

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

Request by Progeny LMS, LLC for Waiver of)	
Certain Multilateration Location and Monitoring)	WT Docket No. 11-49
Service Rules)	
)	
Progeny LMS, LLC Demonstration of Compliance)	
with Section 90.353(d) of the Commission's Rules)	

PETITION FOR RECONSIDERATION

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EXECUTIVE SUMMARY

Section 90.353(d) of the Commission's Rules and the applicable Commission orders require that M-LMS licensees, before commencing commercial operations in the 902-928 MHz band, "demonstrate through actual field tests" and "in close cooperation" with Part 15 users that their "systems do not cause unacceptable levels of interference" to Part 15 devices. The Commission's June 6, 2013 *Order* in this proceeding erroneously found that Progeny has met its obligation under that rule. The Commission should reconsider the *Order* and either require Progeny to engage in cooperative testing with Plantronics or another manufacturer of similar enterprise-level voice telephony devices, consistent with the requirements of Section 90.353(d), or condition Progeny's authorization to operate as proposed in this Petition to provide Plantronics and its customers with the level of certainty that Section 90.353(d) was intended to provide.

Plantronics is an American telecommunications equipment company that is a leading designer, manufacturer and marketer of lightweight communications headsets, telephone headset systems and accessories for the worldwide business and consumer markets. Despite the fact that the Commission's website lists Plantronics' 902-928 MHz equipment authorizations for sophisticated wireless headsets designed for voice telephone users in high-density, enterprise contact centers (including public safety emergency dispatch/first responder contact centers, trading floors, support desks, etc.), Progeny did not test Plantronics' equipment or any other enterprise-level voice telephony equipment in attempting to demonstrate compliance with Section 90.353(d). Indeed, although over 2200 different devices have been authorized by OET to operate in the 902-928 MHz band over just the past five years, Progeny's testing agent, SMC, chose to test just seventeen devices (twelve consumer and five commercial), and did so unilaterally. Although Progeny subsequently engaged in joint testing of a handful of Part 15 devices with three Part 15 interests, to date the only Part 15 voice devices Progeny has tested were a couple of consumer-grade handsets designed for home use that are materially different from the wireless headsets Plantronics manufactures for use in high-density contact centers. The FCC *Order's* finding that the devices tested by Progeny are representative of the technologies employed under Part 15 is demonstrably incorrect. Indeed, Plantronics' own preliminary tests indicate the potential for interference from Progeny.

Plantronics is not suggesting that the Commission require Progeny to test its network against any and all Part 15 devices. But where Plantronics takes issue with the *Order* is the implication that one or more of the devices tested by Progeny is representative of the potential for interference to enterprise-grade 902-928 MHz wireless headsets. The *Order*, simply put, is incorrect when it explains its rejection of Plantronics' call for additional testing with the assertion that "[w]e believe that such additional testing is unnecessary because the tested devices are representative of the technologies typically employed for operation under Part 15 of the rules." To the contrary, because none of the devices tested were intended to operate in the high-density, enterprise environments for which Plantronics' wireless headsets are targeted, the technologies employed by Plantronics equipment differ materially from the short list of devices tested to date.

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PETITION FOR RECONSIDERATION

Plantronics, Inc. (“Plantronics”), by its attorneys and pursuant to Sections 1.106 and 1.429 of the Commission’s Rules,¹ hereby petitions the Commission to reconsider its June 6, 2013 *Order* that finds that Progeny LMS, LLC (“Progeny”) has complied with the requirements of Section 90.353(d) of the Commission’s Rules and authorizes Progeny to commence commercial operations under its Multilateration Location and Monitoring Service (“M-LMS”) licenses.²

For the reasons set forth below, Plantronics respectfully submits that the *Order* is premised on the flawed presumption that the handful of Part 15 devices used by Progeny in the limited testing it did conduct were “representative” of other Part 15 devices,³ and that the limited testing that was done on Progeny’s behalf satisfies Progeny’s obligation under Section 90.353(d) “to demonstrate through actual field tests that [its] systems do not cause unacceptable levels of interference to 47 CFR part 15 devices.” Plantronics requests that the Commission reconsider the *Order* and either require Progeny to engage in cooperative testing, consistent with the

¹ 47 C.F.R. §§ 1.106, 1.429.

² Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules, *Order*, FCC 13-78 (rel. June 6, 2013) [“*Order*”].

³ *Order* at ¶ 22.

requirements of Section 90.353(d) of the Rules, with Plantronics or another manufacturer of sophisticated voice telephony devices similar to Plantronics' or condition Progeny's authorization to operate as proposed herein to provide Plantronics and its customers with the level of certainty that Section 90.353(d) was intended to provide.

I. STATEMENT OF INTEREST

Plantronics is an American telecommunications equipment company, headquartered in Santa Cruz, California, that is a leading designer, manufacturer and marketer of lightweight communications headsets, telephone headset systems and accessories for the worldwide business and consumer markets under the Plantronics brand. In addition, the company manufactures and markets, under the Clarity brand, specialty products such as telephones for the hearing impaired and other related products for people with special communication needs. Among the millions of products sold by Plantronics are state-of-the art wireless headsets that operate in the 902-928 MHz band under Part 15 of the Commission's Rules that are designed for use in high-density contact centers (call centers, including public safety emergency dispatch/first responder contact centers, trading floors, support desks, etc.) where dozens, if not hundreds, of units are utilized simultaneously and in close proximity.⁴

⁴ See, e.g., Letter from Paul J. Sinderbrand, Counsel to Plantronics, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49, at 1 (dated Apr. 17, 2013) ["Plantronics April 17, 2013 *Ex Parte*"]. As Plantronics had previously noted, those wireless headsets are extremely sophisticated, as they must meet the challenges of providing interference free service to individuals who spend most, if not all, of the workday engaged in telephone conversations using unlicensed spectrum that not only is shared by a myriad of other similar users in close proximity, but also by other Part 15 devices. Among the techniques employed by modern Plantronics products targeting such high-density users are the incorporation of fast diversity antenna selection to maximize the radiofrequency signal-to-noise ratio, adaptive transmit power control to reduce interference, and least-interfered-channel selection techniques. In the presence of interference, audio artifacts are mitigated by error detection-and-mute, and error-driven channel/timeslot handover algorithms. See Letter from Steve Cahill, Principal RF Engineer, Plantronics, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49, at 1-2 (dated Dec. 20, 2012) ["Plantronics December 20,

Plantronics has been an active participant in this proceeding, having submitted several written filings and having discussed its specific concerns with Commissioners and staff. It has done so because Plantronics' preliminary testing has shown that granting Progeny authority to commence commercial operations without imposing adequate conditions on Progeny's operations creates an environment that threatens to cause unacceptable levels of interference in those situations where a Progeny high-powered beacon is located in proximity to a contact center location that utilizes Plantronics' 902-928 MHz wireless headsets. As such, Plantronics clearly has standing to petition for reconsideration of the *Order*.

II. THE *ORDER* INCORRECTLY CONCLUDES THAT PROGENY HAS SATISFIED ITS OBLIGATION UNDER SECTION 90.353(D) OF THE RULES

Although Plantronics does not agree in full with the characterization of the relationship between M-LMS licenses and Part 15 devices advanced in the *Order*, Plantronics certainly agrees that the relationship is far from the typical licensed/unlicensed norm. At the time that M-LMS was created in 1995, the 902-928 MHz band was already home to a wide variety of

2012 *Ex Parte*"]. However, as Plantronics has explained, certain interference-mitigation techniques that might be employed by a data device in the band are unavailable to it given the nature of the voice-telephony application. The Plantronics voice-telephony application employs local sidetone generated in the telephone to which the wireless base station is attached to allow the person wearing the headset to hear his or her own voice through the headset. This necessitates eliminating long delays in the uplink and downlink radio paths for the wireless headset and base, since delayed sidetone disrupts the natural flow of conversation and is not acceptable for an enterprise product. This requirement for minimizing audio delays in turn precludes the use of error-detection and-retransmission protocols to mitigate interference. And, techniques such as listener-talkpath-attenuation to attenuate delayed sidetone are of limited effectiveness due to the fatigue induced by such techniques in an all-day professional telephony user. *See id.* at 2 n.1.

