

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

In the Matter of)
)
Additional Spectrum for) **ET Docket No. 02-380**
Unlicensed Devices Below 900 MHz)
And in the 3 GHz Band)

INITIAL COMMENTS OF PHILIPS MEDICAL SYSTEMS

The Philips Medical Systems division of Philips Electronics North America Corp. (“Philips”), pursuant to Sections 1.415 and 1.430 of the Commission’s Rules, hereby files its initial comments on the *Notice of Inquiry*, released December 20, 2002, FCC 02-328 (“*Notice*”) in the above-captioned proceeding. Philips is a leading manufacturer of wireless medical telemetry devices and is a member of the American Hospital Association Task Force on Medical Telemetry (“AHA Task Force”).

In the *Notice*, the Commission sought comments on the feasibility of allowing unlicensed devices to operate in the TV broadcast spectrum. Several of the Commission’s specific requests for comments directly affect the operation of wireless medical telemetry devices. The Commission sought comment on whether unlicensed devices should be prohibited on certain television channels, e.g., channel 37. The Commission also asked what technical requirements on unlicensed operation would be necessary to protect other licensees in the television bands, as well as whether the new unlicensed operations should be required to protect unlicensed medical telemetry transmitters operating on channels 7-46 from interference.

Wireless medical telemetry devices, which among other applications, monitor vital signs and other critical parameters of hospitalized patients, are currently authorized in the television bands under two parts of the Commission’s Rules, on channel 37 in the Wireless Medical

Telemetry Service (“WMTS”) under Part 95¹ and vacant television channels 7-46 under Part 15.² These systems operate at very low power (field strength less than 200 mv/m at 3 m) and are therefore susceptible to co-channel and adjacent channel interference from even low-power transmitters nearby.

Part 15 transmitters pose a significant risk of interference with critical patient monitoring activities, which would be exacerbated by the unlicensed nature of the proposed operation, which makes it difficult to identify or control the source of interference. Even within health care facilities, it is difficult to effectively control the use of unlicensed devices, which may be brought in by employees, visitors, contractors or others. Unlicensed Part 15 transmitters should therefore be prohibited on those television channels where it is reasonably likely to interfere with medical telemetry transmission.

Philips’ comments focus on potential interference with WMTS operation under Part 95. It should be noted that some of these comments also apply to Part 15 medical telemetry.

I. PROTECTION OF WMTS OPERATION ON CHANNEL 37

A. CO-CHANNEL INTERFERENCE

In the Report and Order creating the WMTS, the Commission recognized the hazard to WMTS operations presented by co-channel interference from other low-power transmitters. Indeed, it ruled out even *licensed* mobile or home use of WMTS systems because it would be difficult to effectively control and coordinate such operation with facility-based telemetry, creating an unnecessary risk of interference.³ The risk posed by *unlicensed* operation on channel 37 is even greater.

¹ 47 C.F.R. Part 95, Subpart H.

² 47 C.F.R. § 15.242.

³ *Amendment of Parts 2 and 95 of the Commission’s Rules to Create a Wireless Medical Telemetry Service*, ET Docket 99-255, PR Docket 92-235, *Report and Order*, 15 FCC Rcd 11,206 (¶ 31), released June 12, 2000.

Many hospitals are in the process of replacing their Part 15 medical telemetry transmitters with WMTS transmitters at significant cost, in large part because of the promise of a lower likelihood of interference on channel 37 and other WMTS bands. This migration has been encouraged by the Commission, the Food and Drug Administration and others.⁴ It is therefore important not to allow unlicensed devices to interfere with such WMTS operation. Unlicensed Part 15 operation by non-medical telemetry users should therefore be prohibited on Channel 37.

B. ADJACENT CHANNEL INTERFERENCE

Low-power WMTS operation on channel 37 may be susceptible to adjacent channel interference from operation on television channels 36 and 38. Interference from these adjacent channels is typically caused by broadcast licensees, and medical telemetry manufacturers and users have been able to predict and plan for such interference. Such planning would become more difficult if the sources of such adjacent channel interference were unlicensed, potentially mobile transmitters.

Philips does not believe that the operation of unlicensed Part 15 transmitters on channels 36 or 38 is likely to interfere with the WMTS systems that Philips manufactures, provided the transmitters strictly comply with typical rules for such operation⁵ and are not operated in the immediate vicinity of a WMTS antenna. However, there are medical telemetry systems intended for specific clinical applications, each with different specifications and requirements, and some such systems may be more sensitive to such interference than others. As this proceeding progresses, and the details of any proposed Part 15 operation are developed, this issue should be closely examined.

⁴ See, e.g., Notice, at 8 n.37; *FDA Public Health Advisory: Risk of Electromagnetic Interference with Medical Telemetry Systems* (July 10, 2000).

⁵ E.g., 47 C.F.R. § 15.249 (50 mv/m maximum field strength at 3 m for fundamental frequencies in the 902-928 MHz band).

II. PROTECTION OF PART 15 WIRELESS MEDICAL TELEMETRY OPERATION IN THE TELEVISION BANDS

Although Philips expects most users of Part 15 medical telemetry systems to migrate to WMTS in the next several years, some facilities may not have the resources to do so in that time frame. Philips therefore suggests that the Commission consider whether it is necessary to authorize Part 15 transmitters on *all* vacant television channels, or instead to maintain some channels for alternative licensed operations, some of which are likely to be more compatible with the remaining medical telemetry systems in the band and have other public benefits.

CONCLUSION

For the foregoing reasons, Philips Medical Systems urges the Commission to ensure that any new authorization or operation of unlicensed devices in the television bands does not add to the potential sources of interference to wireless medical telemetry systems operating in the television bands.

Respectfully submitted,

PHILIPS MEDICAL SYSTEMS

/s/

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