16-149

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554

ACCEPTED/FILED

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Federal Communications Commission
Office of the Secretary

In the Matter of	)	
	)	
PCS Partners, L.P.	)	Docket No. _____
	)	
Petition for Waiver of 47 C.F.R. § 90.353(b) and Request for Extension of Time and for Expedited Treatment	)	File No. _____

PETITION FOR WAIVER OF 47 C.F.R. § 90.353(b), AND REQUEST FOR EXTENSION OF TIME AND FOR EXPEDITED TREATMENT

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April 15, 2016

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PCS Partners, L.P. ("PCSP"), by its attorneys and pursuant to Sections 1.3 and 1.925(b) of the rules of the Federal Communications Commission ("Commission"), respectfully requests a waiver of Section 90.353(b) of the rules to provide PCSP flexibility with respect to transmissions utilizing its licensed Multilateration Location and Monitoring Service ("M-LMS") spectrum, and thereby foster greater spectrum efficiency and competition. In addition, pursuant to Section 90.155(g) of the Commission's rules, PCSP requests an extension of its current construction milestone deadlines to afford additional time for the development and testing of network equipment and devices necessary for PCSP to deploy viable technology using its spectrum.

I. INTRODUCTION AND SUMMARY

PCSP holds licenses to provide M-LMS – defined as "a system that is designed to locate vehicles or other objects by measuring the difference of time of arrival, or difference in phase, of signals transmitted from a unit to a number of fixed points or from a number of fixed points to the unit to be located"[1] – in the M-LMS A Block (904.0-909.750 MHz/927.750-928.0 MHz).

The licensed M-LMS bands (which also include the B Block (919.750-921.750 MHz/927.500-927.750 MHz) and C Block (921.750-927.250 MHz/927.250-927.500 MHz) (the M-LMS A, B, and C Blocks collectively, the "M-LMS Bands") have a long history of underutilization. PCSP has made substantial efforts to identify a viable technology solution in its M-LMS spectrum, taking into consideration both the obligation to provide location functionality and the realities of current and anticipated markets for equipment and services. As described in greater detail below, PCSP has identified a clear path forward for near-term utilization of its A Block spectrum, subject to Commission approval. In particular, PCSP seeks a relaxation of Section 90.353(b), which permits the transmission of voice or non-voice "status and instructional messages" only if such messages are related to the location or monitoring functions of the system,[2] in order to permit short, infrequent packet transmissions in the M-LMS A Block sub-band (904.0-909.75 MHz) at scheduled times utilizing equipment that incorporates the latest version of the 3rd Generation Partnership Project ("3GPP") Long Term Evolution ("LTE") standard. If the requested waiver is granted, PCSP proposes to deploy an LTE system capable of supporting both a trilateration-based M-LMS and machine type communication ("MTC") for

[1] 47 C.F.R. § 90.7.

[2] 47 C.F.R. § 90.353(b).

narrowband Internet of Things ("IoT") applications and services. PCSP also requests extensions of time to satisfy the first and second construction deadlines applicable to its licenses.[3]

II. THIS REQUEST SATISFIES THE COMMISSION'S WAIVER STANDARD

The Commission may waive any of its rules for "good cause" shown.[4] Under this standard, a waiver is appropriate if "(i) special circumstances warrant a deviation from the general rule, and (ii) such deviation will serve the public interest."[5] Section 1.925(b) of the rules further provides that "the Commission may grant a request for waiver if it is shown that: (i) The underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or (ii) in view of the unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative."[6]

As demonstrated below, the requested waiver of Section 90.353(b), and extension of the current construction deadlines, would both further the underlying intent of applicable rules and serve the public interest, while application to PCSP of these requirements, for which PCSP has no reasonable alternative, would be inequitable, unduly burdensome, and contrary to the public

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[3] 47 C.F.R. § 90.155(d); *Requests by Progeny LMS, LLC, FCR, Inc., Helen Wong-Armijo, and PCS Partners, L.P. for Waiver and Extension of Time to Construct 900 MHz M-LMS Licenses*, WT Docket No. 12-202, Order, 29 FCC Rcd 10361 (WTB MD 2014), *recon. pending*.

[4] 47 C.F.R. § 1.3.

