

prescribe a specific format or protocol for the control message. We will require applicants for equipment certification to attest that they comply with the requirement that MBAN equipment receive the control message by describing the protocols that the devices employ including the expected periodicity for reception of control messages that will allow the MBAN transmitter to begin or continue operating in the band.¹⁵¹ Additionally, we expect that the control message will be an electronic message since it is expected to be sent using the health care facility's LAN. This helps to ensure that the MBAN meets the requirement for operating indoors on the 2360-2390 MHz band as discussed above, since it will have to be tethered to a wireline network or within signal range of a wireless network within the facility. Accordingly, our control message requirement offers a means by which an MBAN user can comply with our separate requirement that an MBAN that is moved outdoors (either intentionally or unintentionally) must stop operating in the 2360-2390 MHz band. Because each health care facility's communications infrastructure and physical layout will present unique capabilities and challenges, we do not establish any requirements for how control messages are distributed within a health care facility.

50. *Unwanted Emissions.* In the *NPRM*, we noted that the Part 95 MedRadio rules set forth limits on unwanted emissions from medical transmitting devices operating in the 401-406 MHz band and sought comment on the appropriateness of applying the same general limits to MBAN operations in the 2360-2400 MHz bands.¹⁵² We find that the provisions in Section 95.635(d) of our Rules, which specify limits on unwanted emissions, are appropriate. Accordingly, we modify this rule to reflect the use of the 2360-2400 MHz band by MBAN devices.¹⁵³ We note that the Joint Parties' proposal supports using the proposed limits on unwanted radiation and no party objected to the use of these figures.¹⁵⁴ In addition, use of the MedRadio limits is consistent with our approach of accommodating MBAN operations under the existing MedRadio rules where practical.

51. *Frequency Stability.* In the *NPRM*, we proposed to require that MBAN transmitters comply with the MedRadio rules and maintain a frequency stability¹⁵⁵ of +/- 100 ppm of the operating frequency over the ambient environmental temperature range: 1) 25°C to 45°C in the case of MBAN transmitters; and 2) 0°C to 55°C in the case of MBAN control transmitters.¹⁵⁶ GEHC states that +/- 100 ppm is an acceptable limit for MBAN devices, but does not discuss the temperature range over which that stability should be required.¹⁵⁷ As described above, we are using the existing MedRadio definitions to regulate the MBAN sensor and hub devices. Under this construction, the existing temperature range for MedRadio programmer/control transmitters set forth in 95.628(d)(2) of our Rules will apply to MBAN

¹⁵¹ Existing Section 95.603(f) requires certification for MedRadio Transmitters. 47 C.F.R. § 95.603(f).

¹⁵² *NPRM* at 9609 para. 68.

¹⁵³ Under Section 95.635(d), emissions on frequencies 500 kHz or less above or below any particular authorized bandwidth are required to be attenuated by at least 20 dB below the transmitter output power. In addition, emissions more than 500 kHz above or below any particular authorized bandwidth are required to be attenuated to a level no greater than the following signal strengths at 3 m: a) between 30-88 MHz, 100 µV/m, b) between 88-216 MHz, 150 µV/m, c) between 216-960 MHz, 200 µV/m, and d) 960 MHz and above, 500 µV/m. See 47 C.F.R. § 95.635(d)(1).

¹⁵⁴ Joint Parties *ex parte*, filed January 30, 2012, Attachment § 95.635.

¹⁵⁵ Frequency stability is the maximum permissible departure by the characteristic frequency of an emission from the reference frequency. The frequency stability is typically expressed in parts per million.

¹⁵⁶ *NPRM* at 9609 para. 69.

¹⁵⁷ *GEHC Comments* at 29. Revised 47 C.F.R. § 95.628(d)(1) specifies a temperature range of 25 °C to 45 °C in the case of medical implant transmitters and revised 47 C.F.R. § 95.628(d)(2) specifies a temperature range of 0 °C to 55 °C in the case of MedRadio programmer/control transmitters.

hub devices without modification. Because no MBAN sensor will be implanted, we further conclude that the 25°C to 45°C range we have used for implanted devices should not apply to sensors. Instead we will use the broader 0°C to 55°C specification.¹⁵⁸

52. *RF Safety.* In the *NPRM*, we noted that portable radiofrequency (RF) transmitting devices are subject to Section 2.1093 of the Rules, pursuant to which an environmental assessment concerning human exposure to RF electromagnetic fields must be prepared under Section 1.1307, and that these rule sections also govern existing MedRadio devices.¹⁵⁹ We also noted that the Commission has an open RF safety proceeding (ET Docket No. 03-137) in which it proposed to conduct a comprehensive review of its rules regarding human exposure to RF electromagnetic fields. Thus, the *NPRM* only sought comment on whether MBAN transmitters should be deemed portable devices. We will apply existing Section 95.1221 of our rules to MBAN devices, which will classify them as portable devices that are subject to Sections 2.1093 and 1.1307 of our rules. The record reflects support for treating MBAN devices in this manner.¹⁶⁰ We see no reason to treat MBAN devices differently than existing MedRadio devices with respect to RF safety matters.

53. *Frequency Monitoring.* In the *NPRM*, we sought comment on whether a frequency monitoring requirement should be required for MBAN devices to promote inter- and intra-service sharing and, if so, how we should develop such a protocol.¹⁶¹ We noted that contention-based protocols could take a variety of forms, including listen-before-talk (LBT) frequency monitoring, time slot synchronization, and frequency hopping.¹⁶² We encouraged commenters supporting implementation of a contention based protocol to discuss what kinds of contention protocols should or should not be utilized, and to explain in detail why or why not.¹⁶³

54. We find that it is not necessary to specify protocols to ensure spectrum sharing among MBAN systems. We recognize that the record on this issue has evolved. Initial filings by GEHC as well as the Joint Parties indicated a desire to codify a sharing protocol requirement.¹⁶⁴ Several parties that support contention protocols nevertheless have urged us to avoid adopting specific rules.¹⁶⁵ In more recent pleadings, the Joint Parties state that while manufacturers believe that MBAN devices are likely to incorporate a mechanism to avoid interference in close proximity (such as within medical facilities), they do not wish for us to adopt detailed procedures that might inadvertently inhibit the development of innovative methods that would allow them to make more intensive use of the spectrum.¹⁶⁶ We believe

¹⁵⁸ We are modifying Section 95.628(d)(2) to specify that the 0°C to 55°C temperature range applies to Medical body-worn transmitters. This provision was omitted in our recent decision to authorize Medical Micro-power Networks because Medical Micro-power Networks cannot contain body-worn transmitters other than a programmer/control transmitter. *MMN Order* at Appendix A.

¹⁵⁹ *NPRM* at 9609-10 para. 71.

¹⁶⁰ See *Philips Comments* at A-16; *AdvaMed Comments* at 13; *GEHC Comments* at 29.

¹⁶¹ *NPRM* at 9607 para. 61.

¹⁶² *NPRM* at 9607 para. 62.

¹⁶³ *NPRM* at 9608 para. 64.

¹⁶⁴ *GEHC Comments* filed May 27, 2008 at 16.

¹⁶⁵ *AdvaMed Comments* at 10 (“this should just be defined as a high-level requirement with no specific details”). See also *TI Comments* at 7 and *Philips Comments* at A-8.

¹⁶⁶ Joint Parties *ex parte*, filed July 27, 2011, at 1-2.

that the best course is to refrain from mandating a sharing protocol requirement, particularly because it appears that these matters are already being addressed within the standards setting process.¹⁶⁷ In addition, we believe that the relatively low power levels used by MBAN transmitters make it possible that the use of sharing protocols might be unnecessary in many situations. We further conclude that MBAN manufacturers will determine the appropriate level of communications reliability through the risk management activities involved with medical device design that is subject to oversight by the Food and Drug Administration (FDA), and that they should be given the flexibility to meet that level of communications reliability through whatever means they find appropriate.¹⁶⁸ We also find that because we are requiring frequency coordination for MBAN and AMT sharing, described below, it is not necessary to adopt frequency monitoring rules to promote spectrum sharing between these services.

