

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

<b>In the Matter of</b>	)	
	)	
<b>Amendment of Part 90 of the Commission's Rules and Policies for Applications and Licensing of Low Power Operations in the Private Land Mobile Radio 450-470 MHz Band</b>	)	<b>ET Docket No. 01-146 RM-9966</b>

**REPLY COMMENTS OF THE AMERICAN HOSPITAL  
ASSOCIATION TASK FORCE ON MEDICAL TELEMETRY**

The American Hospital Association Task Force on Medical Telemetry (“the AHA Task Force” or “Task Force”),<sup>1</sup> by its attorneys and pursuant to Section 1.415 of the Commission’s Rules, hereby files a reply to the initial comments filed in the above-captioned proceeding.<sup>2</sup> Specifically, the AHA Task Force endorses the initial comments of Philips Medical Systems, Allina Health Systems, Cook County Hospital, and SpaceLabs Medical, Inc. that support the FCC’s tentative decision to postpone implementing rule changes that might cause harmful interference to operations of medical telemetry devices in the 460-470 MHz band until the conclusion of the ongoing transition period for that band, currently scheduled to expire on October 16, 2003.

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<sup>1</sup> Members of the AHA Task Force include representatives of hospitals, clinics and other users of medical telemetry systems, manufacturers of medical telemetry devices, and representatives of trade associations involved in the development of medical devices and the delivery of health care. Even as these comments reflect a consensus of the members of the Task Force, individual members may file separate reply comments to highlight their respective positions.

<sup>2</sup> *Amendment of Part 90 of the Commission’s Rules and Policies for Applications and Licensing of Low Power Operations in the Private Land Mobile Radio 450-470 MHz Band*, ET Docket No. 01-146, FCC 01-199, July 24, 2001, 66 Fed. Reg. 47435 (September 12, 2001) (“NPRM”).

## I. BACKGROUND

As the *NPRM* initiating this proceeding explains, for almost thirty years the Commission has permitted Private Land Mobile Radio (“PLMR”) users in the 450-470 MHz band to be licensed for low power operations on frequencies offset 12.5 kHz from regularly assignable channels.<sup>3</sup> Low power operations authorized to use these offset channels have included wireless medical telemetry systems that are used to promote better patient care in hospitals by transmitting waveforms and other physiological data from patient measurement devices to patient monitoring, data distribution and data storage systems. Wireless medical telemetry devices promote better patient outcomes, enhance hospital efficiency, and reduce hospital costs by, respectively, encouraging monitored patients to ambulate, allowing more beds in a hospital to be monitored, and allowing more patients to be monitored by each health care worker.

In order to promote more efficient use of regularly assignable PLMR spectrum, in 1995 the Commission adopted a “refarming” band plan under which the 12.5 kHz channels no longer would be considered offset channels but would be available for high power operations.<sup>4</sup> The Commission recognized, however, that a transition would be necessary to prevent high power applicants from interfering with existing low power operations. The Commission, therefore, on August 11, 1995, adopted a “freeze” on accepting PLMR applications for high power operations on the offset channels to provide the Commission time to consider the potential for interference to medical telemetry devices.<sup>5</sup>

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<sup>3</sup> *NPRM* ¶2.

<sup>4</sup> *Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them and Examination of Exclusivity and Frequency Assignment Policies of the Private Land Mobile Services*, 10 FCC Rcd 10076 (1995).

<sup>5</sup> FCC Public Notice, *Freeze on the Filing of High Power Applications for 12.5 kHz Offset Channels in the 450-470 MHz Band*, 10 FCC Rcd 9995 (1995).

Because medical telemetry had no protection from interference from the primary users of the available frequency bands, and was increasingly subject to interference from licensed radio services, the American Hospital Association formed the AHA Task Force on Medical Telemetry in April 1998. Working with hospitals, leading manufacturers of medical telemetry equipment, and representatives of the Food and Drug Administration and the FCC, the AHA Task Force submitted a report to the Commission recommending the creation of a new licensed medical telemetry service that would receive protection from interference through dedication of frequencies allocated to it on a primary basis.