[5] *In the Matter of DISH Network Corporation Petition for Waiver*, Memorandum Opinion and Order, 28 FCC Rcd 16787, ¶ 11 (WTB 2013) ("*DISH Waiver Order*").

[6] 47 C.F.R. § 1.925(b)(3). Sections 1.3 and 1.925(b)(3) require "substantially the same" showing. *Barry P. Lunderville*, Memorandum Opinion and Order, 28 FCC Rcd 665, ¶ 14 n.51 (2013).

interest. Accordingly, this request fully satisfies the waiver standard, and a grant would be consistent with Commission precedent.

A. *Waiver of Section 90.353(b) Would Further the Underlying Purposes of the Rule and Serve the Public Interest*

The Commission adopted rules establishing M-LMS and providing for the auction of M-LMS licenses in 1995. Those rules replaced outdated rules for the Automatic Vehicle Monitoring ("AVM") service, and were intended to allow "efficient and competitive use" of dedicated spectrum and to "promote certainty for all users of the band so they can invest in the equipment and facilities necessary to bring quality, low cost services to consumers."[7] In addition to furthering these general purposes, the operational restriction codified in Section 90.353(b) is intended to limit the potential for interference to other users of the band.[8] A waiver of Section 90.353(b) is fully consistent with these purposes.

First, a waiver will result in innovative and efficient use of the spectrum. Today, the M-LMS Bands are not being used to provide any service authorized under the M-LMS rules. PCSP's proposed use will bring users a widely accepted, standardized and efficient solution in an M-LMS offering, as well as narrowband IoT services. Furthermore, by incorporating the latest

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[7] *Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems*, PR Docket No. 93-61, Report and Order, 10 FCC Rcd 4695, ¶¶ 1, 2 (1995) ("*M-LMS Report & Order*"). The Commission has described the rules adopted in 1995 as "a substantial step towards the efficient and competitive use of spectrum previously governed by outdated AVM service regulations that had not kept pace with the technological evolution." *Amendment of the Commission's Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands*, WT Docket No. 06-49, Notice of Proposed Rulemaking, 21 FCC Rcd 2809, ¶ 18 n.46 (2006).

[8] *M-LMS Report and Order*, ¶¶ 2, 23. Five separate user groups share the 902-928 MHz band: Federal Government fixed and mobile radiolocation services, and Industrial, Scientific, and Medical ("ISM") devices have a primary allocation; government fixed and mobile and LMS systems may operate secondary to primary users; and licensed amateur radio operations and Part 15 equipment may operate on a secondary basis to all other users. *See id.*, ¶ 29.

releases of the 3GPP LTE standard with newly introduced user equipment ("UE") categories that provide for intermittent (low duty cycle) traffic, low data rates, and delay-tolerant transmissions intended to reduce complexity and power consumption, M-LMS can be provided in a more spectrally efficient manner[9] than the network configuration mandated by current rules.[10] As the Commission has found, granting a waiver that provides "the flexibility to make fundamental choices about service offerings, taking into account market factors such as consumer demand, availability of technology, and competition … tends to result in efficient and highly-valued uses of spectrum."[11] Furthermore, facilitating "more efficient use of the spectrum ... will result in a more market-driven system that should better meet the needs of the public."[12]

Second, a waiver will result in a second approved provider in the M-LMS Bands, and provide a competitive alternative to the location service authorized to be offered by Progeny LMS, LLC ("Progeny") utilizing its proprietary multilateration technology on B Block and C Block M-LMS spectrum, for which it has been granted waivers of certain M-LMS rules.[13] Given the development and availability of globally standardized LTE equipment supported by a large

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[9] UE Category 0, introduced in 3GPP Release 12 (March 2015), has further evolved in Release 13 (expected end date June 2016) to offer a 75% modem complexity reduction as compared to Category 1 UE; reduce UE receive bandwidth to 1.4 MHz; provide ultra-low power and longer life battery (over ten years); and provide 15-20 dB coverage enhancement. *See* NOKIA NETWORKS, LTE-M – OPTIMIZING LTE FOR THE INTERNET OF THINGS (Aug. 28, 2015) *available at* http://networks.nokia.com/file/34496/lte-m-optimizing-lte-for-the-internet-of-things; 3GPP TS 22.368, V13.1.0, Dec. 2012, Service Requirements for Machine Type Communications (MTC) Stage 1 (Rel. 13), *available at* http://3gpp.org/DynaReport/22368.htm.