55. *Duty Cycle.* In the *NPRM*, we sought comment on whether we should adopt specific duty cycle limits for MBAN transmitters in our rules and whether such limits would be needed to allow the functioning of a contention-based protocol for achieving reliable MBAN system performance, or for other reasons.¹⁶⁹ We find that it is not necessary to specify a duty cycle in our rules. The record indicates that manufacturers are likely to employ duty cycles absent a specific requirement to do so because it will allow them to achieve important operational goals.¹⁷⁰ Moreover, we note that the Joint Parties' did not propose that we adopt a duty cycle.¹⁷¹ Finally, while AdvaMed supports adoption of a mandatory duty cycle to be consistent with other international standards, we believe that the ongoing efforts of standards setting bodies to address MBAN use are adequate to address any relevant duty cycle considerations.¹⁷²

D. Registration and Coordination for the 2360-2390 MHz band

56. *Notice of Proposed Rulemaking.* In the *NPRM* we sought comment on several approaches for facilitating sharing between MBAN systems and incumbent AMT operations. We sought comment on the establishment of exclusion zones around AMT test flight sites and whether they could be an effective means to protect those sites from harmful interference.¹⁷³ We noted that the GEHC Petition included a similar proposal to protect AMT receive sites in the 2360-2390 MHz band, and we asked for comment regarding the procedures and criteria for implementing such zones, acknowledging that these topics had generated much contention up to that point in the proceeding.¹⁷⁴ In particular, we sought comment on the interference criteria that should be used to determine whether harmful interference might

¹⁶⁷ For example, IEEE P802.15, the working group for Wireless Personal Area Networks (WPANs), is considering proposals to support MBAN operations in the 2360-2400 MHz band. See homepage for Task Group 4j, available at <http://www.ieee802.org/15/pub/TG4j.html>.

¹⁶⁸ See Joint Parties *ex parte*, filed June 27, 2011, at 2.

¹⁶⁹ *NPRM* at 9608 para. 66.

¹⁷⁰ See *Philips Comments* at A-12 and A-16 (discussing power management and RF safety considerations). Philips also notes that the 5 megahertz maximum bandwidth – which we are adopting – will allow for a shorter duty cycle than would be possible under the 1 megahertz limit we proposed in the *NPRM*. *Id.* at A-14. See also, *NPRM* at para. 66 (discussing the 25 percent duty cycle factor assumed in GEHC's original proposal).

¹⁷¹ Joint Parties *ex parte*, filed January 30, 2012.

¹⁷² *AdvaMed Comments* at 11. See also, footnote 163, *supra*.

¹⁷³ *NPRM* at 9605-06 paras. 52-55.

¹⁷⁴ *Id.* at 9596, 9603-06 paras. 19, 46-55.

occur;¹⁷⁵ the criteria that should be used to identify which AMT sites need interference protection; and the procedures to be used to identify future AMT sites that should be protected from an operational MBAN.¹⁷⁶ We also asked whether limiting MBAN operations in the 2360-2390 MHz band to indoor use within health care facilities (as defined in the WMTS¹⁷⁷) would further reduce the likelihood of interference to AMT facilities by relying on building structures to further attenuate MBAN signals.¹⁷⁸

57. We also sought comment on whether coordination of MBAN devices and AMT operations is needed and should be required and, if so, under what circumstances.¹⁷⁹ We specifically requested comments addressing the potential benefits of requiring registration of MBAN devices similar to the approach used for WMTS registration,¹⁸⁰ and the advantages and disadvantages of requiring coordination procedures rather than specifying exclusion zones where MBAN operations would not be permitted. We asked parties to address the criteria that would be used to determine if a MBAN system could operate without causing interference, the type of information that should be contained in a database, and how the Commission would designate a database administrator.¹⁸¹

58. *Decision.* We adopt registration and coordination rules for MBAN operations in the 2360-2390 MHz band.¹⁸² As explained below, registration and coordination are two separate but related processes. A health care facility that intends to operate an MBAN in the 2360-2390 MHz band must register the MBAN with a frequency coordinator (“the MBAN coordinator”) that the Commission will designate. The registration requirement will ensure that the locations of all MBAN operations in the 2360-2390 MHz band are recorded in a database. As part of the coordination process, the MBAN coordinator will first determine if a proposed MBAN in the 2360-2390 MHz band will be within line-of-sight of an AMT receiver. If the MBAN transmitter is within line-of-sight of an AMT receive site, the MBAN and AMT coordinators will work cooperatively to assess the risk of interference between the two operations and determine the measures that may be needed to mitigate interference risk. The MBAN coordinator will notify the health care facility when coordination is complete and the MBAN must operate consistent with the terms of any agreement reached by the coordinators. If no agreement is reached, the MBAN will not be permitted to operate in the band. The health care facility may not operate

¹⁷⁵ *Id.* at 9604-05 paras. 51-52. GEHC suggested an interference-to-noise ratio (I/N) of ≤ 3 dB; AFTRCC, the AMT coordinator, suggested a power-flux density (PFD) level of -180 dB Watts/m² in a 4 kHz bandwidth. The I/N criteria examines the power of an interfering signal relative to the noise level of the receiver, and the PFD criteria measures power received at a given location, usually on the ground. Both of these criteria are employed in ITU-R Recommendation M.1459 that addresses AMT systems operating in the 1425-1525 and 2310-2360 MHz bands and compatibility with broadcasting-satellite and mobile-satellite services.

¹⁷⁶ *NPRM* at 9605 para. 54. GEHC and AFTRCC disagreed on the number of AMT test sites, including those that were in use and the number of sites “entitled” to use the 2360-2390 MHz band. *See id.* at 9605 footnote 69.

¹⁷⁷ Section 95.1103(b) of the Commission’s rules provides: “A health care facility includes hospitals and other establishments that offer services, facilities and beds for use beyond a 24 hour period in rendering medical treatment, and institutions and organizations regularly engaged in providing medical services through clinics, public health facilities, and similar establishments, including government entities and agencies such as Veterans Administration hospitals; except the term health care facility does not include an ambulance or other moving vehicle. 47 C.F.R. § 95.1103 (b).

¹⁷⁸ *NPRM* at 9597 para. 22.

¹⁷⁹ *Id.* at 9606 paras. 56-58.

¹⁸⁰ *Id.* at 9606 paras. 57-58. *See also* 47 C.F.R. §§ 95.1111, 95.1113.

¹⁸¹ *NPRM* at 9606 para. 58.

¹⁸² Operation in the 2390-2400 MHz band may occur without registration or coordination.

the MBAN in the band until it receives the appropriate operating parameters from the MBAN coordinator. We also adopt procedures to accommodate new AMT receive sites as well as changes to MBAN deployment and operations.

59. The registration and coordination requirements we adopt accomplish several key principles of the Joint Parties' proposal to protect AMT receive sites. First, an MBAN will not be allowed to operate in the 2360-2390 MHz band until the frequency coordinators determine the risk of interference between the two services and the MBAN coordinator notifies the health care facility whether the device can operate in the band and the terms and conditions of operation.¹⁸³ Second, the parties agree that MBAN operation within the line-of-sight of an AMT receive facility should serve as the baseline criteria that would trigger an analysis of interference risk and mitigation techniques.¹⁸⁴ The importance of this baseline is underscored in the Joint Parties' proposed rules which include an expectation that both MBAN and AMT licensees will avoid line-of-sight operations whenever possible. Finally, we expect that the MBAN and AMT coordinators will work cooperatively to evaluate potential interference situations and thus we will require that they reach mutually satisfactory coordination agreements before MBAN operation is allowed at any specific location. Nevertheless, we recognize that AMT operates under a primary allocation and is entitled to protection from MBAN operations that will occur on a secondary basis. We anticipate that the AMT coordinator will only enter into agreements that ensure an appropriate level of protection for the primary AMT operations.

60. We conclude that the use of frequency coordination procedures is an efficient and effective way for MBAN and AMT services to successfully share the 2360-2390 MHz band. Unlike exclusion zones, which would prohibit any MBAN operation within a specified distance of an AMT receive site, coordination provides the parties flexibility to determine whether and under what conditions both services could operate in the band at a given location. Because all MBAN operations in the band will be required to register and the information will be maintained in a database, a coordinator can readily identify those locations that are within line-of-sight of an AMT receive site and thus will require a coordination agreement with incumbent or new AMT receive sites.

61. The rules we adopt incorporate many but not all of the suggestions made by the Joint Parties, including their determination that the rules governing MBAN use of the 2360-2390 MHz band will be sufficient to protect AMT operations.¹⁸⁵ The rules we adopt provide the flexibility manufacturers, licensees and coordinators need to accommodate changes in both AMT and MBAN operations and assurance to AMT users that their future access to the spectrum will not be hampered.

1. Registration Requirement

62. As indicated above, we are adopting a new rule, Section 95.1223, which requires health care facilities to register all MBAN devices they propose to operate in the 2360-2390 MHz band with a frequency coordinator designated by the Commission. MBAN operation in the 2360-2390 MHz band

¹⁸³ We note that the Joint Parties often describe the MBAN coordinator's function as "authorizing" MBAN use. MBAN operations are authorized by the Commission under the rules we adopt herein, and the frequency coordinator identifies those frequencies that are available for MBAN use at a given location.

¹⁸⁴ The Joint Parties stated that 94 percent of hospitals are not within line of sight to AMT receive locations. Joint Parties *ex parte*, filed January 14, 2011, Attachment A at slide 6.