unlicensed Part 15 devices that the Commission had found to be “valuable and in the public interest.”⁵ The Commission recognized that:

consumers are now able to purchase cordless telephones operating in the band offering high quality voice operations, wireless local area networks are being implemented in offices and buildings to enable tetherless voice and data transmission, and utility companies are now able to read residential utility meters from the street or remote locations using Part 15 radio devices. In addition to the enormous benefits to both businesses and consumers that will result from the continued growth in the use of the Part 15 industry, our nation’s economy also benefits due to the continued development of these new, advanced radio technologies by American companies.⁶

Thus, the Commission sought to craft a regulatory environment that, among other things, “continues to permit secondary operations by unlicensed Part 15 and amateurs across the entire band, *but affords users in these services a greater degree of protection to their operations.*”⁷ Specifically, the Commission anticipated that in “close cooperation between multilateration system users and operators of Part 15 [devices],” M-LMS licensees would be required “to demonstrate through actual field tests that their system does not cause unacceptable levels of interference to Part 15 devices.”⁸ The Commission’s goal was to “provide certainty for *all users* of the band so they can invest in the equipment and facilities necessary to bring quality, low cost

⁵ Amendment of Part 90 of the Commission’s Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, *Report and Order*, 10 FCC Rcd 4695, 4696 ¶ 1 (1995) [“1995 LMS Order”].

⁶ *Id.* at 4699-00 ¶ 8 (citations omitted). *See also id.* at 4712 ¶ 30 (recognizing that in 1995 there were already 4 million Part 15 devices in the band); *id.* at 4714 ¶ 34 (citing the “important contribution” of Part 15 devices such as “automated meter reading, inventory control, package tracking and shipping control, alarm services, local area networks, and cordless telephones” that allow businesses “to operate more effectively and efficiently.”).

⁷ *Id.* at 4701 ¶ 11 (emphasis added).

⁸ *Id.* at 4737 ¶ 82.

services to consumers.”⁹ Importantly, the Commission gave no indication that only the most prevalent Part 15 devices would be entitled to the greater protection afforded by Section 90.353(d), as is now suggested by the *Order*. To the contrary, the Commission sought, in its own words, to provide certainty to “all users” – a goal undermined by the *Order*.

When the Office of Engineering and Technology (“OET”) and the Wireless Telecommunications Bureau (“WTB”) granted in 2011 Progeny’s request for waivers of certain rules that effected a fundamental change in the nature of Progeny’s offering over its M-LMS spectrum, they reiterated that all of the other M-LMS rules remain in place:

Included in these rules is the obligation, set forth in Section 90.353(d), that Progeny demonstrate through actual field tests that its M-LMS system will not cause unacceptable levels of interference to Part 15 devices. As the Commission noted, the purpose of the testing condition “is to insure that multilateration LMS licensees, when designing and constructing their systems, take into consideration a goal of minimizing interference to existing deployments or systems of Part 15 devices in their area, and to verify through cooperative testing that this goal has been served.”¹⁰

Again, like the Commission before it, OET and WTB did not suggest the Progeny only had to mitigate interference to a subset of Part 15 devices – Progeny was warned that it must minimize interference to “existing deployments or systems” without any limitation.¹¹

On January 27, 2012, Progeny submitted to the Commission a paper prepared by Spectrum Management Consulting Inc. (“SMC”) reporting on the results of testing that SMC

⁹ *Id.* at 4696 ¶ 2 (emphasis added).

¹⁰ Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules, *Order*, 26 FCC Rcd 16878, 16887 ¶ 25 (2011) (citations omitted) (“2011 Waiver Order”). See also *Order* at ¶ 15.