[10] *See* 47 C.F.R. § 90.155(e).

[11] *DISH Waiver Order*, ¶ 19.

[12] *Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets*, Report and Order and Further Notice of Proposed Rulemaking, 18 FCC Rcd 20604, ¶ 40 (2003).

[13] *Request by Progeny LMS, LLC for Waiver of Certain M-LMS Rules,* WT Docket No. 11-49, Order, 26 FCC Rcd 16878 (WTB & OET 2011), *recon. pending* ("*Progeny Waiver Order*").

ecosystem of vendors and suppliers, the timetable for implementation of PCSP's proposed solution (as discussed in Section III below) could enable the availability of a new location technology in the M-LMS Bands concurrent with other M-LMS Bands technology solutions.[14] As the Commission has concluded, "the existence of competing technologies spurs innovation and provides choice to consumers, thereby furthering the public interest."[15] Competition in turn "promotes consumer welfare by generally resulting in lower prices, higher output, more choices for consumers, and more technological progress than in markets that are less competitive."[16]

Moreover, new LTE devices will produce location information in a variety of difficult-to-serve deep indoor environments, providing users with service both indoors and outdoors that is likely more reliable than most existing location services. As the Commission has found, "the

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[14] Progeny has notified the Commission that it has constructed facilities in 40 of its 115 markets to date. Request of Progeny LMS, LLC for Waiver and Extension of Time, WT Docket No. 12-202, Amendment and Restatement to Requests for Waiver and Extension of Time (Mar. 27, 2015) ("Progeny March 2015 Extension Request"), at 2. However, the commercial availability of its services cannot be ascertained based on a review of Commission filings or the websites of Progeny and its affiliate NextNav, LLC. Progeny's current proposed timetable (April 2020 through April 2023) for meeting the first construction milestone in its remaining markets and its second milestone in all of its markets is tied to the timeline for mobile service provider implementation of indoor location accuracy requirements established last year. *See* Progeny March 2015 Extension Request at 2 (citing *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114, Fourth Report and Order, 30 FCC Rcd. 1259 (2015)). *See also* Request of Progeny LMS, LLC for Waiver and Extension of Time, WT Docket No. 12-202 (Jul. 17, 2014), at i; Request of Progeny LMS, LLC for Waiver and Limited Extension of Time, Limited Amendment to Amendment and Restatement to Requests for Waiver and Extension of Time, WT Docket No. 12-202 (Jun. 26, 2015), at 3-4.

[15] *Amendment of the Commission's Part 90 Rules,* WT Docket Nos. 12-202, 12-229, Order, 29 FCC Rcd 10361, ¶ 19 (WTB MD 2014).

[16] *See* F. M. Scherer and David Ross, *Industrial Market Structure and Economic Performance*, 19-28 (3d ed. 1990).

public interest benefits from improved position location service in areas where GPS is limited, such as in urban canyons and indoors, are substantial."[17]

Third, a waiver will allow a wide variety of additional applications and services to be offered to consumers. LTE is poised to become a major solution for low-cost MTC for the foreseeable future.[18] Commercial products and services based on equipment and devices from global standards-based suppliers are expected to be introduced by late 2016 or early 2017, allowing LTE-capable equipment to enable a wide range of narrowband IoT applications, including smart energy meters, industrial sensors, asset trackers, smart city controllers, consumer wearables, and medical devices.[19]

Finally, a waiver is highly unlikely to cause interference to other band users. As an initial matter, PCSP's proposal can be implemented in compliance with existing M-LMS technical rules, including power limits and interference protections.[20] PCSP's preliminary analysis indicates that its proposed effective bandwidth use in its A Block spectrum will be comparable to the bandwidth use previously approved for Progeny in its B and C Block M-LMS spectrum.[21]

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[17] *Progeny Waiver Order*, ¶ 20.

