

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of

Starkey Laboratories, Inc.
Request for Waiver of
Section 15.247(a)(2) of the
Commission's Rules

Docket No. 09-38

To: Marlene Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.,
Washington, D.C. 20554.

From: Jeffrey Solum
Starkey Laboratories
6600 Washington Ave. So.
Eden Prairie, MN 55344

Date: April 29th, 2010

Dear Ms Dortch,

Pursuant to Section 1.1206 of the Commission's rules this ex parte notice is being filed on behalf of Starkey Laboratories Inc.

On Wednesday April 21st, 2010 Starkey Laboratories met with Julius Knapp and members of his staff as well as legislative affairs person Timothy Strachan of the FCC regarding the two proceedings RM 11523 rule making and ET Docket No. 09-38 request for waiver. In that meeting Starkey was asked for additional information regarding its method of listen before use algorithm when communicating with a hearing instrument. That information is provided on the following page of this letter.

Jeff Solum
Wireless System Architect
Starkey Laboratories, Inc.

Starkey Laboratories, Inc.
April 29th, 2010

Starkey Laboratories, Inc. (Starkey) met with the FCC OET staff on April 21st 2010 to discuss Starkey's Request for Waiver of Section 15.247(a)(2) of the Commission Rules, ET Docket No. 09-38. During the meeting Starkey described a method of adaptive frequency selection that is used by its manufactured hearing instruments when communicating with an assistive listening device or other device to maintain clear and reliable communication.

Starkey was asked to submit more details in relation to its Request for a Waiver of Part 15.247(a)(2) to occupy less than the required 500 KHz minimum bandwidth, while maintaining the power spectral density requirement of 8 dBm/3 KHz.

Starkey's base unit maintains a list of available channels within the 902 – 928 MHz band. The channel spacing is on the order of 900 KHz. Each channel is interrogated for interference using a separate receiver that scores the channels in rank order of "least interfered with". In other embodiments it uses a time division scheme to interrogate potential channels to find the "least interfered with". It then selects the channel for use as well as one or more potential alternate channels that may be used if interference should suddenly arrive on the channel. Once a channel is selected, a listen before use algorithm is used to determine if the current channel selected for communication is sufficient for maintaining a quality link on the channel while preventing interference of systems occupying the channel.

In some embodiments a listen before talk algorithm is employed on a per packet basis to prevent unnecessary retries of critical information in the face of interference thus reducing the amount of interference to others from the Starkey devices. The receiver used for this purpose has a sensitivity of approximately -90 dBm.

Channel maintenance messages are inserted periodically (greater than once per second) within the payload streams that update the alternate channels in case certain signal strength thresholds or other metrics are exceeded on the current channel. In this way Starkey hearing instruments can maintain a reliable communication link between various devices without causing harm to other devices attempting to use a similar channel. Also Starkey prevents other devices from interfering with its system by moving away from interference and onto another alternate channel predetermined to be free of interference.

Respectfully submitted,

Jeff Solum
Wireless System Architect
Starkey Laboratories, Inc.