

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
Amendment of the Commission’s Rules to Provide) ET Docket No. 08-59
Spectrum for the Operation of Medical Body Area)
Networks)

ORDER

Adopted: February 10, 2015

Released: February 11, 2015

By the Chief, Mobility Division, Wireless Telecommunications Bureau:

1. *Introduction.* In this *Order*, the Wireless Telecommunications Bureau (Bureau) designates the American Society for Health Care Engineering of the American Hospital Association (ASHE/AHA) to serve as frequency coordinator for Medical Body Area Network (MBAN) operations in the 2360-2390 MHz frequency band. As a condition of this designation, ASHE/AHA will be required to sign a Memorandum of Understanding setting forth its duties and the limits on its authority.

2. *Background.* On May 24, 2012, the Commission adopted a *First Report and Order and Further Notice of Proposed Rulemaking* amending its Part 95 Rules to authorize the operation of MBAN devices in the 2360-2400 MHz band.¹ MBAN technology will provide a flexible platform for the wireless networking of multiple body transmitters used for measuring and recording physiological parameters and other patient information or for performing diagnostic or therapeutic functions, primarily in health care facilities.² MBAN devices will be licensed by rule on a secondary basis, and may not cause interference to (and must accept interference from) the primary users of the band, including aeronautical mobile telemetry (AMT) operations.³ The Commission determined that it should designate an MBAN frequency coordinator to ensure interference-free sharing of the band.⁴ On August 20, 2014, it adopted an *Order on Reconsideration and Second Report and Order* addressing, *inter alia*, issues related to MBAN coordination.⁵ Among other things, the Commission in the *Second Report and Order* set forth minimum qualifying criteria for an MBAN frequency coordinator, mandated that initially only a single such coordinator be selected, and delegated authority to the Bureau to select the MBAN frequency

¹ See Amendment of the Commission’s Rules to Provide Spectrum for the Operation of Medical Body Area Networks, *First Report and Order and Further Notice of Proposed Rulemaking*, ET Docket No. 08-59, 27 FCC Rcd 6422 (2012) (*First R&O*).

² *Id.* at 6423 ¶ 1.

³ *Id.* at 6434-35 ¶ 23.

⁴ *Id.* at 6450-57 ¶¶ 62-74.

⁵ See Amendment of the Commission’s Rules to Provide Spectrum for the Operation of Medical Body Area Networks, *Order on Reconsideration and Second Report and Order*, ET Docket No. 08-59, 29 FCC Rcd 10662 (2014) (*Second R&O*).

coordinator.⁶

3. Under the Commission's Rules, a health care facility, as defined in Section 95.1203 of the Commission's Rules,⁷ is required to register an MBAN device capable of operating in the 2360-2390 MHz band with the MBAN coordinator.⁸ If the health care facility intends to operate MBAN devices only in the 2390-2400 MHz band, then the MBAN coordinator will simply include the pertinent registration data in the MBAN database. If operation in the 2360-2390 MHz band is proposed, the MBAN coordinator must determine whether the proposed MBAN location will be within line-of-site of an AMT receiver, and, if so, work in cooperation with the AMT frequency coordinator – the Aerospace and Flight Test Radio Coordinating Council (AFTRCC) – and the affected health care facility to mitigate the interference risk.⁹ The MBAN frequency coordinator must provide service to all eligible parties nationwide on a non-discriminatory basis.¹⁰ It must agree to serve a ten-year term, after which the coordinator will serve until it either elects not to continue as coordinator or is removed by the Commission.¹¹ In addition, the MBAN coordinator's fee structure must be reasonable and reflect only the actual costs of providing the coordination and registration functions on a not-for-profit basis.¹²