[18] *See, e.g.*, 4G AMERICAS, CELLULAR TECHNOLOGIES ENABLING THE INTERNET OF THINGS 29-40 (Nov. 2015), *available at* http://www.4gamericas.org/files/6014/4683/4670/4G_Americas_Cellular_Technologies_Enabling_the_IoT_White_Paper_-_November_2015.pdf; *Ericsson delivers massive IoT with millions of connections per cell site for AT&T* (Jan. 6, 2016), *available at* http://www.ericsson.com/news/160106_ericsson_delivers_massive_iot_244039856_c.

[19] *See generally* Martha DeGrasse, *Internet of Things: Opportunities for Carriers and Their Vendors*, RCR WIRELESS NEWS (Jan. 2016), *available at* http://www.prweb.com/releases/2016/01/prweb13179089.htm.

[20] *See* 47 C.F.R. §§ 90.353(a), (c), (d).

[21] *See Progeny Waiver Order*, ¶¶ 26, 29; *see also Request of Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules, Progeny LMS, LLC Demonstration of Compliance with Section 90.353(d) of the Commission's Rules*, WT Docket No. 11-49, Order, 28 FCC Rcd 8555, ¶ 23 (2013).

Significantly less bandwidth is needed to perform location functions alone than the approximately 4 MHz utilized by Progeny's approved solution, while the amount of bandwidth utilized by IoT applications can be controlled by limiting the number of devices per cell to a level that precludes unacceptable interference to other A Block users.[22] No user outside the A Block will be materially impacted by transmissions resulting from PCSP's proposed solution. And, PCSP will remain subject to the existing condition that it demonstrate through field tests that its system does not cause "unacceptable levels of interference" to Part 15 devices that operate on a secondary basis in the M-LMA A Block,[23] as well as the obligation to not cause interference to, and to tolerate interference from, federal government radiolocation stations and ISM devices operating in the 902-928 MHz band.[24] It is these rules, in combination with power limits and other fundamental technical requirements, that are the most effective regulations for limiting potential interference, and thus best achieve the purpose of Section 90.353(b).

The Commission has found that the public interest would be served by grant of a waiver that has the potential to enhance competition, innovation, and rapid deployment, and to increase

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[22] PCSP's proposed narrowband solution is intended to utilize 1.4 MHz (35 percent of the approximately 4 MHz B and C Block bandwidth utilized by the approved Progeny system) to offer both M-LMS and IoT applications. If PCSP were to provide only M-LMS, bandwidth usage would be only approximately 7 percent of the bandwidth used by Progeny's approved location determination system. Adding IoT-related traffic would result in bandwidth usage comparable to the usage of Progeny's technology, based on a duty cycle of about 56 percent compared to the 20 percent duty cycle of the Progeny solution. Moreover, the PCSP solution has sufficient flexibility in its smart scheduler function to vary the duty cycle in response to traffic demand and mitigate any unlikely interference concern.

[23] 47 C.F.R. § 90.353(d). *See DISH Waiver Order*, ¶¶ 28-29, 32, 36, 47 (waiver of technical rules granted on condition that applicant comply with other requirements intended to prevent interference to other specified spectrum users).

[24] 47 C.F.R. § 90.353(a).

the supply of in-demand spectrum and services.[25] As described above, the requested waiver of Section 90.353(b), for M-LMS spectrum in 31 markets covering approximately 38 million POPs, will fulfill each of these objectives. A waiver also is consistent with the Commission's recognition that flexible policies promote rapid deployment of innovative services and competitive spectrum use.[26] Recently, with respect to IoT technologies, Chairman Wheeler reiterated that flexible use policies are needed to "assur[e] that spectrum is available to be deployed when the private sector has arrived at the requisite technical standards and network architectures."[27] PCSP's proposal provides the fastest route to technology deployment in the M-LMS A Block. A waiver therefore will help assure that spectrum is available for the standards and systems now becoming available that make possible the provision of both M-LMS and other services.

B. Application of Section 90.353(b) to PCSP Would Be Unduly Burdensome and Contrary to the Public Interest

PCSP's proposed path forward takes into account today's mature market for position location technology, which offers a multitude of alternative technologies. Mandates in the United States and around the world have compelled mobile services carriers to implement

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[25] *DISH Waiver Order*, ¶ 23.