¹⁸⁵ In the *NPRM*, we observed that the 2390-2395 MHz is "very sparsely used" by AMT. *NPRM* at 9592 footnote 22. AFTRCC has noted that its members "generally avoid use of [the band] due to the risk of interference from amateurs," and it had previously suggested that 2390-2395 MHz could be reallocated for MBAN use. Reply Comments of AFTRCC, filed November 4, 2009 at 6; *AFTRCC Comments* at 20-21.

prior to registration is prohibited.¹⁸⁶ We believe that registration of all MBAN operations in the band will create a regulatory environment that promotes MBAN use and protects AMT operations. To register MBAN devices whose scope of operations will include the 2360-2390 MHz frequency range, a health care facility must provide to the MBAN coordinator the following information:

- Specific frequencies or frequency range(s), within the 2360-2390 MHz band to be used, and the capabilities of the MBAN equipment to use the 2390-2400 MHz band;
- Effective isotropic radiated power;
- Number of programmer/controller transmitters in use at the health care facility as of the date of registration including manufacturer name(s) and model numbers and FCC identification number;
- Legal name of the health care facility;
- Location of programmer/controller transmitters (*e.g.*, geographic coordinates, street address, building);
- Point of contact for the health care facility (*e.g.*, name, title, office, phone number, fax number, e-mail address). This would typically be an administrator or other official who has a high level of authority within the facility; and
- Contact information (*e.g.*, name, title, office, phone number, fax number, e-mail address) for the party that is responsible for ensuring that MBAN operations within the health care facility are discontinued or modified in the event such devices have to cease operating in all or a portion of the 2360-2390 MHz band due to interference or because the terms of coordination have changed. This person would typically be an employee or contractor. The health care facility also must state whether, in such cases, its MBAN operation is capable of defaulting to the 2390-2400 MHz band and that it is responsible for ceasing MBAN operations in the 2360-2390 MHz band or defaulting traffic to other hospital systems.

63. To ensure that the registration data maintained by the MBAN coordinator is accurate and up to date, we are requiring health care facilities to keep their registration information current and to notify the MBAN coordinator of any material changes to the location or operating parameters of a registered MBAN. Because changes in MBAN location or operation could place that MBAN within line-of-sight of an AMT receive site, we will prohibit the MBAN from operating under the changed parameters until the MBAN coordinator has determined if a new or revised coordination agreement with the AMT coordinator is required, and if so, coordination with the AMT coordinator is completed. We also require a health care facility to notify the MBAN coordinator whenever an MBAN programmer/controller transmitter in the 2360-2390 MHz band is permanently taken out of service, unless it is replaced with transmitter(s) using the same technical characteristics as those reported on the health care facility's registration.

64. We do not adopt a suggestion by the Joint Parties to require health care facilities to implement a "transition plan" that they must file with the MBAN coordinator in order to register an MBAN operating in the 2360-2390 MHz band. The Joint Parties define a transition plan as one that "...defines the responsibilities and execution process for the healthcare facility to vacate all or portions of the 2360-2390 MHz band.... The transition plan must specify the measures necessary to meet the transition requirements compliant with these rules [*sic*], and must expressly authorize the healthcare

¹⁸⁶ MBAN devices that will operate only in the 2390-2400 MHz band will not require registration or coordination. See para. 67, *infra*.

facility's MBANS equipment vendor to re-channel the healthcare facility's MBANS operations out of all or portions of the 2360-2390 MHz band if necessary to remain compliant with these rules. The healthcare facility and its equipment vendor shall be required to effect re-channeling in accordance with these Rules, which commitments shall be reflected in the transition plan."¹⁸⁷ The Joint Parties would require that transition plans be "re-validated annually by the healthcare facility, its MBANS equipment vendor, and the MBANS coordinator."¹⁸⁸ The Joint Parties argue that a transition plan would be an efficient way to respond to an interference situation if one should occur because it "creates a contractual outline of responsibilities ... among the healthcare facility, equipment vendor, and MBANS coordinator" and would capture the "normal business practices" of warranty and service contracts whereby vendors manage hospitals' medical systems.¹⁸⁹ They also argue that, in the event a health care facility fails to take immediate action to correct interference, the transition plan assures AMT licensees that a mechanism exists to do so.¹⁹⁰ The Joint Parties envision that a transition plan would be unique for each health care facility in that it may identify various types of communications networks within the facility as back-ups for patient monitoring (*e.g.*, WMTS facilities), that the MBAN coordinator "would approve the transition plan if it describes a reasonable approach to eliminating potential interference for that particular hospital[,]" and that the "overall process is a product of normal vendor risk assessment that is required for medical devices and systems by the Food and Drug Administration."¹⁹¹

65. We are not persuaded that requiring a transition plan as suggested by the Joint Parties is necessary to ensure that interference with AMT operations, if it occurs, can be quickly resolved. Instead, we are adopting other requirements that would be less burdensome and provide some flexibility in accomplishing the same objective. In particular, we require a health care facility, as part of the registration process with the MBAN coordinator, to state whether its MBAN is capable of defaulting its operations to the 2390-2400 MHz band or to other hospital systems. We find that this approach effectively puts the facility on notice that it is responsible for taking whatever actions necessary to prevent or correct any harmful interference with AMT operations and also appropriately leaves the responsibility of defining and ensuring patient safety in the hands of medical professionals rather than the Commission or Commission designated frequency coordinators. Also, we are requiring that an MBAN transmitter not operate in the 2360-2390 MHz band unless it is able to receive and comply with a control message that notifies the device to limit or cease operations in the band.¹⁹² This requirement should ensure that MBAN devices always operate in compliance with any coordination agreement and quickly respond to any interference situation. We also conclude that the rules we adopt will provide health care facilities with sufficient flexibility to decide how best to manage its communication and medical networks because, as the Joint Parties note, each situation is unique in terms of network capability and management capability.

66. Although we agree with the Joint Parties that integrating an MBAN into the existing network environment in a health care facility is important, we do not believe that a frequency coordinator should be responsible for approving a health care facility's plans for complying with the rules or its plans for managing its internal systems for communications or patient care. Although we appreciate the Joint Parties' argument that the overall process is a by-product of the risk assessment that a medical device manufacturer is required to conduct by the Food and Drug Administration (FDA) and thus may not be

¹⁸⁷ Joint Parties *ex parte*, filed January 30, 2012, Attachment § 95.1603(m).

¹⁸⁸ *Id.*

¹⁸⁹ *Id.* at 1-2.

¹⁹⁰ *Id.* at 2.

¹⁹¹ *Id.*

¹⁹² See § 95.628(c) in Appendix A and para. 49, *supra*.

burdensome to prepare, we believe that the FDA's risk assessment process serves a purpose that is fundamentally different than the Commission's in requiring health care facilities to register with a frequency coordinator. The transition plan as described by the Joint Parties goes beyond the scope of the registration and coordination functions we are requiring to ensure interference protection to AMT licensees, and those plans might overlap the risk assessment that is within the FDA's purview. We do not believe that a frequency coordinator is an appropriate party for approving such plans or that the Commission should confer such approval authority on a frequency coordinator. The approach we adopt will allow health care facilities to manage their own MBAN systems or enter agreements as they determine to be appropriate for their individual situation, rather than adopting an approach that would require a health care facility to enter into service agreements with MBAN vendors.¹⁹³ Finally, while we do not require health care facilities to file a transition plan with the MBAN coordinator, we anticipate that health care facilities will create such plans in routine practice. We encourage them to share such information with the MBAN coordinator to facilitate the coordination process.

67. Finally, we do not adopt the Joint Parties' suggestion that the registration (but not the coordination) requirement be expanded to include the 2390-2400 MHz band only for health care facilities that are classified as hospitals as defined at Section 1861 of the Social Security Act, 42 U.S.C. § 1395x(e) prior to their use of that band for MBAN equipment.¹⁹⁴ ASHE, which has expressed an interest in serving as the MBAN coordinator, advocated for this requirement because "hospitals treat patients with the most acute symptoms, they are the facilities that require the most protection from potential MBANS interference."¹⁹⁵ ASHE further argues that registration of all hospital deployments of MBAN equipment "will provide the MBANS frequency coordinator with better information to serve the facilities that are treating patients with the most critical needs."¹⁹⁶ We are not persuaded that registration of only certain types of health care facilities in a band not subject to coordination is needed or otherwise in the public interest. We are adopting a registration requirement for the 2360-2390 MHz band because it will facilitate coordination with AMT operations in that band; coordination is not needed and will not be required for an MBAN to operate in the 2390-2400 MHz band. Our rules recognize that some MBAN equipment may operate across the whole 2360-2400 MHz band, but some equipment may be designed to operate only in the 2390-2400 MHz band which can be used for indoor or outdoor use without coordination. In the latter case, a registration requirement would unnecessarily burden hospitals that do not need assistance from the MBAN coordinator. Even if we were persuaded that a registration requirement in the upper band would serve some useful purpose, we do not agree with ASHE that our rules should discriminate as to which facilities should be required to register. Our rules require that any facility that registers MBAN equipment that operates in the 2360-2390 MHz specify whether its equipment can default to the 2390-2400 MHz band since this information will enable the coordinator to help the facility manage its MBAN operations consistent with any coordination agreements.