In response to the Task Force's report, the Commission on July 19, 1999, initiated ET Docket No. 99-255 in which it compiled a substantial record regarding the uses of wireless medical telemetry in meeting the current and future health care requirements of our nation's hospital patients. On June 12, 2000, the Commission adopted rules to establish a new Wireless Medical Telemetry Service ("WMTS").<sup>6</sup> As the *NPRM* in this proceeding indicates, in creating the WMTS "the Commission's goal was [not only] to provide spectrum where medical telemetry equipment can operate without interference but also to encourage medical telemetry users to eventually migrate out of the current bands, including the 450-470 MHz band."<sup>7</sup> In the *WMTS Order*, however, the Commission expressly recognized that the bands of spectrum allocated on a primary basis for WMTS (608-614 MHz, 1395-1400 MHz and 1429-1432 MHz) were not without encumbrances, could not be utilized immediately, and would not all be available in each area where WMTS spectrum would be needed.<sup>8</sup> To allow time for a transition to the new

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<sup>6</sup> *Amendment of Parts 2 and 95 of the Commission's Rules to Create a Wireless Medical Telemetry Service*, 15 FCC Rcd 11206 (2000) ("WMTS Order").

<sup>7</sup> *NPRM* ¶ 5.

<sup>8</sup> As the Commission recognized in the *WMTS Order* ¶ 11, use of the 608-614 MHz band is constrained as a result of its use in some areas for radio astronomy, so that health care facilities

spectrum, the Commission ruled that it would retain the freeze on high power land mobile applications in the 460-470 MHz band for three years from the effective date of the WMTS rules (October 16, 2000).

**II. THE AHA TASK FORCE SUPPORTS THE COMMISSION'S TENTATIVE DECISION IN THIS DOCKET TO PROTECT MEDICAL TELEMETRY DEVICES IN THE 460-470 MHz BAND THROUGHOUT THE WMTS TRANSITION PERIOD**

The Commission's proposals in the instant docket are largely based on the so-called Consensus Plan developed by the Land Mobile Communications Council ("LMCC"). The LMCC proposal includes the establishment of twenty-five 12.5 kHz channel pairs for non-coordinated, itinerant ("Group C") channels in the 450-470 MHz band. Ten of the channels identified by LMCC are currently available and used for medical telemetry. In the *NPRM*, the Commission recognized the potential for harmful interference to existing medical telemetry systems that would result from the grant of new nationwide non-coordinated licenses on these ten channels, and the Commission, therefore, tentatively decided to postpone their availability for licensing under the LMCC Consensus Plan.<sup>9</sup> The Commission concluded that the temporary postponement should coincide with the duration of the freeze on high power applications in the 460-470 MHz band, currently scheduled to expire on October 16, 2003.<sup>10</sup>

In its initial comments, LMCC opposes the Commission's tentative decision to protect existing medical telemetry systems in the 460-470 MHz band by postponing temporarily the

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in approximately ten mid-sized cities, including Cedar Rapids and Iowa City, Iowa, would be precluded from using this band. WMTS use of the 608-614 MHz band also might not be available in other geographic areas due to potential interference from high power DTV transmissions on adjacent TV channels 36 or 38. Use of the 1390-1395 MHz and 1429-1432 MHz bands are constrained by the potential for interference from high power radar systems in nearby bands and by grandfathered Federal Government operations.

<sup>9</sup> *NPRM* at ¶23.

<sup>10</sup> *Id.*

availability of the ten Group C frequencies for non-coordinated, itinerant uses.<sup>11</sup> LMCC limits its argument to claiming that “[s]ystems on these channels will continue to be low power, a situation which has existed for many years. Thus, the possibility of interference from low power radios to medical telemetry devices will not increase.” The Personal Communications Industry Association (“PCIA”) echoes LMCC’s comments, without additional substantive analysis.<sup>12</sup>

LMCC’s abbreviated opposition to the Commission’s tentative decision should be rejected. First, LMCC’s claim that adoption of a new rule for non-coordinated, itinerant operations would maintain “a situation which has existed for many years” is logically unfounded. Unrestricted non-coordinated, itinerant use of the ten specified Group C channels is not the *status quo* in this band; otherwise, LMCC would not be seeking a rule change.