[26] *See* Tom Wheeler, *Empowering Small Businesses To Innovate in Today's Digital Economy*, FCC BLOG (Mar 25, 2016, 1:00 PM), https://www.fcc.gov/news-events/blog/2016/03/25/empowering-small-businesses-innovate-today%E2%80%99s-digital-economy. *See also DISH Waiver Order*, ¶ 19 (flexibility "encourages research, innovation, and investment, spurs the development of new technologies and their deployment to customers, and overall encourages efficient use of spectrum."); *Progeny Waiver Order*, ¶¶ 15, 16 (the "definition of M-LMS in Section 90.7 … provides a flexible framework to facilitate the implementation of M-LMS," and "without a waiver, application of Section 90.155(e) would impede Progeny's ability to offer an innovative service that promotes the public interest.").

[27] Sean Kinney, *FCC Chairman Talks 5G, Spectrum in House Session*, RCR WIRELESS (Mar. 22, 2016), *available at* http://www.rcrwireless.com/20160322/policy/fcc-chairman-talks-5g-spectrum-tag17?omhide=true.

location-based technologies in order to provide access to critical emergency services.[28] Equipment manufacturers and carriers understandably have settled on market-driven location and positioning solutions, realizing economies of scope and scale that drive down costs throughout the communications ecosystem. In particular, carriers generally rely on standardized techniques based on Observed Time Difference of Arrival ("O-TDOA") and Uplink Time Difference of Arrival ("U-TDOA") principles to meet their obligations.[29] Both O-TDOA and U-TDOA essentially use the concept of measuring the time difference of arrival of transmission from or to a fixed number of stations at known locations, to or from a device to be located. These technologies have been standardized by 3GPP.[30] The O-TDOA multilateration method, in addition to being a globally standardized solution, also is commercially viable; consequently, it

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[28] *See, e.g.*, *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 18676 (1996); *see also TCS Launches E112 Emergency Services Solution to European Mobile Operators*, BUSINESSWIRE (Jan. 23, 2004), *available at* http://www.businesswire.com/news/home/20040223005773/en/TCS-Launches-E112-Emergency-Services-Solution-European (announcing that TCS has developed a location-based solution that will help ensure mobile providers are compliant with the European Union requirement that "all mobile operators who are technically able to offer location-based services to their subscribers must forward the caller's location information to emergency services in the event of a[n] .... emergency call being made.").

[29] *See* Alan Bensky, *Wireless Positioning Technologies and Applications* (2nd ed. 2016); Nat Natarajan and Ken Zdunek, *E911 Indoor Location Technology Assessment*, Jan. 21, 2015, *available at* http://apps.fcc.gov/ecfs/document/view?id=60001015543. In practical commercial deployments, a variety of technologies based on both multilateration and non-multilateration principles are used and results are combined to yield the best location estimate. Specifically, the emerging solution uses 3GPP standardized O-TDOA technology is conjunction with satellite (GPS and many variants including A-GPS) and indoor (Wi-Fi and Bluetooth) technologies.

[30] *See* 3GPP TS 36.355, E-UTRA LTE Positioning Protocol (LPP), Release 9; 3GPP TS 36.455, E-UTRA LTE Positioning Protocol A (LPPa), Release 9; 3GPP TS 25.305 V11.0.0 Stage 2 Functional Specification of User Equipment (UE) Positioning in UTRAN (Release 11); 3GPP TS 37.571-1, v12.0.0 Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC) – User Equipment (UE) Conformance Specification for UE Positioning: Part 1: Conformance Test Specification (Release 12).

is being implemented in commercial service provider networks, typically coupled with other service offerings. Indeed, the most successful location-based technologies, such as GPS, and more generally Global Navigation Satellite Systems ("GNSS"), are available to consumers as an integral part of service providers' bundled offerings.[31]

In contrast, there is effectively no market for a stand-alone position location service such as was contemplated by the Commission when it established M-LMS, and no manufacturers have developed commercially available equipment to deliver a stand-alone position location service in the M-LMS Bands.[32] Instead, manufacturers and carriers alike have opted to pursue solutions that are based on open standards and that enable multiple services, because such technologies can deliver services to consumers more efficiently and cost-effectively.[33]

In short, because there is no market or technological rationale for implementing a stand-alone location position service in the M-LMS A Block spectrum, it would be unduly burdensome for PCSP to provide such a service, or to further delay implementation of its proposal awaiting a change in market conditions or technology solutions.[34]

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[31] *See, e.g.*, European Global Navigation Satellite Systems Agency, GNSS Market Report, Issue 4, 16-23 (Mar. 2015), *available at* http://www.gsa.europa.eu/systems/files/reports/GNSS-Market-Report-2015-issue4_0.pdf.