¹¹ Thus, Plantronics respectfully disagrees with, and urges the Commission to reconsider, the *Order*’s suggestion that Progeny can comply with the requirements of Section 90.353(d) notwithstanding evidence of interference to well-designed Part 15 devices. See *Order* at ¶ 28.

unilaterally conducted “using a number of Part 15 devices and Progeny’s initial M-LMS network deployment in Santa Clara County, California” and purporting to satisfy Progeny’s obligation under Section 90.353(d) of the Rules.¹² Notwithstanding the clear and unambiguous call by the Commission in 1995, reinforced by OET and WTB in 2011, for such testing to be conducted “in close cooperation” with Part 15 interests, Progeny made no apparent effort to permit any Part 15 stakeholder to observe or participate in SMC’s testing.¹³ Although the *Order* acknowledges that the actual field testing was to be conducted cooperatively with Part 15 stakeholders,¹⁴ the *Order* is strangely silent regarding Progeny’s failure to do so in the preparation of the SMC Report.

¹² Letter from Bruce A. Olcott, Counsel to Progeny LMS, LLC, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49, at 1 (dated Jan. 27, 2012), transmitting Steven Stravitz, Spectrum Management Counsultry, Inc., *Coexistence of M-LMS Network and Part 15 Devices* (Jan. 2012) [“SMC Report”].

¹³ Certainly, Plantronics was not invited to observe or participate – although Plantronics has had wireless headset equipment certified for use in the 900 MHz band under Part 15 since 2003 and each of Plantronics’ equipment authorizations is available online in OET’s Equipment Authorization Database, neither Progeny nor SMC contacted Plantronics to engage in the cooperative testing with Plantronics initially required by the Commission in 1995 and reinforced by OET and WTB in 2011 when they granted Progeny various waivers of the M-LMS rules. *See* Plantronics April 17, 2013 *Ex Parte* at 2; Letter from Paul J. Sinderbrand, Counsel to Plantronics, Inc., to The Honorable Mignon L. Clyburn, Commissioner, Federal Communications Commission, WT Docket No. 11-49, at 2 (dated May 9, 2013) [“Plantronics May 9, 2013 *Ex Parte*”]. Plantronics subsequently wrote to Progeny, proposing that the two companies engage in the very sort of cooperating testing that the Commission and the Bureaus had sought, but Progeny never responded. Although this effort on Plantronics’ part to engage in cooperative testing was known to the Commission, Progeny’s failure to respond was not acknowledged, much less addressed, in the *Order*. *See* Letter from Paul J. Sinderbrand, Counsel to Plantronics, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49, at 1 (dated May 6, 2013) [“Plantronics May 6, 2013 *Ex Parte*”] (transmitting copy of April 24, 2013 letter from Joe Burton, Plantronics’ Senior Vice President Technology, Development & Strategy and Chief Technology Officer, to Gary Parsons, Chief Executive Officer of NextNav, LLC). *See also* Letter from Paul J. Sinderbrand, Counsel to Plantronics, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49, at 1 (dated May 16, 2013) [“Plantronics May 16, 2013 *Ex Parte*”].

¹⁴ *See Order* at ¶ 10.

Although over 2200 different devices have been authorized by OET to operate in the 902-928 MHz band over just the past five years,¹⁵ SMC chose to test just seventeen devices (twelve consumer and five commercial).¹⁶ While SMC claimed that this was “an adequate and representative sample of Part 15 devices,” Plantronics has been cautioning the Commission for more than six months that none of those seventeen devices, or any of the few additional devices employed in the testing submitted in October 2012,¹⁷ is representative of Plantronics’ sophisticated 902-928 MHz headsets designed for use in high-capacity contact center settings, equipment in which Plantronics has invested significant money, time and resources under the expectation of protection under the FCC’s rules.¹⁸

¹⁵ See *id.* at ¶ 22 n.66.

¹⁶ See SMC Report at 8.

¹⁷ See *Order* at ¶ 17 n.48. Plantronics notes that it was unaware of the 2011 *Waiver Order*, the unilateral SMC testing, or the limited joint testing Progeny conducted until well after those developments occurred. This is because neither Progeny nor the FCC conducted any general outreach to Part 15 manufacturers or users; and neither the 2011 *Waiver Order* nor any subsequent FCC requests for comment were published in the Federal Register to provide meaningful notice to parties that potentially would be affected.