4. On November 10, 2014, we released a *Public Notice* establishing a filing window for requests to be designated as the MBAN frequency coordinator.¹³ The *Public Notice* reiterated the minimum qualifying criteria that had been established by the Commission, noting that coordinator applicants are required to have (1) the ability to register and maintain a database of MBAN transmitter locations and operational parameters; (2) knowledge of or experience with medical wireless systems in health care facilities (*e.g.*, Wireless Medical Telemetry Service (WMTS)); (3) knowledge of or experience with AMT operations; (4) the ability to calculate and measure interference potential between MBAN and AMT operations, and to enter into mutually satisfactory coordination agreements with the AMT coordinator based on the requirements in Section 95.1223(c) of the Commission's Rules; and (5) the ability to develop procedures to ensure that registered health care facilities operate an MBAN consistent with the requirements in Section 95.1223.¹⁴ Two entities filed requests to be the MBAN frequency coordinator: ASHE/AHA¹⁵ and the Enterprise Wireless Alliance (EWA).¹⁶

⁶ *Id.* at 10681-83 ¶¶ 58-66. The Commission also directed the Bureau to consider certifying one or more additional coordinators in the future if it determines that such an action would serve the public interest. *See id.* at 10681-82 ¶ 60.

⁷ 47 C.F.R. § 95.1203.

⁸ *See* 47 C.F.R. § 95.1223(a).

⁹ *See* 47 C.F.R. § 95.1225(b)(2).

¹⁰ *See* 47 C.F.R. § 95.1225(c)(1).

¹¹ *See Second R&O*, 29 FCC Rcd at 10681 ¶ 58.

¹² *See* 47 C.F.R. § 95.1225(c)(2).

¹³ *See* Wireless Telecommunications Bureau Opens Filing Window for Requests to be the Frequency Coordinator for Medical Body Area Networks, *Public Notice*, ET Docket No. 08-59, 29 FCC Rcd 13750 (WTB MD 2014). The filing window opened on November 17, 2014, and closed on January 2, 2015.

¹⁴ *Id.* at 13751. The Bureau also noted that applicants intending to rely on a third-party consultant's technical expertise to demonstrate compliance with these criteria must provide the identity and qualifications of the third-party consultant, the length of time that the contract between the MBAN coordinator and the third-party consultant would be in effect, and under what circumstances that contract could terminate. *Id.*

¹⁵ *See* Request of the American Society for Health Care Engineering of the American Hospital Association to be Designated Medical Body Area Networks Frequency Coordinator, filed Jan. 2, 2015 (ASHE/AHA Request).

¹⁶ *See* Letter, dated Dec. 31, 2014, from Mark E. Crosby, President/CEO, Enterprise Wireless Alliance, to Marlene H. Dortch, Secretary, FCC, filed Dec. 31, 2014 (EWA Request).

5. *Discussion.* We find that ASHE/AHA and EWA are both basically qualified to be designated as an MBAN frequency coordinator. As noted above, however, the Bureau has been delegated authority to select only a single MBAN frequency coordinator at this time. For the reasons set forth below, we select ASHE/AHA as the MBAN frequency coordinator.

6. ASHE/AHA. ASHE/AHA notes that it was designated as the WMTS coordinator in 2001.¹⁷ It created, and still maintains and operates, a WMTS database that now includes registration data for more than 9,000 WMTS systems located in more than 3,400 hospitals, covering more than 360,000 transmitters.¹⁸ In its stewardship of the WMTS database, ASHE/AHA has worked with a third-party consultant, Comsearch, and it intends to contract with Comsearch to provide third-party consulting and operating services for MBAN frequency coordination.¹⁹

7. ASHE/AHA says its “knowledge of, and experience with medical wireless systems in health care facilities is unequalled within the health care field.”²⁰ It is “one of the largest associations devoted to optimizing the health care built environment”²¹ and its membership includes health care facility managers/engineers, health care construction managers, safety and security professionals, plant management services personnel, clinical and biomedical engineers, maintenance engineers, and health care facility service professionals.²² ASHE/AHA adds that its proposed consulting partner, Comsearch, is very familiar with AMT operations and has worked with AFTRCC on numerous occasions.²³ It says that Comsearch’s strong working relationship with AFTRCC would provide significant benefits in negotiating and implementing coordination agreements.²⁴ ASHE/AHA also says that Comsearch’s experience in calculating potential interference to and from WMTS installations, in particular, demonstrates its ability to calculate and measure potential interference between MBAN and AMT operations.²⁵

8. ASHE/AHA pledges to make its services available to all eligible parties nationwide on a non-discriminatory basis, as it has done as the WMTS frequency coordinator.²⁶ It says that it has no

¹⁷ ASHE/AHA Request at 2. *See* Amendment of Parts 2 and 95 of the Commission’s Rules to Create a Wireless Medical Telemetry Service, *Order*, ET Docket No. 99-255, 16 FCC Rcd 4543 (WTB PSPWD 2001) (*WMTS Coordinator Selection Order*). WMTS equipment is used in health care facilities to transmit patient measurement data, such as pulse and respiration rates, to a nearby receiver. *Id.* at 4543 ¶ 2.