Second, LMCC’s claim that the possibility of interference to medical telemetry devices will not increase from adoption of its proposal is factually unsupported. In fact, the potential interference hazard to existing medical telemetry systems is real and potentially severe. As Philips Medical Systems describes:

All ten Group C channels referenced in the NPRM are currently used by medical telemetry transmitters . . . These transmitters are used by health care providers to monitor the cardiac function and other vital parameters of hospitalized patients. Itinerant use of the very same frequencies by building contractors who may be working in or near a hospital, is difficult to plan for. Even at the proposed level of 2W TPO, such use can cause disabling interference to these telemetry systems, which transmit at less than 4 mW ERP.<sup>13</sup>

The potential widespread hazard of the proposed itinerant uses is further illustrated by the comments of Allina Health Systems that state that it uses 375 separate medical telemetry devices

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<sup>11</sup> Comments of the Land Mobile Communications Council, Section III.D, page 10.

<sup>12</sup> Comments of the Personal Communications Industry Association at 5.

<sup>13</sup> Comments of Philips Medical Systems at 3-4.

in the 460-470 MHz PLMR band in its 16 hospitals and 52 clinics located in Minnesota and Wisconsin.<sup>14</sup> Similarly, the Veterans Administration reports that it has approximately 740 beds around the country still operating medical telemetry equipment in the 460-470 MHz band. Health care systems like these should not be subjected to potential intermittent interference from itinerant, non-coordinated transmitters in the 460-470 MHz band, especially since the lack of frequency coordination would make it difficult for hospitals to select channels that would be unused by PLMR licensees in their vicinity and effectively would preclude hospitals from being able to track down the sources of any interference that occurs. Faced with the prospect of ongoing intermittent, unidentifiable interference, hospitals might need to terminate their medical telemetry operations in the 460-470 MHz band well in advance of the currently scheduled WMTS transition period. This would not be consistent with the intent of the Commission's WMTS rules.

Even Motorola, a large manufacturer of PLMR equipment in the 450-470 MHz band, acknowledges that it understands the validity of postponing the availability of the ten specified Group C channels for non-coordinated, itinerant use until the termination of the PLMR freeze (WMTS transition period).<sup>15</sup> Although Motorola cursorily dismisses the possibility of increased interference resulting from operations on the specified Group C channels, Motorola at least recognizes that "the impact of their temporary deferral from the uncoordinated low power pool is minimal."<sup>16</sup> In weighing the risk to existing medical telemetry operations in the 460-470 MHz

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<sup>14</sup> Comments of Allina Health Systems (Michael J. Phelps, Biomedical Engineer), October 4, 2001, at 1.

<sup>15</sup> Comments of Motorola at 7.

<sup>16</sup> *Id.*

band against the “minimal” hardship caused by the temporary postponement, Motorola correctly recognizes that the balance must favor the safety of hospital patients.<sup>17</sup>

**III. IN POSTPONING IMPLEMENTATION OF RULE CHANGES AFFECTING THE 460-470 MHZ BAND, THE COMMISSION SHOULD RECOGNIZE THAT THE THREE YEAR TRANSITION ADOPTED IN ET DOCKET NO. 99-255 WILL NOT BE ADEQUATE TO PROTECT THE INTERESTS OF MEDICAL TELEMETRY LICENSEES**