¹⁹³ In conjunction with this suggestion, the Joint Parties' also suggested that we expand the "Eligibility" rule (47 C.F.R. § 95.1201). See Joint Parties *ex parte*, filed January 30, 2012, Attachment § 95.1605. They argue that such authorization would allow vendors and coordinators to test equipment quickly with a minimum of paperwork and delay. *Id.* at 4. As we discussed above, because we have not adopted the Joint Parties "transition plan" concept, which would have obligated vendors and coordinators to operate MBAN equipment in some circumstances, we do not expand the eligibility rule. Again, we reiterate that a health care facility can enter agreements with third parties to operate MBAN equipment as it determines to be appropriate for their individual situation to facilitate the coordination process. See also paras. 33-34, *supra*.

¹⁹⁴ See Joint Parties *ex parte*, filed January 30, 2012, Attachment § 95.1615(e).

¹⁹⁵ The American Society for Healthcare Engineering of the American Hospital Association (ASHE) *ex parte*, filed September 26, 2011, at 2.

¹⁹⁶ *Id.*

2. Coordination Requirement

68. The Joint Parties have proposed using a coordination process that is based on the MBAN coordinator and the AMT coordinator agreeing to a set of technical specifications.¹⁹⁷ Under that proposal, it would first be necessary for the MBAN coordinator to determine whether the proposed MBAN location would be within the line-of-sight of an AMT receive site. The Joint Parties propose that the MBAN coordinator would notify the AMT coordinator of proposed MBAN operations that are beyond line-of-sight to AMT receiver locations so that the AMT coordinator could evaluate this determination. When MBAN operations are proposed for a location within line-of-sight of an AMT receiver location, the parties would initiate a coordination process that considers the proposed MBAN specifications and existing AMT operations. The Joint Parties propose using the technical parameters specified in ITU-R Recommendation M.1459 for determining protection criteria and technical parameters associated with AMT receivers.¹⁹⁸ Under this approach, the coordinators would agree to permit the MBAN to operate if an evaluation based on this standard indicates that MBAN operations can occur without causing harmful interference to AMT operations. The Joint Parties also propose the adoption of procedures that would cause an MBAN to automatically clear the band when the AMT stations require access to the spectrum.

69. We find that use of a coordination framework that is based on the Joint Parties' proposal will allow for the operation of MBAN devices in the 2360-2390 MHz band while also providing adequate interference protection for AMT receivers, and we codify these coordination procedures in new Section 95.1223(c) of our rules. As the first step in the coordination process, the MBAN coordinator will determine whether a proposed MBAN location is within line-of-sight of AMT operations. We will require that the MBAN coordinator provide the AMT coordinator with the MBAN registration information and get the AMT coordinator's concurrence that the MBAN is beyond line-of-sight prior to the MBAN beginning operations in the band. If the MBAN is within line-of-sight, the MBAN and AMT coordinators will assess the risk of interference between the two operations and determine the measures that may be needed to mitigate interference risk. In determining compatibility between proposed line-of-sight MBAN and AMT operations, the coordinators will use ITU-R M.1459, subject to accepted engineering practices and standards that are mutually agreeable to both coordinators and that take into account the local conditions and operating characteristics of the AMT and proposed MBAN facilities. The Joint Parties have proposed specific analytical techniques for determining whether proposed MBAN locations are within line-of-sight and how to determine actual path loss. We decline to specify these procedures in our rules. We recognize that the MBAN and AMT coordinators will have to agree to the procedures they will use to determine when coordination is required and how it is done, but we also are confident that the coordinators will be technically competent and will fully cooperate to develop mutually agreeable procedures to create coordination agreements. We are also convinced that codifying specific procedures would potentially reduce flexibility on the part of both coordinators to adapt the coordination procedures as MBAN technologies mature.

70. The Joint Parties have suggested procedures to follow when AMT users need to expand their operations beyond existing receiver locations. As a service operating on a primary basis in the 2360-2390 MHz band, AMT users are entitled to expand as necessary to provide for aeronautical testing purposes. Because health care facilities need levels of certainty and also need time to adapt to the

¹⁹⁷ Joint Parties *ex parte*, filed January 14, 2011, Appendix A at slide 7 (describing proposed criteria for MBAN protection of AMT operations).

¹⁹⁸ Protection Criteria for Telemetry Systems in the Aeronautical Mobile Service and Mitigation Techniques to Facilitate Sharing with Geostationary Broadcasting-Satellite and Mobile-Satellite Services in the Frequency Bands 1 452-1 525 MHz and 2 310-2 360 MHz, International Telecommunications Union/ITU Radiocommunications Sector, ITU-R Recommendation M.1459 (2002).

increased AMT requirements, the Joint Parties propose that an AMT licensee planning to expand its operations would first consider using locations that are not within line-of-sight to existing MBAN locations. If locations outside the line-of-sight to MBAN operations are not available, the AMT coordinator would give the MBAN coordinator at least seven days notice that MBAN users would have to cease or modify their operations.¹⁹⁹ Under this proposal, the MBAN operator would still be eligible to enter into a new or modified coordination agreement with the new AMT operator, but the MBAN operator would nevertheless be required to vacate its operations at the end of the seven-day period if no coordination agreement is reached. We adopt this proposal because we find that it provides for the continuing requirements of the AMT community and preserves their growth potential, while also providing adequate notice to MBAN operators to adapt to any new AMT requirements.

71. The Joint Parties have also suggested procedures to follow when AMT users experience interference from MBAN operations. We agree that it is important to consider the possibility that unexpected interference situations may occur, and we adopt rules that will aid MBAN users in identifying and resolving interference complaints. The channel use policy rule we adopt conditions MBAN use on not causing harmful interference to and accepting interference from authorized stations operating in the 2360-2400 MHz band.²⁰⁰ As part of the registration process for operating MBAN devices in the 2360-2390 MHz band, we also require an MBAN user to provide an MBAN coordinator with a point of contact for the health care facility that is responsible for making changes to MBAN operating parameters (such as discontinuing operations or changing frequencies), to state whether its MBAN operation is capable of defaulting to the 2390-2400 MHz band, and to acknowledge that it is responsible for ceasing MBAN operations in the 2360-2390 MHz band or defaulting traffic to other hospital systems.²⁰¹ We require the MBAN coordinator, as part of its duties, to work with the health care facility to identify an interference source in response to a complaint from the AMT coordinator.²⁰² Together, these rules give MBAN users clear notice that they must be prepared to cease use of the 2360-2390 MHz band in the event of interference, require them to disclose the person who is able to modify or cut off MBAN use within a health care facility, and obligate the MBAN coordinator – the party who has a record of MBAN use and who will logically be contacted by the AMT coordinator about interference – to identify alternative frequencies for MBAN use or to direct the MBAN to cease operation. Under the procedures suggested by the Joint Parties, if a health care facility is notified of MBAN interference to an AMT receive antenna, the MBAN system should be required to immediately cease transmission.²⁰³ We note that the Joint Parties' proposal does not clearly specify who is responsible for notifying the health care facility of interference and incorporates use of the transition plan concept, which we are not adopting. We conclude that the rules we describe above can accomplish the same overall goal of identifying and resolving interference to AMT from MBAN users in a way that also clearly sets forth the roles and responsibilities of the parties. We fully expect that licensees will work together to resolve any instances of harmful interference under the rules we adopt and the procedures described above.²⁰⁴

¹⁹⁹ Joint Parties *ex parte*, filed January 14, 2011, Appendix C § 95.1615(g)(F).

²⁰⁰ 47 C.F.R. § 95.1211(c). Although the secondary status of MBAN operations already indicates that MBAN licensees are responsible for resolving any harmful interference to primary AMT licensees, this rule serves to make the point explicitly.

²⁰¹ 47 C.F.R. §95.1223(a)(7).

²⁰² 47 C.F.R. §95.1225(b)(5).

²⁰³ Joint Parties *ex parte*, filed January 30, 2012, Attachment § 95.1615(g)(E).

²⁰⁴ In response to Commission staff inquiries, the Joint Parties acknowledged that in most services many, if not most, interference situations are resolved by the private parties involved, without FCC involvement or even knowledge. Joint Parties *ex parte*, filed January 30, 2012, at 6.

