmitting and/or receiving equipment used in the trial.

Trial Devices at the Conclusion of the Trial

QuayChain will notify all end users in the market trial that devices will be rendered inoperable or retrieved at the conclusion of the market trial as required by Section 5.602(e) of the Commission's rules, 47 C.F.R. § 5.602(e). QuayChain also will notify all end users in the market trial that the service they will be receiving is being provided in part or in whole under experimental authority, and as a condition of the experimental license, QuayChain may be required at any time, without prior notice, to cease operations. Upon expiration of the market trial, Quaychain will cease operations, or will transition such operations to continue pursuant to the Initial Commercial Deployment (ICD)[1] contemplated for the CBRS band in the event ICD proposals are approved prior to expiration of the requested Market Trial Experimental License.

[1] *Wireless Telecommunications Bureau and Office of Engineering and Technology Establish Procedure and Deadline for Filing Spectrum Access System Initial Commercial Deployment Proposals*, GN Docket No. 15-319, Public Notice, DA 18-783 (WTB July 27, 2018).

Exhibit B – Technical Information:

QuayChain requests confidential treatment of the information underlined and highlighted below and to have it redacted from the publicly filed version of Exhibit B regarding the proposed testing in Los Angeles and Long Beach, CA.

Applicant Name: QuayChain, Inc.

Applicant FRN:0027939503

Legal Contact Details:

Name of Contact	Simon Davidson
Contact Address	100 High Street, 28th Floor Boston, MA 02110

Technical Contact Details:

Name of Contact	Andrew Scott
Contact Address	222 West 6th Street, Suite 1010 San Pedro, CA 90731 516-391-5777
Should any interference be reported, the proposed market trial operations will cease immediately unless and until the interference incident has been resolved. The technical point of contact above is the "stop buzzer" contact for all devices involved in the proposed market trial.	

Base Station General Information

Equipment	[redacted]
Quantity	[redacted]
Area of Operation	Operation not to exceed 5 km from the following geographic center points: Latitude: 33°45'5.41"N Longitude: 118°14'55.31"W

Amplifier Detail

Antenna	External
Type	Omni
Quantity	2 per Base Station
Gain	17 dB
Beamwidth at Half-Power Point	N/A
Orientation in Horizontal Plane	N/A
Orientation in Vertical Plane	N/A
Lower Frequency	3.65 GHz
Upper Frequency	3.69 GHz
Power (and Power units)	[redacted]

ERP (and ERP units)	[redacted]
Mean / Peak (for power)	Peak
Frequency Tolerance	.000005% (.05 ppm)

Radio	**Modulation**	**Emission Designator**	**Bandwidth**	**Maximum Output Power**	**Maximum EIRP**
[redacted]	Digital	10M0W7W	10 MHz	[redacted]	[redacted]
[redacted]	Digital	20M0W7W	20 MHz	[redacted]	[redacted]