The Commission’s purpose in extending the PLMR freeze when the WMTS was created was to allow an orderly transition of medical telemetry devices out of the 460-470 MHz band. The Commission established a three-year transition period on the assumption that “equipment to operate in the [1.4 GHz] bands allocated in this proceeding should become available over the next two years.”<sup>18</sup> The Commission’s assumption, however, is not proving accurate, due to no fault of WMTS users or manufacturers. Space Labs Medical, Inc. and Philips Medical Systems both point out that the transition to WMTS spectrum has been delayed by the ongoing uncertainty in ET Docket No. 00-221<sup>19</sup> concerning (1) what spectrum will be allocated to WMTS in the 1.4 GHz band and (2) the identity of the users of the neighboring spectrum (information about who the adjacent channel users will be and what technical rules will apply to the adjacent channels is necessary for WMTS manufacturers to determine the amount of filtering required to

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<sup>17</sup> Motorola admittedly limits its support for the temporary postponement to October 2003,<sup>17</sup> when the freeze on high power applications is currently scheduled to expire. The AHA Task Force agrees that the postponement of the availability of the ten Group C channels for non-coordinated, itinerant uses can be lifted at the same time as the freeze on high power PLMR applications in the 460-470 MHz band. As discussed below, however, the Task Force does not agree that the need to protect medical telemetry devices in the 460-470 MHz band necessarily will expire October 16, 2003.

<sup>18</sup> *WMTS Order* ¶ 23.

<sup>19</sup> *Reallocation of the 216-220 MHz, 1390-1395 MHz, 1429-1432 MHz, 1432-1435, 1670-1675 MHz Government Transfer Bands*, FCC 00-395, ET Docket No. 00-221, November 20, 2000, 66 Fed. Reg. 7443.

minimize interference to patient-critical WMTS equipment).<sup>20</sup> Manufacturers reasonably cannot be expected to begin marketing equipment for the 1.4 GHz band until this uncertainty is resolved.

Moreover, hospitals today are facing many challenges. While the transition of medical telemetry equipment out of the 460-470 MHz band remains a priority, the September 11 attacks have caused hospitals to expend increased resources and time on their preparations for future mass casualty events, including those from nuclear, biological or chemical attacks. Because of these unforeseen competing concerns, as Allina Health Systems explains, hospitals should not be placed in the position where to respond to the October 16, 2003, deadline they “must scramble to minimize the risk of electromagnetic interference for medical telemetry systems.”<sup>21</sup> Allina states that the current PLMR freeze deadline “places hospital systems . . . in an extremely difficult position regarding our investment in technology . . . [w]ith today’s healthcare environment, hospital systems . . . must be prudent with every capital dollar available.”<sup>22</sup>

The AHA anticipates that the issues involving the allocation of the 1427-1432 MHz band to the WMTS are likely to be finally resolved over the next several months. Once resolved, the AHA also anticipates that the Commission may be asked to extend the WMTS transition period beyond October 2003. An extension not only would allow manufacturers sufficient time prior to the end of the PLMR freeze to design and bring to market advanced systems for the 1.4 GHz

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<sup>20</sup> See Comments of Philips Medical Systems at 2; Comments of Space Labs Medical, Inc. at 2. Many electronic components needed to implement cost-effective medical telemetry systems in the 1.4 GHz band will require investment in research and development and tooling, which along with customary supplier lead times, will affect the roll-out schedule in equipment. Resolution of the spectrum allocations in the 1.4 GHz band, including those on channels adjacent to the WMTS allocation, will permit product development efforts in the 1.4 GHz band to accelerate.

<sup>21</sup> Comments of Allina Health Systems at 3.

<sup>22</sup> *Id.*

band, but would better enable hospitals to plan for the new technology and to budget for capital costs that at this point are undefined. In considering its deferral of the rules proposed in this proceeding, the Commission should acknowledge that the implementation of those rules and the lifting of the freeze are likely to be tied to a further review of the transition length.

#### **IV. CONCLUSION**

The AHA Task Force endorses the initial comments of Philips Medical Systems, Allina Health Systems, Cook County Hospital and Space Labs Medical, Inc. and supports the Commission's proposal, *NPRM* ¶ 23, to postpone the availability of the ten "Group C" channels currently utilized for medical telemetry until the end of the WMTS transition period for the 460-470 MHz band, as that period may be extended.

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