72. The Joint Parties have proposed additional rules for the coordination process that, although we are not codifying, we agree would be useful tools for the coordinators to use to achieve mutually agreeable coordination agreements. For example, the Joint Parties ask that the rules specify a priority order in which an MBAN would be permitted to use certain sub-bands within the 2360-2390 MHz band. We believe that this approach would likely provide some certainty to both MBAN and AMT users so they can avoid co-frequency operation. We prefer to provide coordinators with the flexibility to determine the appropriate operating parameters for band sharing, which may change over time, rather than codifying this approach. We also believe that our rules should offer the flexibility for health care facilities and MBAN coordinators to develop an interface for the delivery of MBAN operational parameters that is best suited to the health care facility's own internal communications network. Thus, the appropriate format and medium for delivering the information may vary in each case and may evolve over time. We recognize that the delivery of this information also must be consistent with the mutually agreeable coordination agreement the MBAN coordinator has reached with the AMT coordinator. The Joint Parties have addressed this issue by proposing rules that would specify two types of "electronic keys" and how they would be delivered by the MBAN coordinator to a facility's control point.²⁰⁵ They suggest that in most cases "electronic keys" can be deployed using non-electronic means, e.g., telephone or postal mail, but in certain cases – such as when MBAN operations can only be permitted during certain hours – it may be necessary to require a health care facility to receive this information electronically over a secure network to ensure effective band sharing. We believe that in the latter case, if a health care facility is not able to receive the operational parameter information on a secure link, the MBAN at that facility may not be successfully coordinated. While the specific architecture proposed by the Joint Parties may prove useful as MBAN devices are designed and deployed, we choose not to mandate their specific approach and we will instead provide the coordinators with flexibility to determine the appropriate format and medium for delivering MBAN operating parameters to a health care facility. Accordingly, we are not codifying the electronic key proposal into our rules.

3. Coordinator Functions

73. To implement the registration and coordination requirements that we describe above, the Commission will designate an MBAN coordinator(s) after resolution of the proceedings addressed in the Further Notice below.²⁰⁶ We direct the staff to act expeditiously to prepare a decision in response to the Further Notice and to initiate the selection of an MBAN coordinator(s), with a target of completing the process by June 2013. We adopt a new rule, Section 95.1225, which sets forth the specific functions that the MBAN coordinator will perform. The MBAN coordinator must:

- Register health care facilities that operate an MBAN in the 2360-2390 MHz band, maintain a database of these MBAN transmitter locations and operational parameters, and provide the Commission with information contained in the database upon request;
- Determine if an MBAN is within line-of-sight of an AMT receive facility in the 2360-2390 MHz band and coordinate MBAN operations with the designated AMT coordinator;
- Notify a registered health care facility when an MBAN has to change frequency within the 2360-2390 MHz band or to cease operating in the band consistent with a coordination agreement between the MBAN and the AMT coordinators; and
- Develop procedures to ensure that registered health care facilities operate an MBAN consistent with the coordination requirements.

²⁰⁵ See footnote 37, *supra*.

²⁰⁶ We will not permit MBAN operation in the 2360-2390 MHz band prior to the selection of a coordinator(s).

74. Regarding the AMT coordinator functions, in 1969 the Commission designated Aerospace & Flight Test Radio Coordinating Council (AFTRCC) as the AMT coordinator under its rules.²⁰⁷ AFTRCC performs coordination for non-Federal Government licensees and coordinates with the Federal Government Area Frequency Coordinators for day-to-day scheduling of missions.²⁰⁸ In the *NPRM*, we acknowledged AFTRCC's role as AMT coordinator and sought comment on the organization's involvement in MBAN and AMT spectrum-sharing.²⁰⁹ We expect that AFTRCC will represent both Federal and non-Federal AMT interests when coordinating with the MBAN coordinator, thereby eliminating the need for MBAN licensees to separately coordinate with Federal AMT systems. This should significantly reduce the time needed to complete coordination and should facilitate timely deployment of MBAN operations.

IV. FURTHER NOTICE OF PROPOSED RULEMAKING

75. In this Further Notice we request comment on a number of issues related to designating the MBAN coordinator(s) for the 2360-2390 MHz band. As we discuss below, the Joint Parties have asked that only one MBAN coordinator be designated. American Society for Healthcare Engineering (ASHE), which is now the WMTS coordinator, has expressed its interest in being the MBAN coordinator as well.²¹⁰ Although the *NPRM* sought comment on coordination procedures and generated a record upon which we are adopting coordination requirements in the Report and Order herein, it did not address other issues that would guide the selection and designation of an MBAN coordinator. We raise those issues in this Further Notice.

A. MBAN Coordinator Criteria

76. In this section, we seek comment on whether we should designate one or more MBAN coordinators, the term of service for an MBAN coordinator, the qualifying criteria that should guide our selection of an MBAN coordinator, and fees to register with an MBAN coordinator and to coordinate MBAN and AMT operations.

77. *Number of coordinators.* The Joint Parties have asked that only one MBAN coordinator be designated, arguing that MBAN coordination should be viewed as an extension of WMTS coordination for health care facilities.²¹¹ Philips and GEHC previously pointed out that the Commission has designated only one WMTS coordinator and one AMT coordinator, and a single MBAN coordinator would likewise simplify the coordination process, reduce costs and expedite deployment of MBAN

²⁰⁷ See Request by Aerospace & Flight Test Radio Coordinating Council For Designation as a Recognized Frequency Advisory Committee, 17 F.C.C.2d 525 (1969); see also 47 C.F.R. § 87.305.

²⁰⁸ See Letter from William K. Keane, counsel for AFTRCC, to Secretary, FCC, WT Docket No. 01-289 (January 27, 2005).

²⁰⁹ See *NPRM* at 9606-9607 para. 60.

²¹⁰ ASHE is a part of the American Hospital Association, and represents a broad spectrum of professions involved in healthcare engineering and facilities management. ASHE *ex parte*, filed May 28, 2009, at 1. ASHE contracts with Comsearch as their technical partner in providing WMTS coordination services. ASHE *ex parte*, filed September 26, 2011, at 1. In this proceeding, ASHE has participated in discussions with the Joint Parties as evidenced by their co-signing their most recent filings. See Joint Parties *ex parte*, filed January 30, 2012, at 8; Joint Parties *ex parte*, filed September 13, 2011, at 2.

²¹¹ Joint Parties *ex parte*, filed June 3, 2011, at 1.

equipment.²¹² They assert that a process relying on multiple MBAN coordinators could delay coordination and compromise accuracy, as well as increase costs for users by, for example, maintaining multiple databases.²¹³

78. We propose to select only one MBAN coordinator. Because the MBAN and AMT coordinators will have to mutually agree to coordination procedures, as discussed above, we believe that it will be easier for a single MBAN coordinator to work with the AMT coordinator to develop these coordination procedures. Use of a single MBAN coordinator will also provide both the health care community and the AMT coordinator a single point of contact for obtaining all the information needed regarding potential frequency conflicts. As with WMTS, a single MBAN coordinator will simplify the registration process for the health care community and provide a single database of all registered MBAN equipment in the 2360-2390 MHz band. We believe that using a model that is similar to WMTS will make it easier for the health care community to understand and comply with the MBAN rules that we are adopting. If we were to designate multiple coordinators, they all would have to agree to coordination procedures and share information on a regular and timely basis so that each has a complete registration database, provides consistent coordination results, and are able to provide coordination services without undue delay. This would likely add costs that would have to be shared among the relatively small and specialized health care user community, and we do not believe that the costs incurred by having multiple coordinators would spur a competitive environment that would provide sufficient benefits to offset these costs. We seek comment on this proposal.

79. *Term of Service.* We propose to require that the MBAN coordinator we designate agree to serve a ten-year term, which could be renewed by the Commission. Further, in the event that the MBAN coordinator cannot or does not want to continue to the end of its term, it will have to transfer its MBAN database to another entity designated by the Commission. We believe that a ten-year term is appropriate for several reasons. Because it will probably take several years for MBAN equipment to be deployed, a shorter term (e.g., five years) may not provide enough time for the user communities and the coordinators to develop a working relationship to facilitate MBAN deployment while protecting AMT operations. A ten-year term also will provide a substantial time period for the Commission to evaluate the coordinator's performance. We seek comment on this proposal.

80. *Qualifying Criteria.* We propose to establish minimum qualifying criteria for selecting an MBAN coordinator. These minimum qualifying criteria are intended to ensure that the designated coordinator can successfully accomplish the functions required by our rules. We propose to require that parties interested in being designated an MBAN coordinator demonstrate that they meet the following criteria:

- Ability to register and maintain a database of MBAN transmitter locations and operational parameters;
- Knowledge of or experience with medical wireless systems in health care facilities (e.g., WMTS);
- Knowledge of or experience with AMT operations;
- Ability to calculate and measure interference potential between MBAN and AMT operations

²¹² Philips and GEHC *ex parte*, filed May 11, 2011, at 4. Although Philips and GEHC are the parties of record for this document, they noted that they "...provided a copy of this letter to AFTRCC for its review, and AFTRCC has advised that, in its view, the letter furthers adoption of the compromise approach for MBANS that the Joint Parties have submitted to the Commission." *Id.* at 1.