¹⁸ See, e.g., Plantronics December 20, 2012 *Ex Parte* at 1; Letter from Steve Cahill, Principal RF Engineer, Plantronics, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49, at 1 (dated Jan. 28, 2013) [“Plantronics January 28, 2013 *Ex Parte*”]; Letter from Steve Cahill, Principal RF Engineer, Plantronics, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49 (dated Feb. 26, 2013) [“Plantronics February 26, 2013 *Ex Parte*”]; Letter from Steve Cahill, Principal RF Engineer, Plantronics, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49 (dated Mar. 11, 2013); Plantronics April 17, 2013 *Ex Parte* at 2; Plantronics May 9, 2013 *Ex Parte* at 1 (Plantronics’ own preliminary testing demonstrates potentially unacceptable interference.); Plantronics May 16, 2013 *Ex Parte* at 1 (giving notice pursuant to Section 1.1206(b)(1) of the Rules that voice messages had been left for Commissioners’ legal advisors noting “that neither Progeny’s unilateral testing nor any subsequent testing conducted by Progeny with other Part 15 interests, examined potential interference to sophisticated voice devices of the sort Plantronics manufactures for high-density commercial contact centers” and that “pointed out that Plantronics’ own preliminary testing has indicated that interference will occur.”). See also Plantronics May 6, 2013 *Ex Parte* at 1. Given these filings, Plantronics cannot agree with the *Order*’s assertion that no one did show that their

To be clear, Plantronics is not suggesting that the Commission require Progeny to test its network against any and all Part 15 devices. Plantronics recognizes, for example, that while there are many baby monitors operating in the 902-928 MHz band, there are relatively few fundamental designs and thus protection of baby monitors can be established by the testing of representative samples of each design. Thus, Plantronics has no quarrel with the *Order*'s conclusion that "not every [] device operating in the 902-928 MHz band needs to be evaluated."¹⁹ But where Plantronics takes issue with the *Order* is the implication that one or more of the devices tested by Progeny is representative of the potential for interference to enterprise-grade 902-928 MHz wireless headsets. The *Order*, simply put, is incorrect when it explains its rejection of Plantronics' call for additional testing with the assertion that "[w]e believe that such additional testing is unnecessary because the tested devices are representative of the technologies typically employed for operation under Part 15 of the rules."²⁰

To the contrary, because none of the devices tested were intended to operate in the high-density, enterprise environments for which Plantronics' wireless headsets are targeted, the

devices are sufficiently dissimilar to those tested as to warrant additional testing. *See Order* at ¶ 22.

¹⁹ *Order* at ¶ 20.

²⁰ *Id.* at ¶ 22. Plantronics also takes issue with the *Order*'s implication that because Part 15 devices must be designed to operate in a crowded environment, the addition of the Progeny beacons should not be particularly problematic. *See id.* at ¶ 20. As noted *supra* note 4, Plantronics' wireless headsets have been operating in the 902-928 MHz band for a decade with minimal interference issues. However, introducing Progeny, which can operate at much higher power levels than a Part 15 user, presents unique challenges. For example, as discussed below, Plantronics' system uses transmit power control to reduce power to the minimum necessary to facilitate the ability of numerous headsets and other Part 15 devices to operate in close proximity. Were Plantronics to disable the transmit power control function to overpower the Progeny signal, Plantronics own system would suffer self-interference that would reduce range available for users in an adaptive-power-control-enabled density deployment, as well as reducing battery life.

technologies employed by Plantronics equipment differ materially from the short list of devices identified in Table 1 of the SMC Report or those that were subsequently tested. These differences can be summarized as follows:

1. Unlike the other voice systems tested by Progeny, Plantronics system uses real-time duplex TDMA digital voice data transmissions. This modulation scheme allows much more efficient use of the spectrum than available alternatives (including those tested), avoids the delays associated other approaches, and is necessary to support the high density of wireless headset users in the contact centers served by Plantronics. Because the systems tested utilize types of modulation that may be more tolerant of Progeny, but are not appropriate for wireless headsets intended for high-density deployment, they are not representative of Plantronics' wireless headsets..
2. Unlike any of the other voice devices tested, Plantronics' equipment incorporates a "least interfered channel selection algorithm" which, when interference occurs (usually presented to the headset wearer as an audio click, pop or mute), causes the individual unit to scan for unused frequencies. The unit then moves transmissions to an unused frequency. These interference-avoidance operations are performed at a rapid rate, optimized for minimizing audio disturbances occurring on a channel as it is transiently corrupted by interference. The use of this technology is essential to achieving Plantronics' high-spectral-efficiency/high-density design objective. The Progeny system, in which transmissions from each beacon are present for as little as 0.1 seconds and not present for as much as 0.8 seconds in each second, creates "attractive nuisance" unused spectrum during the portion of each second that the beacon is not present, resulting in Plantronics units selecting spectrum that is vacant for the moment, but on which Progeny beacon transmissions will appear in a split-second. This results in continuing interference – an unending series of audio clicks, pops and mutes that are unacceptable to those using the Plantronics headsets on a continual basis – persistent interference that Plantronics has not suffered from other Part 15 sources.
3. Unlike any of the other devices tested, Plantronics equipment incorporates adaptive transmit power control – a feature whereby transmit power is reduced when a user's headset is in proximity to the corresponding base. This technology, which the Commission has often mandated as a mechanism for avoiding interference,²¹ both minimizes self-interference in high-density settings and allows Plantronics equipment to be a good neighbor to other 902-928 MHz devices. However, use of this technology makes Plantronics equipment more vulnerable to interference from Progeny, as it reduces the received desired signal level and thus increases the

²¹ See, e.g., 47 C.F.R. §15.407(h)(1) (requiring certain Unlicensed National Information Infrastructure devices to employ transmit power control); §§27.50(a)(2) and (3)(iii) (requiring Wireless Communications Service fixed and mobile devices to employ transmit power control); §15.709(a)(3) (requiring unlicensed Television Band Devices to utilize transmit power control).

disparity between the received level of the undesired Progeny signal and the desired Plantronics signal.

4. Unlike any of the other devices tested, Plantronics base equipment incorporates fast adaptive diversity antenna selection. With this technology, the base selects the antenna with the strongest signal level at the start of each TDMA burst reception. This generally results in improved performance and allows transmit power to be reduced. However, because the technology cannot differentiate between a desired signal and an undesired signal, where strong interference is present, the technology will select the antenna with the strong undesired signal, rather than the desired signal.
5. What constitutes “unacceptable interference” in the context of, say, a Part 15 wireless baby monitor is fundamentally different from what constitutes “unacceptable interference” to an enterprise-grade product such as the Plantronics system. None of the equipment tested by Progeny is a professional-audio device, and none of the results were measured against a benchmark appropriate for professional audio service. Plantronics devices are intended for all-day, every-day usage by professional telephone users that require highly-reliable voice service undisturbed by substantial clicks, pops or muting. The testing by SMC used as its benchmark a standard that may be appropriate for the consumer audio devices, deeming it acceptable that:

[i]n certain instances when the beacons were operational, an audible “shhh” or “beep” pulse was detected. Although the pulse could vary in sound and intensity, it had a regular period of one second. This audible pulse was not a normal part of the Part 15 device operation and attributed to beacon operation.²²

While this may be acceptable for the consumer devices tested by Progeny, it is not acceptable for the market Plantronics services, which requires that a high-density of wireless headsets operate reliably, without interference. Thus it cannot be fairly stated that those consumer devices are “representative” of Plantronics’ equipment. For products such as Plantronics’, designed to be used on a constant basis, persistent interference, whether in the form of clicks, beeps, mutes, or “shhh”, or a reduction in the number of units that can operate simultaneously, is unacceptable.