[32] PCSP has performed numerous searches of vendors of wireless communication network equipment, and has determined that none are offering or advertising M-LMS equipment that could be used in the A Block M-LMS spectrum.

[33] At one time, TruePosition offered a proprietary U-TDOA technology that was used by a small number of U.S. carriers in their 2G systems; however, it discontinued evolution of this technology for 3G and 4G systems due to lack of carrier customer interest. U.S. carriers have settled on O-TDOA technology to incorporate in their future networks for location determination.

[34] *Cf. FiberTower Inc., Petition for Waiver of Section 101.103 and 101.115 of the Commission's Rules for Use of 0.61 meter Antennas in the 10.7-11.7 GHz Band*, Order, 21 FCC Rcd 6386, ¶ 13 (WTB 2006) (absent a waiver of technical rules that impede a waiver applicant's ability to provide service, it would be unduly burdensome to compel the applicant to delay deployment).

(continued...)

III. ADDITIONAL TIME IS NEEDED TO IMPLEMENT THE PROPOSED TECHNOLOGY SOLUTION

In order to achieve the benefits attainable through the development and deployment of commercially viable equipment utilizing its spectrum, PCSP also requests a further extension of its current construction milestones.

Based on its discussions to date with vendors and its engineering consultants, PCSP believes that implementation of its proposal can be achieved within a reasonable timeframe. Subject to timely action on this request,[35] PCSP proposes the following milestones.

(1) *Second Quarter/Third Quarter 2016*: Negotiate agreements with vendors for equipment development.

(2) *Second Half 2016 – First Half 2017*: Incremental design changes to re-band LTE for operation in M-LMS A Block.

(3) *Second Half 2017*: FCC testing and approval for compliance with Part 90 emission limits.

(4) *Second Half 2017*: Design and implement LTE/system architecture core network support, including UE positioning function.

(5) *First Half 2018*: Conduct field trial deployment.

(6) *First Half 2018:* Conduct Part 15 co-existence tests per requirements of Section 90.353(d).

(...continued)

See also Maritel, Inc., Request to Extend Construction Deadline for Certain VHF Public Coast Station Geographic Area Licenses, Memorandum Opinion and Order, 22 FCC Rcd 14074, ¶ 11 (2007) ("*Maritel Waiver MO&O*") (holding that in light of increased availability of alternative technology solutions to meet demand for service, "it would be unduly burdensome" to require licensee to satisfy its construction deadline by investing in technology "for which the record indicated there was little demand.").

[35] PCSP requests that this petition for waiver and request for extension of time be afforded expedited treatment. PCSP's current deadline to satisfy its first construction milestone is September 4, 2016. PCSP stands ready to proceed with its proposed implementation upon grant hereof. Consequently, the public interest would be served by granting the relief requested herein on an expedited basis.

(7) *Second Half 2018*: Obtain FCC approval to launch service.

(8) *First Half 2019*: Launch services in initial markets.

(9) *First Half 2020*: Satisfaction of first construction milestone.[36]

(10) *Second Half 2022*: Satisfaction of second construction milestone.[37]

Because PCSP cannot be certain of the timing of action on this request, however, PCSP proposes, in the alternative, that the timing of completion of certain of the above milestones be based on the date of grant of the requested waiver and extension.[38] In particular, the deadlines for Milestones 9 and 10 would be four years and six years, respectively, after the date of grant of this request. PCSP also is willing to commit to completion of certain interim milestone events (i.e., prior to Milestones 9 and 10) as a condition of grant of this request.

Section 90.155(g) of the Commission's rules provides that extensions will be granted if the licensee shows that the failure to commence service is due to causes beyond its control, and that no extensions will be granted for delays caused by lack of financing, lack of site availability, assignment or transfer of control of an authorization, or failure to timely order equipment. None of these circumstances apply here. Rather, the cause of delay at all times has been a lack of commercially available equipment. Now, however, a viable technology solution is becoming available, and the requested extension will afford PCSP sufficient time to complete the necessary prerequisites to deploy that solution, including finalizing contractual arrangements with vendors;

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[36] *See* 47 C.F.R. § 90.155(e).