²¹³ *Id.* at 4.

and to enter into mutually satisfactory coordination agreements with the AMT coordinator based on the requirements in Section 95.1223(c);

- Ability to develop procedures to ensure that registered health care facilities operate an MBAN consistent with the requirements in Section 95.1223.

81. Philips and GEHC suggested additional requirements for an MBAN coordinator which emphasize, for example, experience working with hospitals and medical device vendors; institutional knowledge of the health care industry; and having an MBAN user community as its core constituency.²¹⁴ We believe that these types of requirements may have been useful had we adopted certain elements of the Joint Parties' coordination plan, *e.g.*, the transition plan requirement, but they may not be necessary under the coordination rules we are adopting. We seek comment on the minimum qualifying criteria that should be established for selecting an MBAN coordinator, and whether those we propose above are sufficient. We also seek comment on whether we should require that service should be provided on a non-discriminatory basis.

82. Finally, as noted above, ASHE, the WMTS coordinator, has expressed an interest in being designated the MBAN coordinator. As indicated above, ASHE contracts with Comsearch as its technical partner in providing WMTS coordination services.²¹⁵ When the Commission designated ASHE as the WMTS coordinator, it noted that ASHE did not have frequency coordination experience and would contract with a third party to provide technical and administrative support for providing the service. Nonetheless, we concluded that this was not a significant factor arguing against ASHE's selection because the WMTS coordinator would not have to resolve frequency conflicts.²¹⁶ As we discuss above, the MBAN coordinator has broader responsibilities than the WMTS coordinator and will have to resolve frequency conflicts with the AMT coordinator. Because AMT is a primary service entitled to interference protection from MBAN operations, we believe it is important for us to be confident that the designated MBAN coordinator can perform the required functions under the rules and will be directly responsible to the Commission if it has to intervene in resolving any coordination disputes that may arise. We seek comment on whether third party contractual arrangements should be permitted to qualify an entity for designation as an MBAN coordinator and, if so, what amount of disclosure of a contractual arrangement should we require as part of the selection process.

83. *Fees for Service.* We do not propose to prescribe fees for MBAN registration and coordination services and instead propose to let an MBAN coordinator establish service fees. Nonetheless, we recognize that if we choose to designate only one MBAN coordinator, fees for service will not be disciplined by competition from several coordinators. Philips and GEHC have asked that, as a qualification for designation as an MBAN coordinator, an entity must be "willing to operate the coordination process and MBANS database at cost, ideally on a non-profit basis."²¹⁷ The Commission did not prescribe any service fees for WMTS coordination, but stated that it would allow the designated coordinator "to set the fee structure necessary to recoup costs."²¹⁸ We also seek comment on whether we

²¹⁴ *Id.*

²¹⁵ See <http://www.ashe.org/resources/WMTS/> and http://www.comsearch.com/interactive_solutions/WMTS/overview.jsp.

²¹⁶ Amendment of Parts 2 and 95 of the Commission's Rules to Create a Wireless Medical Telemetry Service, ET Docket 99-255, *Order*, 16 FCC Rcd 4543, 4550-51 para. 25 (WTB PSPWD 2001) (*WMTS Designation Order*).

²¹⁷ Philips and GEHC *ex parte*, filed May 11, 2011, at 5.

²¹⁸ Amendment of Parts 2 and 95 of the Commission's Rules to Create a Wireless Medical Telemetry Service, ET Docket No. 99-255, PR Docket No. 92-235, *Report and Order*, 15 FCC Rcd 11206, 11218-19 at para. 36 (2000). (continued....)

should adopt any fee requirements for MBAN registration and coordination, including for example whether service fees should only recoup costs and how such a requirement should be evaluated and whether service fees should be reasonable and non-discriminatory.

84. AFTRCC has established service fees for FCC licensees in the aeronautical services.²¹⁹ The Joint Parties have asked that we codify as part of the coordination rules a requirement that health care facilities “bear responsibility for reasonable costs incurred by the aeronautical telemetry coordinator in effecting the coordination.”²²⁰ We seek comment on this request. We also seek comment on how “reasonable costs” should be evaluated, and if we were to codify this requirement, what oversight the Commission should exercise over AMT-MBAN coordination fees. Should we require that service should be provided on a non-discriminatory basis and that fees should be reasonable and non-discriminatory? We also seek comment on the procedures that would apply for health care facilities to pay these costs. For example, would a health care facility apply to AFTRCC for coordination or would it pay these fees to the MBAN coordinator who, in turn, would pass along the fees to AFTRCC? As discussed above, AFTRCC coordinates Federal AMT operations, in conjunction with the Federal Government Area Frequency Coordinators for day-to-day scheduling of missions. Should service fees for MBAN coordination exclude costs that AFTRCC may incur for coordinating Federal AMT operations?

B. MBAN Coordinator Selection

85. Under the Commission’s rules, the Wireless Telecommunications Bureau (WTB) has delegated authority to certify frequency coordinators for the services that it administers, including the MedRadio Service under Part 95 of the Commission’s rules.²²¹ We propose that, under its delegated authority, WTB would select the MBAN coordinator using the same procedures that were implemented for selecting the WMTS coordinator. The WTB would issue a Public Notice to announce procedures for interested parties to submit applications for consideration as an MBAN coordinator.²²² It would issue an Order to designate the MBAN coordinator, and execute a Memorandum of Understanding with the selected coordinator that will set forth the coordinator’s authority and responsibilities.²²³ The MBAN coordinator would assume its duties upon the execution of the Memorandum of Understanding. We seek comment on whether this process, which worked well for selecting the WMTS coordinator, would permit the Commission to complete the MBAN coordinator selection process in a timely and efficient manner.

V. PROCEDURAL MATTERS

86. *Final Regulatory Flexibility Analysis.* A Final Regulatory Flexibility Analysis has been prepared for this Report and Order and is included in Appendix C.

87. *Initial Regulatory Flexibility Certification.* The Regulatory Flexibility Act of 1980, as

(Continued from previous page) _____

Interested parties were asked to provide their proposed fee structure as part of their request to be designated an WMTS coordinator. Wireless Telecommunications Bureau Opens Filing Window For Requests To Be a Frequency Coordinator In The Wireless Medical Telemetry Service, *Public Notice*, 15 FCC Rcd 19038 (2000).

²¹⁹ See <http://www.aftrcc.org/pages/procedures.php>.

²²⁰ Joint Parties *ex parte*, filed January 30, 2012, Appendix § 95.1615 (g)(I).

²²¹ 47 C.F.R. § 0.131 (m) (WTB “[c]ertifies frequency coordinators; considers petitions seeking review of coordinator actions; and engages in oversight of coordinator actions and practices.”).

²²² See, e.g., Wireless Telecommunications Bureau Opens Filing Window for Requests to Be a Frequency Coordinator in the Wireless Medical Telemetry Service, *Public Notice*, 15 FCC Rcd 19038 (2000).

²²³ *WMTS Designation Order* at 4551 para. 26.

amended (RFA),²²⁴ requires that an initial regulatory flexibility analysis be prepared for notice and comment rulemaking proceedings, unless the agency certifies that “the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.”²²⁵ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”²²⁶ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.²²⁷ A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).²²⁸

88. The Further Notice addresses a number of issues related to designating an MBAN coordinator for the 2360-2390 MHz band. The Joint Parties have asked that only one MBAN coordinator be designated. American Society for Healthcare Engineering (ASHE), who is now the WMTS coordinator, has expressed its interest in being the MBAN coordinator as well.²²⁹ Although the NPRM sought comment on coordination procedures and generated a record upon which we are able to adopt coordination requirements in the Report and Order, the NPRM did not address other issues that would guide the selection and designation of an MBAN coordinator. We address those issues in the Further Notice. We seek comment on whether we should designate one or more MBAN coordinators, the terms of service for an MBAN coordinator, the qualifying criteria that should guide our selection of an MBAN coordinator, and fees to register with an MBAN coordinator and to coordinate MBAN and AMT operations.

89. Therefore, we certify that the proposals in this Further Notice of Proposed Rulemaking, if adopted will not have a significant economic impact on a substantial number of small entities. If commenters believe that the proposals discussed in the Further Notice require additional RFA analysis, they should include a discussion of these issues in their comments and additionally label them as RFA comments. The Commission will send a copy of the Further Notice, including a copy of this initial certification to the Chief Counsel for Advocacy of the SBA.²³⁰ In addition, a copy of the Further Notice and this initial certification will be published in the Federal Register.²³¹

90. *Congressional Review Act.* The Commission will send a copy of this Report & Order and Further Notice of Proposed Rulemaking to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. 801(a)(1)(A).

91. *Paperwork Reduction Act.* The Report and Order in this document contains new or

²²⁴ The RFA, *see* 5 U.S.C. § 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

²²⁵ 5 U.S.C. § 605(b).

