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May 23, 2008

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VIA ELECTRONIC FILING

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

**Re: *Ex parte* Notice: Investigation of the Spectrum Requirements for
Advanced Medical Technologies – ET Docket No. 06-135
Amendment of Parts 2 and 95 of the Commission’s Rules To Establish
The Medical Data Service at 401-402 and 405-406 MHz – RM-11271**

Dear Ms. Dortch:

An *ex parte* meeting between representatives of Medtronic, Inc. and Commission staff occurred on May 22, 2008. David Hilliard and the undersigned, as counsel to Medtronic, met with the following members of the Commission’s Office of Engineering and Technology: Julius Knapp, Geraldine Matise, Bruce Romano, Mark Settle, and Gary Thayer.

Medtronic presented excerpts from a video that demonstrates the benefits of Conexus™ Wireless Telemetry to medical professionals. The transcript and still images from the video are provided in the attachment to this Notice. The video shows that wireless implantable medical device reliability is a critical concern for the devices must reliably provide diagnostic, therapeutic, and RF communications functionality for five or more years. To achieve such an extended useful life, implantable devices must use all available tools – such as listen before transmit and adaptive frequency agility – to ensure that communications are successfully received.

Also, far from being RF engineers, physicians, nurses, and technicians must deal with numerous patient issues during the implant procedure and must promptly address unexpected complications that can occur during major surgery. Finally, the RF environments in which these devices need to operate changes constantly. Wireless communications between separate, uncoordinated implantable medical devices and programmer/controllers will be occurring in close proximity – possibly within the same operating suite.



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Medtronic also discussed the recent *ex parte* submissions from ON Semiconductor Corporation and Transoma Medical Inc, and reiterated the views that Medtronic provided in prior *ex parte* filings.

Sincerely,

John W. Kuzin

John W. Kuzin

Att.

cc: Julius Knapp
Geraldine Matisse
Bruce Romano
Mark Settle
Gary Thayer

Medtronic Conexus™ Wireless Telemetry Video

AUDIO TRANSCRIPT

Narrator: For many years Medtronic has led the industry with medical technology that helps to alleviate pain, restore health, and extend life for millions of people around the world.

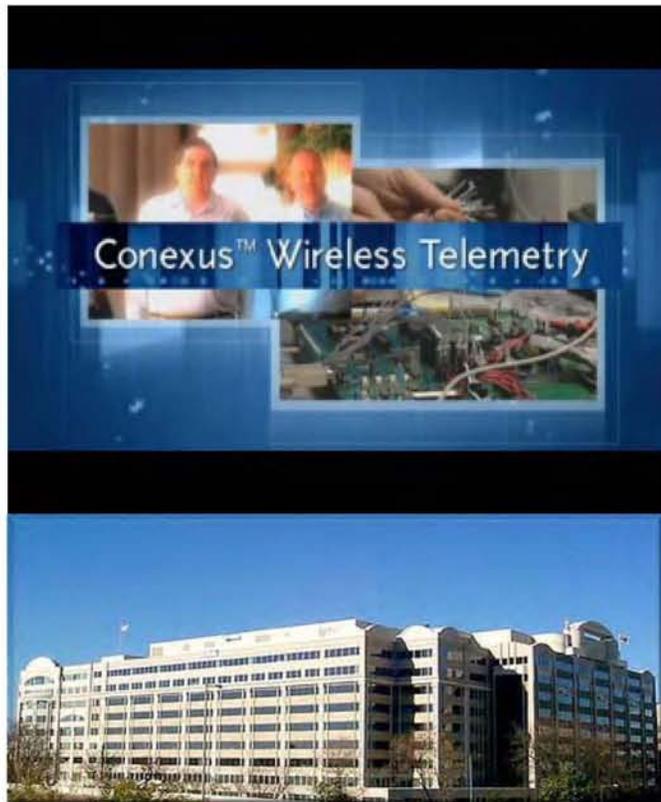
Narrator: Now, with wireless technology, Medtronic's latest devices – the Concerto CRT-D and the Virtuoso ICD – offer greater efficiencies for physicians and increased safety for patients.

Narrator: Being able to program and monitor devices wirelessly is an exciting new advancement in the industry of implantable medical devices but Medtronic wanted to take the time to do wireless the right way.

VISUALS



Narrator: Medtronic engineers worked for over 10 years to develop Conexus Wireless telemetry. Working with the FCC, one priority was to develop a designated radio frequency band for implantable medical devices. The Medical Implant Communication Service--or MICS band--was the result. A radio frequency band designated for implantable medical devices that will not experience interference from other common wireless devices such as cordless phones and baby monitors. Conexus Wireless Telemetry has SmartRadio technology which offers 10 channels for device communication and frequency agility for real-time interference avoidance.



Narrator: With the development of wireless technology there are several improvements that can be realized in the implant procedure.



Narrator: Until recently, standard implant procedure has required placement of the RF programming head into the sterile field in order to perform system testing. During this time sensing and pacing thresholds, lead impedances, and defibrillation thresholds are measured.



Narrator: Preparing the programming head for the sterile field can be cumbersome and time-consuming.