[37] *See id.*

[38] PCSP has a pending request for an extension of time to satisfy its construction obligations for licenses that are the subject of this Petition for Waiver and Request for Extension of Time. *See* PCSP Petition for Partial Reconsideration and Clarification, WT Docket No. 12-202 (filed Sept. 29, 2014) ("2014 Petition"). To the extent the Bureau acts on the instant request prior to addressing the 2014 Petition, the extension period approved in this proceeding would supersede the period requested in the 2014 Petition.

designing and testing hardware and software components; equipment testing; network design and implementation; satisfying the field test condition of Section 90.353(d); and obtaining Commission approval to launch commercial service. An extension thus will spur "deployment, making more efficient use of available spectrum, and encouraging innovation."[39]

Extension also is justified under the Commission's waiver standard. There is good cause for additional time given the circumstances related to PCSP's development of a viable technology in M-LMS A Block spectrum, as set forth in Section II above. Moreover, given the lack of commercially available equipment for the PCSP spectrum, there is no reasonable alternative to its request for relief that would enable it to satisfy the current construction deadlines. Under the circumstances, it would be inequitable and unduly burdensome, and contrary to the public interest, not to grant the requested extension.[40]

IV. CONCLUSION

For the foregoing reasons, PCSP respectfully requests that the Wireless Telecommunications Bureau expeditiously grant the requested flexibility in order to permit PCSP to deploy LTE-based location and other services, and also grant an extension of PCSP's

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[39] *DISH Waiver Order*, ¶ 42.

[40] *Cf. Maritel Waiver MO&O*, ¶ 11 (holding that it would be unduly burdensome to require a licensee to invest in technology for which there is no demand, and that the public interest is served by granting an extension of time to construct a network "that could provide innovative data services that may be highly valued" by the marketplace).

M-LMS buildout deadlines for the authorizations listed on Attachment 1 hereto. A prompt grant of this request will serve the public interest and is consistent with Commission precedent.

Respectfully submitted,

PCS PARTNERS, L.P.

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April 15, 2016

ATTACHMENT 1

CALL SIGN	MARKET NUMBER	MARKET NAME
WPYE267	BEA005	Albany-Schenectady-Troy, NY
WPYE268	BEA006	Syracuse, NY-PA
WPYE269	BEA007	Rochester, NY-PA
WPYE270	BEA020	Norfolk-Va. Beach-Newport News, VA-NC
WPYE271	BEA022	Fayetteville, NC
WPYE272	BEA025	Wilmington, NC-SC
WPYE273	BEA026	Charleston-North Charleston, SC
WPYE274	BEA042	Asheville, NC
WPYE275	BEA046	Hickory-Morganton, NC-TN
WPYE276	BEA049	Cincinnati-Hamilton, OH-KY-IN
WPYE277	BEA050	Dayton-Springfield, OH
WPYE278	BEA051	Columbus, OH
WPYE279	BEA059	Green Bay, WI-MI
WPYE280	BEA060	Appleton-Oshkosh-Neenah, WI
WPYE281	BEA067	Indianapolis, IN-IL
WPYE282	BEA070	Louisville, KY-IN
WPYE283	BEA074	Huntsville, AL-TN
WPYE284	BEA087	Beaumont-Port Arthur, TX
WPYE285	BEA096	St. Louis, MO-IL
WPYE286	BEA097	Springfield, IL-MO
WPYE287	BEA099	Kansas City, MO-KS
WPYE288	BEA104	Madison, WI-IA-IL
WPYE289	BEA105	La Crosse, WI-MN
WPYE290	BEA106	Rochester, MN-IA-WI
WPYE292	BEA108	Wausau, WI
WPYE293	BEA109	Duluth-Superior, MN-WI
WPYE294	BEA125	Oklahoma City, OK
WPYE295	BEA132	Corpus Christi, TX
WPYE296	BEA133	McAllen-Edinburg-Mission, TX
WPYE297	BEA135	Odessa-Midland, TX
WPYE298	BEA157	El Paso, TX-NM