²²⁶ 5 U.S.C. § 601(6).

²²⁷ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

²²⁸ 15 U.S.C. § 632.

²²⁹ ASHE, part of the American Hospital Association, contracts with Comsearch as their technical partner in providing WMTS coordination services. *See* footnote 206, *supra*.

²³⁰ *See* 5 U.S.C. § 605(b).

²³¹ *See* 5 U.S.C. § 605(b).

modified information collection(s) subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13.²³² The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public to comment on the information collection requirements contained in this Report and Order as required by the Paperwork Reduction Act. In addition, the Commission notes that pursuant to the “Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. § 3506(c)(4), we previously sought specific comment on how the Commission might further reduce the information collection burden for small business concerns with fewer than 25 employees.

92. The Further Notice of Proposed Rule Making in this document does not contain proposed information collection(s) subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. In addition, therefore, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4).

93. *Ex Parte Rules – Permit-But-Disclose Proceeding.* The Notice in this proceeding shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.²³³ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules.

94. *Comments and Reply Comments.* Pursuant to sections 1.415 and 1.419 of the Commission’s rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission’s Electronic Comment Filing System (ECFS).²³⁴

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/>.

²³² The proposed labeling and disclosure requirements do not qualify as information collections under the PRA. 5 C.F.R. § 1320.3(c)(2).

²³³ 47 C.F.R. §§ 1.1200 *et seq.*

²³⁴ *See* Electronic Filing of Documents in Rulemaking Proceedings, GC Docket 97-113, *Report and Order*, 13 FCC Rcd 11322 (1998).

- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

95. *Further Information.* For further information, contact Jamison Prime, Office of Engineering and Technology, at (202) 418-7474, or Brian Butler, Office of Engineering and Technology, at (202) 418-2702, Federal Communications Commission, 445 12th Street, SW, Washington, DC 20554; or via the Internet at Jamison.Prime@fcc.gov or Brian.Butler@fcc.gov, respectively.

VI. ORDERING CLAUSES

96. Accordingly, IT IS ORDERED that pursuant to the authority contained in Sections 4(i), 301, 302, 303(e), 303(f), 303(r), and 307(e) of the Communications Act of 1934, as amended, 47 USC Sections 154(i), 301, 302, 303(e), 303(f), 303(r), and 307(e), this Report and Order IS ADOPTED and Parts 2 and 95 of the Commission's Rules are amended as set forth in Appendix B will become [effective 30 days after date of publication in the Federal Register], except for §§ 95.1215(c), 95.1217(a)(3), 95.1223 and 95.1225, which contain information collection requirements subject to the Paperwork Reduction Act of 1995, Public Law 104-13, that are not effective until approved by the Office of Management and Budget. The Federal Communications Commission will publish a document in the Federal Register announcing OMB approval and the effective date of these rules.

97. IT IS FURTHER ORDERED, pursuant to sections 1.4(b)(1) and 1.103(a) of the Commission's rules, 47 C.F.R. §§ 1.4(b)(1) and 1.103(a), that the Further Notice of Proposed Rulemaking IS ADOPTED and comments will be sought on these proposals.

98. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Report and Order, including the Final Regulatory Flexibility Analysis in Appendix C, to the Chief Counsel for Advocacy of the Small Business Administration.

99. IT IS FURTHER ORDERED that the Commission will send a copy of this Report & Order and Further Notice of Proposed Rulemaking to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. 801(a)(1)(A).

FEDERAL COMMUNICATIONS COMMISSION

A handwritten signature in cursive script, reading "Marlene H. Dortch".

Marlene H. Dortch
Secretary

APPENDIX A**Commenting Parties****Parties Filing Comments in ET Docket 08-59**

Aerospace and Flight Test Radio Coordinating Council
American Society for Healthcare Engineering
American Telemedicine Association
Amy L. Bush
ARRL, the national association for Amateur Radio
A T and T Inc.
AdvaMed
Boeing Company
Comsearch
GE Healthcare
IEEE 802 Local and Metropolitan Area Networks Standards Committee
CHI Clinical Engineering
Lamont Yoder
Mike Foley
Philips Healthcare Systems
Telecommunications Industry Association
Texas Instruments Incorporated
Textron
Theresa Burdette
Toumaz Technology Ltd
Wi-Fi Alliance
Wireless Communications Association International, Inc.
Zarlink Semiconductor Inc.

Parties Filing Reply Comments in ET Docket 08-59

Aerospace and Flight Test Radio Coordinating Council
Boeing Company
GE Healthcare
Philips Healthcare Systems

APPENDIX B**Final Rules**

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 C.F.R. parts 2 and 95 as follows:

**PART 2 – FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS;
GENERAL RULES AND REGULATIONS**

1. The authority citation for part 2 continues to read as follows:

Authority: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

2. Section 2.106, the Table of Frequency Allocations, is amended as follows:

- a. Pages 37 and 38 are revised.

- b. In the list of United States (US) Footnotes, footnote US101 is added.

§ 2.106 Table of Frequency Allocations.

The revisions and addition read as follows:

* * * * *

International Table			United States Table		FCC Rule Part(s)		
Region 1 Table	Region 2 Table	Region 3 Table	Federal Table	Non-Federal Table			
2200-2290 SPACE OPERATION (space-to-Earth) (space-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (space-to-Earth) (space-to-space)			2200-2290 SPACE OPERATION (space-to-Earth) (space-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space) FIXED (line-of-sight only) MOBILE (line-of-sight only including aeronautical telemetry, but excluding flight testing of manned aircraft) 5.391 SPACE RESEARCH (space-to-Earth) (space-to-space)				
5.392 2290-2300 FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)			5.392 US303 2290-2300 FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)				
2300-2450 FIXED MOBILE 5.384A Amateur Radiolocation			2300-2305 G122 2305-2310 US338 G122 2310-2320 Fixed Mobile US339 Radiolocation G2 US327 2320-2345 Fixed Radiolocation G2 US327 2345-2360 Fixed Mobile US339 Radiolocation G2 US327 2360-2390 MOBILE US276 RADIOLOCATION G2 G120 Fixed US101 2390-2395 MOBILE US276		2300-2305 Amateur 2305-2310 FIXED MOBILE except aeronautical mobile RADIOLOCATION Amateur US338 2310-2320 FIXED MOBILE US339 BROADCASTING-SATELLITE RADIOLOCATION 5.396 US327 2320-2345 BROADCASTING-SATELLITE 5.396 US327 2345-2360 FIXED MOBILE US339 BROADCASTING-SATELLITE RADIOLOCATION 5.396 US327 2360-2390 MOBILE US276 US101 2390-2395 AMATEUR		Amateur Radio (97) Wireless Communications (27) Amateur Radio (97) Wireless Communications (27) Aviation (87) Satellite Communications (25) Wireless Communications (27) Aviation (87) Aviation (87) Personal Radio (95) Aviation (87) Personal Radio (95)

			US101	MOBILE US276	Amateur Radio (97)
			2395-2400	US101 2395-2400 AMATEUR	Personal Radio (95) Amateur Radio (97)
			US101 G122	US101	
			2400-2417	2400-2417 AMATEUR	ISM Equipment (18) Amateur Radio (97)
			5.150 G122	5.150 5.282	
			2417-2450	2417-2450	
			Radiolocation G2	Amateur	
			5.150	5.150 5.282	
2450-2483.5 FIXED MOBILE Radiolocation	2450-2483.5 FIXED MOBILE RADIOLOCATION		2450-2483.5	2450-2483.5 FIXED MOBILE Radiolocation	ISM Equipment (18) TV Auxiliary Broadcasting (74F) Private Land Mobile (90) Fixed Microwave (101)
5.150 5.397	5.150		5.150 US41	5.150 US41	
2483.5-2500 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A Radiolocation	2483.5-2500 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A RADIODETERMINATION- SATELLITE (space-to-Earth) 5.398 RADIOLOCATION	2483.5-2500 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A RADIOLOCATION Radiodetermination-satellite (space-to-Earth) 5.398	2483.5-2500 MOBILE-SATELLITE (space-to- Earth) US319 US380 US391 RADIODETERMINATION-SATELLITE (space-to-Earth) 5.398	2483.5-2495 MOBILE-SATELLITE (space-to- Earth) US380 RADIODETERMINATION-SATEL- LITE (space-to-Earth) 5.398 5.150 5.402 US41 US319 NG147	ISM Equipment (18) Satellite Communications (25)
5.150 5.371 5.397 5.398 5.399 5.400 5.402	5.150 5.402	5.150 5.400 5.402	5.150 5.402 US41	2495-2500 FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to- Earth) US380 RADIODETERMINATION-SATEL- LITE (space-to-Earth) 5.398 5.150 5.402 US41 US319 US391 NG147	ISM Equipment (18) Satellite Communications (25) Wireless Communications (27)
2500-2520 FIXED 5.410 MOBILE except aeronautical mobile 5.384A	2500-2520 FIXED 5.410 FIXED-SATELLITE (space-to- Earth) 5.415 MOBILE except aeronautical mobile 5.384A	2500-2520 FIXED 5.410 FIXED-SATELLITE (space-to-Earth) 5.415 MOBILE except aeronautical mobile 5.384A MOBILE-SATELLITE (space-to-Earth) 5.351A 5.407 5.414 5.414A	2500-2655	2500-2655 FIXED US205 MOBILE except aeronautical mobile	Wireless Communications (27)
5.405 5.412	5.404	5.404 5.415A			
2520-2655 FIXED 5.410 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416	2520-2655 FIXED 5.410 FIXED-SATELLITE (space-to-Earth) 5.415 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416	2520-2535 FIXED 5.410 FIXED-SATELLITE (space-to-Earth) 5.415 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416 5.403 5.414A 5.415A			
5.339 5.405 5.412 5.417C 5.417D 5.418B 5.418C	5.339 5.417C 5.417D 5.418B 5.418C	2535-2655 FIXED 5.410 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416 5.339 5.417A 5.417B 5.417C 5.417D 5.418 5.418A 5.418B 5.418C	5.339 US205	5.339	