¹⁸ ASHE/AHA Request at 2.

¹⁹ *Id.* at 2. In describing Comsearch’s credentials, ASHE/AHA notes, *inter alia*, that, in addition to maintaining comprehensive databases used in the coordination and design of complex wireless systems, Comsearch is an FCC-authorized TV White Space Database Administrator, an FCC-certified 70-80-90 GHz Link Registration Database Administrator, and supports CTIA—The Wireless Association in its management of the CTIA Advanced Wireless Services Cost-sharing Clearinghouse. *Id.* at 2-3. Comsearch also provides ASHE third-party consulting and operating services for WMTS frequency coordination. *Id.* at 2.

²⁰ *Id.* at 3.

²¹ *Id.*

²² *Id.* at 4.

²³ *Id.* ASHE/AHA specifically notes that Comsearch worked with AFTRCC in the early stages of this proceeding in connection with the initial development of a draft framework for the MBAN-AMT coordination procedures. *Id.* at 5.

²⁴ *Id.* at 5.

²⁵ *Id.* at 5-6; *see also id.* at 6-7 (explaining how ASHE/AHA’s and Comsearch’s WMTS frequency coordination efforts demonstrate their ability to ensure that registered health care facilities operate MBANs consistent with the Commission’s rules).

²⁶ *Id.* at 8-9.

conflict of interest with potential manufacturers of MBAN equipment because it neither produces nor is in any way involved with the sale, distribution, or installation of medical telemetry equipment.²⁷

9. EWA. EWA states that its ability to register and maintain a database of MBAN transmitter locations and operational parameters is demonstrated by its history as an FCC-certified Part 90 private land mobile radio (PLMR) frequency advisory committee.²⁸ EWA “currently maintains a state-of-the-art hardware network, extensive proprietary software capabilities, and a database that mirrors the Part 90 Universal Licensing S[ystem] records, that enable it to assist applicants and licensees to secure spectrum solutions to accommodate wireless system operational expectations, and to secure licenses in compliance with FCC operational and technical requirements.”²⁹ It notes that it performs system propagation and contour analyses for a wide variety of wireless systems, processing approximately 10,000 spectrum transactions annually on behalf of PLMR applicants.³⁰ “EWA’s current capabilities to receive and process requests for spectrum solution services expeditiously will be expanded to accommodate requests to register MBAN networks.”³¹

10. EWA states that while it is not currently directly involved in assisting medical institutions in the acquisition of spectrum allocated for wireless medical telemetry operations, it understands the technical requirements and interference risks of MBAN operations.³² It notes, moreover, that it already routinely provides frequency coordination and associated services to medical institutions.³³ It says that it is confident of its ability to work successfully with AFTRCC to ensure that AMT operations are protected from interference from MBANs.³⁴ It adds that, just as it does now, it will provide communications and reminders to applicants and licensees regarding the requirements in the Commission’s Rules.³⁵

11. EWA says that it does not intend to rely on any third parties in acting as the MBAN frequency coordinator.³⁶ It pledges to provide its service on a first-come, first-served and non-discriminatory basis, with uniform fees.³⁷ Finally, EWA pledges to develop a fee structure that “will reflect only the actual costs of providing the coordination, interference analyses, and registration functions on a not-for-profit basis.”³⁸

12. Decision. Based on our review of the requests, we conclude that the public interest would best be served by designating ASHE/AHA as the MBAN frequency coordinator. When the Bureau selected ASHE/AHA to be the frequency coordinator for WMTS in 2001, it said that “ASHE/AHA is uniquely qualified to act as the WMTS frequency coordinator by virtue of its institutional knowledge of the health care industry in general, and its familiarity with the medical telemetry user community in particular.”³⁹ We believe the same applies here. It is as true now as it was in 2001 that ASHE/AHA

²⁷ *Id.* at 8.