Plantronics’ concern regarding the non-representative nature of the handful of devices Progeny and SMC chose to test was reinforced by preliminary testing Plantronics conducted – testing that suggests, contrary to the conclusions reached by SMC with regard to the devices SMC chose to test, that Plantronics wireless headsets would suffer unacceptable interference

²² SMC Report at 36.

from Progeny beacons under some circumstances.²³ Although not as comprehensive a test as Plantronics would have conducted had Progeny accepted Plantronics' invitation to engage in the cooperative testing contemplated by the Commission, OET and WTB, Plantronics' preliminary testing certainly establishes that, contrary to the implication of the *Order*, Plantronics' wireless headsets are not well-represented by the handful of Part 15 devices that Progeny unilaterally tested and unilaterally concluded did not experience unacceptable interference.²⁴ While Progeny subsequently attempted to blame the interference Plantronics identified on the design of the wireless headsets,²⁵ as Plantronics has previously advised the Commission, those headsets have proven to be well-designed for the intended use, and highly invulnerable to interference from other sources over more than a decade of use.²⁶

In light of these concerns, Plantronics respectfully submits that the Commission has erred in concluding that Progeny has met its obligation under Section 90.353(d) "to demonstrate through actual field tests that [its] systems do not cause unacceptable levels of interference to 47 CFR part 15 devices." Thus, Plantronics requests that the Commission reconsider the *Order* and either require Progeny to engage in cooperative testing with Plantronics or another manufacturer

²³ See Plantronics December 20, 2012 *Ex Parte*.

²⁴ See *id.* (presenting Plantronics' test results indicating risk of interference); Plantronics January 28, 2012 *Ex Parte* (responding to Progeny attempt to diminish the implications of those test results).

²⁵ Letter from Bruce A. Olcott, Counsel to Progeny LMS, LLC, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49, at 1-2 (dated Feb. 6, 2013); Letter from Bruce A. Olcott, Counsel to Progeny LMS, LLC, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49, at 4 (dated Mar. 21, 2013).

²⁶ See Plantronics February 26, 2013 *Ex Parte* at 2 ("Beyond an incident ten years ago where it was necessary to boost the transmit power during the prototype phase of a particular system from approximately 5mW to approximately 50mW to cope with proximate Ricochet wireless RF modem units, Plantronics deployments of the various 900MHz ISM-band systems have had no significant problems functioning with other Part 15 users in the band.").

of sophisticated voice-telephony devices similar to Plantronics', consistent with the requirements of Section 90.353(d) of the Rules. In the alternative, Plantronics suggests that the Commission condition Progeny's M-LMS authorization to provide Plantronics and its customers with the level of certainty that Section 90.353(d) was intended to provide by adding the following condition:

In the event of unacceptable interference to any Part 15 device, Progeny will work cooperatively with the affected parties on a timely basis to mitigate the interference including potentially suspending transmissions, relocating M-LMS beacons (either horizontally, vertically, or to an entirely different location), substituting or modifying beacon antennas, or modifying antenna patterns, antenna heights, transmitter slot assignments, duty cycles, or a combination of the above.

Such a condition would be sub-optimal, as it would force Part 15 users to suffer the very sort of interference that that Section 90.353(d) was intended by the Commission to avoid. But at least it will assure users of Plantronics devices (and other Part 15 devices that were not represented by the devices Progeny has tested) that they have an avenue for relief should unacceptable interference occur.

III. CONCLUSION

For the reasons set forth above, Plantronics respectfully requests that the Commission reconsider the *Order* and either require Progeny to engage in cooperative testing with Plantronics or any manufacturer of similar devices consistent with the requirements of Section 90.353(d) of the Rules or condition Progeny's authorization to operate as proposed above to provide Plantronics and its customers with the level of certainty that Section 90.353(d) was intended to provide.

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CERTIFICATE OF SERVICE

I, Karla E. Huffstickler, with the law firm of Wilkinson Barker Knauer, LLP, hereby certify that on this 8th day of July, 2013, I served a true copy of the foregoing Petition For Reconsideration by depositing a copy thereof with the United States Postal Service, first class postage prepaid, addressed to the following:

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