UNITED STATES (US) FOOTNOTES

US101 The band 2360-2400 MHz is also allocated on a secondary basis to the mobile, except aeronautical mobile, service. The use of this allocation is limited to MedRadio operations. MedRadio stations are authorized by rule and operate in accordance with 47 CFR Part 95.

PART 95 – PERSONAL RADIO SERVICES

SUBPART E – TECHNICAL REGULATIONS

3. The authority citation for Part 95 continues to read as follows:

Authority: Secs. 4, 303, 48 Stat, 1068, 1032, as amended; 47 U.S.C. 154, 303.

4. Section 95.628 is amended by revising the heading and all text to read as follows:

§ 95.628 MedRadio transmitters in the 413-419 MHz, 426-432 MHz, 438-444 MHz, and 451-457 MHz and 2360-2400 MHz bands.

The following provisions apply to MedRadio transmitters operating in the 413-419 MHz, 426-432 MHz, 438-444 MHz, and 451-457 MHz bands as part of a Medical Micropower Network (MMN) and in the 2360-2400 MHz band as part of a Medical Body Area Network (MBAN).

(a) *Operating frequencies.* A MedRadio station authorized under this part must have out-of-band emissions that are attenuated in accordance with §95.635.

(1) Only MedRadio stations that are part of an MMN may operate in the 413-419 MHz, 426-432 MHz, 438-444 MHz, and 451-457 MHz frequency bands. Each MedRadio station that is part of an MMN must be capable of operating in each of the following frequency bands: 413-419 MHz, 426-432 MHz, 438-444 MHz, and 451-457 MHz. All MedRadio stations that are part of a single MMN must operate in the same frequency band.

(2) Only MedRadio stations that are part of an MBAN may operate in the 2360-2400 MHz frequency band

(b) *Requirements for a Medical Micropower Network.*

(1) *Frequency monitoring.* MedRadio programmer/control transmitters must incorporate a mechanism for monitoring the authorized bandwidth of the frequency band that the MedRadio transmitters intend to occupy. The monitoring system antenna shall be the antenna used by the programmer/control transmitter for a communications session.

(i) The MedRadio programmer/control transmitter shall be capable of monitoring any occupied frequency band at least once every second and monitoring alternate frequency bands within two seconds prior to executing a change to an alternate frequency band.

(ii) The MedRadio programmer/control transmitter shall move to another frequency band within one second of detecting a persistent (i.e., lasting more than 50 milliseconds in duration) signal level

greater than -60 dBm as received by a 0 dBi gain antenna in any 12.5 kHz bandwidth within the authorized bandwidth.

(iii) The MedRadio programmer/control transmitter shall be capable of monitoring the authorized bandwidth of the occupied frequency band to determine whether either direction of the communications link is becoming degraded to the extent that communications is likely to be lost for more than 45 milliseconds. Upon making such a determination the MedRadio programmer/control transmitter shall move to another frequency band.

(2) MedRadio transmitters shall incorporate a programmable means to implement a system shutdown process in the event of communication failure, on command from the MedRadio programmer/control transmitter, or when no frequency band is available. The shutdown process shall commence within 45 milliseconds after loss of the communication link or receipt of the shutdown command from the MedRadio programmer/control transmitter.

(3) MedRadio programmer/control transmitters shall have the ability to operate in the presence of other primary and secondary users in the 413-419 MHz, 426-432 MHz, 438-444 MHz, and 451-457 MHz bands.

(4) *Authorized bandwidth.* The 20 dB authorized bandwidth of the emission from a MedRadio station operating in the 413-419 MHz, 426-432 MHz, 438-444 MHz, and 451-457 MHz bands shall not exceed 6 MHz.

(c) *Requirements for Medical Body Area Networks.* A MedRadio programmer/control transmitter shall not commence operating and shall automatically cease operating in the 2360-2390 MHz band if it does not receive, in accordance with the protocols specified by the manufacturer, a control message permitting such operation. Additionally, a MedRadio programmer/control transmitter operating in the 2360-2390 MHz band shall comply with a control message that notifies the device to limit its transmissions to segments of the 2360-2390 MHz band or to cease operation in the band.

(d) *Frequency stability.* Each transmitter in the MedRadio service must maintain a frequency stability of ± 100 ppm of the operating frequency over the range:

(1) 25 °C to 45 °C in the case of medical implant transmitters; and

(2) 0 °C to 55 °C in the case of MedRadio programmer/control transmitters and Medical body-worn transmitters.

(e) *Shared access.* The provisions of this section shall not be used to extend the range of spectrum occupied over space or time for the purpose of denying fair access to spectrum for other MedRadio systems.

(f) *Measurement procedures.* (1) MedRadio transmitters shall be tested for frequency stability, radiated emissions and EIRP limit compliance in accordance with paragraphs (h)(2) and (h)(3) of this section.

(2) Frequency stability testing shall be performed over the temperature range set forth in (f) of this section.

(3) Radiated emissions and EIRP limit measurements may be determined by measuring the radiated field

from the equipment under test at 3 meters and calculating the EIRP. The equivalent radiated field strength at 3 meters for 1 milliwatt, 25 microwatts, 250 nanowatts, and 100 nanowatts EIRP is 115.1, 18.2, 1.8, or 1.2 mV/meter, respectively, when measured on an open area test site; or 57.55, 9.1, 0.9, or 0.6 mV/meter, respectively, when measured on a test site equivalent to free space such as a fully anechoic test chamber. Compliance with the maximum transmitter power requirements set forth in §95.639(f) shall be based on measurements using a peak detector function and measured over an interval of time when transmission is continuous and at its maximum power level. In lieu of using a peak detector function, measurement procedures that have been found to be acceptable to the Commission in accordance with §2.947 of this chapter may be used to demonstrate compliance. For a transmitter intended to be implanted in a human body, radiated emissions and EIRP measurements for transmissions by stations authorized under this section may be made in accordance with a Commission-approved human body simulator and test technique. A formula for a suitable tissue substitute material is defined in OET Bulletin 65 Supplement C (01-01).

5. Section 95.633 is amended by revising paragraph (e)(1) to read as follows:

§ 95.633 Emission Bandwidth

* * * * *

(e) For transmitters in the MedRadio Service:

(1) For stations operating in 402–405 MHz, the maximum authorized emission bandwidth is 300 kHz. For stations operating in 401–401.85 MHz or 405–406 MHz, the maximum authorized emission bandwidth is 100 kHz. For stations operating in 401.85–402 MHz, the maximum authorized emission bandwidth is 150 kHz. For stations operating in 413- 419 MHz, 426–432 MHz, 438–444 MHz, or 451–457 MHz, the maximum authorized emission bandwidth is 6 megahertz. For stations operating in 2360-2400 MHz, the maximum authorized emission bandwidth is 5 megahertz.

* * * * *

6. Section 95.635 is amended by adding paragraph (d)(1)(v); redesignating existing paragraph (d)(7) as paragraph (d)(8) and adding a new paragraph (d)(7) to read as follows:

§ 95.635 Unwanted Radiation.

* * * * *

(d) For transmitters designed to operate in the MedRadio service, emissions shall be attenuated in accordance with the following:

(1) Emissions from a MedRadio transmitter shall be attenuated to a level no greater than the field strength limits shown in the following table when they:

* * * * *

(v) Are more than 2.5 MHz outside of the 2360- 2400 MHz band (for devices designed to operate in the 2360-2400 MHz band).

* * * * *

(7) For devices designed to operate in the 2360-2400 MHz band: In the first 2.5 megahertz beyond any of the frequency bands authorized for MBAN operation, the EIRP level associated with any unwanted