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October 21, 2008

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: ET Docket Nos. 06-135, 05-213, 03-92, & RM-11271
***Ex Parte* Filing**

Dear Secretary Dortch:

Medtronic Inc. responds to the six *ex parte* presentations that ON Semiconductor Corporation ("ON Semi") made on October 2, 2008 in the above-referenced proceedings requesting a 300 kHz allocation in the 405-406 MHz upper wing band for wireless hearing aids. ON Semi's request should be rejected for the reasons Medtronic set forth in its February 25 and September 25, 2008 *ex parte* letters, as summarized below.

First, ON Semi's proposal effectively would be a *de facto* 300 kHz allocation of the MedRadio band for wireless hearing aids. ON Semi's wireless hearing aids would operate at maximum power (*i.e.*, -16 dBm) and with a 100% duty cycle, precluding use of the 300 kHz band by other devices. ON Semi fails to appreciate the fact that the Listen Before Transmit ("LBT") spectrum access protocol is useless where a device, such as a hearing aid, is operating 100% of the time.

Second, the wireless hearing aid proposal is contrary to rules that ETSI adopted and the FCC proposed for the 401-402 and 405-406 MHz wing bands, which wisely are limited to non-voice communications. *See* ETSI Standard EN 302 537-1 at 11 ¶ 3.1 (MEDS service permits non-voice communications only); *see also Investigation of the Spectrum Requirements for Advanced Medical Technologies*, Notice Of Proposed Rulemaking, Notice Of Inquiry And Order, FCC 06-103 ¶ 25 (July 18, 2006).

Third, ON Semi's interference analysis is flawed. As the FCC well knows, the *interference* range for a device that has a 1 meter *communications* range is much

greater than one meter – typically in excess of 5 meters.[1] As a result, not only would ON Semi's proposal severely limit the spectrum available for other medical users in the band, but it also would make it difficult for wireless hearing aid users to avoid interfering with each other.

Fourth, there are other more viable options for wireless hearing aids, including inductive techniques and RF approaches currently permitted under Parts 15 and 95. These approaches are used today by companies such as Oticon, Siemens and Phonak.[2] Inductive techniques, in particular, are ideal for the very short range between dual hearing aids because there is little (if any) body absorption of the inductive field.

Finally, ON Semi boldly asserts that:

> 13 European countries have authorized deployment of wireless hearing aids in one MICS channel at 404.2 MHz: – Germany, Great Britain, France, The Netherlands, Sweden, Finland, Ireland, Iceland, Portugal, Poland, The Czech Republic, Romania and Greece

ON Semi Notice of Ex Parte Presentation at 9 (Oct. 3, 2008). This assertion is contrary to what Medtronic has learned in its inquiries in Europe. With the exception of the German approval, which is under review, Medtronic believes that ON Semi's claim is not accurate. Should the FCC believe that such assertions are important to the record in this proceeding, it should conduct its own inquiries.

Also, contrary to ON Semi's claims, *see id*., the ETSI work on wireless hearing aids is proceeding *without* a New Work Item focused on the 401-406 MHz band. Use of the MedRadio band for wireless hearing aids is facing strong opposition in Europe.

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[1] Medtronic expects a communications range of up to 10 meters for MEDS devices at -16 dBm in the 401-402 and 405-406 MHz bands. In such a case, the interference range from ON Semi's 100% duty cycle devices could be 50 meters.

[2] *See* FCC Equipment Authorization Database for FCC IDs: U28STREAM01, U28FURPT01, U28FUITE01, U28FUBTE01, U28AR12712 (Oticon grants); SGI-WL200AP, SGI-WL101, SGI-WL002ITE, SGI-WL002BTE (Siemens grants); and KWCTX9, KWC-WHSBTE, KWC-WHSITE, KWC-ICOM1 (Phonak grants). These FCC equipment authorization grants cover components of hearing assistance systems that provide binaural communications between hearing aids and support accessory devices using Bluetooth technology.

While a New Work Item for wireless hearing aids in the VHF and UHF frequency range was approved by the ETSI ERM Committee on EMC & Radio Spectrum Matters, the 401-406 MHz MedRadio band was not referenced.[3] In fact, a reference to the MedRadio band was removed from the Work Item Scope after a formal objection to its inclusion was sustained.

For these reasons, the FCC should reject wireless hearing aid operation in any portion of the 401-406 MHz MedRadio band.

Respectfully,

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[3] *See* ETSI Details of 'DTR/ERM-TG17WG3-009' Work Item (July 10, 2008).