²⁸ EWA Request at 2.

²⁹ *Id.*

³⁰ *Id.* at 2-3.

³¹ *Id.* at 3.

³² *Id.*

³³ *Id.*

³⁴ *Id.* at 4.

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.* at 5.

³⁸ *Id.*

³⁹ See *WMTS Coordinator Selection Order*, 16 FCC Rcd at 4550 ¶ 24.

possesses not only a demonstrated familiarity with the health care user community but also “a special motivation to ensure that it serves the needs of that community to the best of its ability” because that community is part of its core constituency.⁴⁰

13. Also favoring designation of ASHE/AHA is its experience in WMTS coordination. It has maintained the WMTS database and performed the associated tasks for approximately fourteen years now. Although we also credit EWA for its track record as a Part 90 frequency coordinator and in other database administration roles, ASHE/AHA’s experience as WMTS coordinator should be of greater benefit for purposes of MBAN frequency coordination because, as is the case with respect to WMTS, the MBAN coordination requirement stems from the need to avoid harmful interference from or among licensed-by-rule operations in medical environments. In addition, we believe that health care facilities will be better served by having a single point of contact for WMTS and MBAN coordination, given the similar purposes of the two services.⁴¹ Similarly, ASHE/AHA’s experience in WMTS coordination with the participation of Comsearch as a consultant indicates that ASHE/AHA’s intended reliance on Comsearch once again for MBAN coordination is well-placed.

14. We recognize that there are some distinct considerations in choosing the MBAN frequency coordinator. The MBAN coordinator will have a more expansive role to play than the WMTS frequency coordinator, and, unlike the WMTS coordinator, the MBAN coordinator is responsible for serving the interests not only of health care providers and their patients but must also work cooperatively with AFTRCC to protect primary AMT operations.⁴² Nonetheless, we conclude that ASHE/AHA has demonstrated that it will be able and willing to discharge these additional responsibilities with the participation of Comsearch as a consultant.

15. *Conclusion and Ordering Clauses.* While both ASHE/AHA and EWA satisfy the basic criteria, the Commission has delegated authority to the Bureau to designate only one MBAN coordinator at this time. Based on the factors discussed above, we designate ASHE/AHA as the MBAN coordinator.

16. ASHE/AHA is accordingly DESIGNATED to serve as the frequency coordinator for Medical Body Area Networks. This designation will take effect upon the execution by ASHE/AHA and the Wireless Telecommunications Bureau of a Memorandum of Understanding regarding ASHE/AHA’s responsibilities as MBAN frequency coordinator. After this takes place, the Bureau will announce by Public Notice how interested parties may contact ASHE/AHA for the purpose of registering and coordinating MBAN operations.

17. This action is taken under the delegated authority contained in Sections 0.131 and 0.331 of the Commission’s Rules, 47 C.F.R. §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

Roger S. Noel, Chief
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⁴⁰ *Id.*

⁴¹ See *Second R&O*, 29 FCC Rcd at 10665 ¶ 9, 10681 ¶ 59; *First R&O*, 27 FCC Rcd at 6427 ¶ 9, 6437 ¶ 30. Indeed, the Commission contemplates that the two services will sometimes be used to complement each other. See *First R&O*, 27 FCC Rcd at 6427 ¶ 8, 6451 ¶ 64; Amendment of the Commission’s Rules to Provide Spectrum for the Operation of Medical Body Area Networks, *Notice of Proposed Rulemaking*, ET Docket No. 08-59, 24 FCC Rcd 9589, 9595 ¶ 18 (2009).

⁴² See *Second R&O*, 29 FCC Rcd at 10685 ¶ 71 (“Unlike the WMTS coordinator, who registers WMTS users and notifies other WMTS users of potential frequency conflicts, the MBAN coordinator will have to perform technical calculations, make measurements in certain cases, and coordinate MBAN operations with the AMT coordinator”).