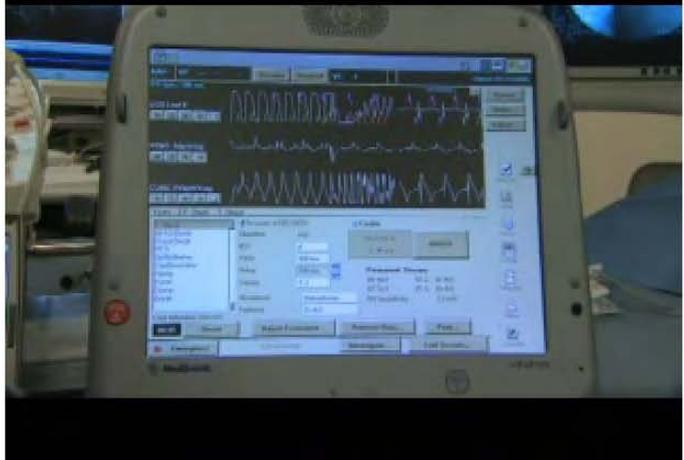
Trey Hunter: We had to grab the bag, impede the physician where he's kind of working in his area, come across the table, hang it, pull away the rep, you know, where she had to come over and drop the head into the bag and everything.



Narrator: Use of Conexus Wireless telemetry makes the programming head unnecessary which means device testing and programming are streamlined. Implant time and energy can be saved, and patient safety may be increased by removing one more item from the sterile field.



Narrator: While the idea of wireless technology was an exciting concept, Medtronic knew they must be prepared for the probability of significant expansion of wireless device use in medical facilities. Clinicians would need to be sure that interference would not disrupt communication during critical moments.



Narrator: This important concern led Medtronic to invest years of research and testing into developing Conexus technology.



Narrator: Medtronic helped to prepare for other medical device companies to eventually enter the MICS band by assisting with the development of requirements. All devices within the MICS band are required to have multiple channels for communication, “listen-before-talk” technology and the ability to hop channels to avoid interference.



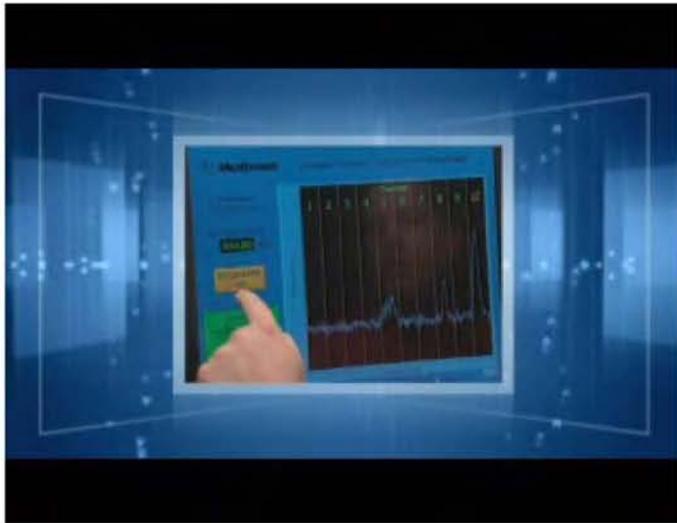
Narrator: Dr. George Crossley at Baptist Hospital in Nashville, Tennessee, helped pioneer the use of Conexus Wireless Telemetry during implantation of cardiac devices. His experience tested the reliability of the technology.



Dr. Crossley: MICS will allow the programmer to lock onto a specific pulse generator by serial number and it only allows you to communicate with that. Even though you might have an operating suite with 3 or 4 patients in it, or a waiting room with a whole bunch of patients in it, you're not going to have competition.



Narrator: In addition to the designated radio frequency band, Medtronic's SmartRadio Technology, has ten available channels within the MICS frequency band in which to establish a telemetry session and continuous telemetry is assured by automatically moving to the next clearest channel if noise or interference occurs. This ability to scan and assess the channel activity allows multiple simultaneous programming sessions to take place within close proximity without threat of interference.



Narrator: The best way to highlight the benefits of Conexus Wireless Telemetry is to demonstrate the technology in action during an implant procedure. In this case, Dr. Crossley implants a Medtronic Virtuoso ICD in a typical cath lab, filled with sophisticated hospital equipment that potentially could cause electromagnetic interference.





Narrator: When it is time to enter device parameters, the Medtronic programmer is activated. Note that communications are completely wireless, without added connections, equipment, or cables.



Narrator: In contrast, with non-wireless procedures, the programmer head is bagged and then introduced into the sterile field.



Narrator: The procedure continues and then ventricular fibrillation is wirelessly induced to check the ICD for detection and defibrillation efficacy.



Narrator: Dr. Crossley completes ICD and lead connections and begins closing the pocket. Simultaneously, final device parameters are entered into the programmer.



Dr. Crossley: I actually sew right up until the induction and then start again as soon as we get sinus rhythm while the data is being prepared. The other time savings, is that while I'm closing, we can discuss how the device is going to be programmed and actually have it programmed by the time we finish closing, as opposed to when we finish testing, we close the wound and then the programming begins, which is what we've typically done for years....We can do simultaneous tasks, instead of sequential tasks.



Narrator: Communications between the device and programmer continue as the patient is wheeled out of the surgical suite. As shown in this case, the use of Conexus Wireless Telemetry results in a more convenient and streamlined procedure.



Dr. Crossley: It probably shortens my time of the procedure by five minutes or more and probably shortens the total duration the patient is in the room by somewhere between 10 and 15 minutes, by allowing us to do multiple tasks at the same time. That is, I can be sewing while the nurse or the Medtronic technician is programming the device.



Question: Why would you choose a wireless implant over a traditional implant?

Crossley: I think the better question is why you would ever choose a non-wireless device, if you've got a wireless device available?



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