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January 23, 2004

Mr. Tim Johnson
ACTB
American Telecommunications Certification Body, Inc.
6731 Whittier Avenue
McLean, VA 22101

RE: permissive change for BQI01DT-4500, BQI02DT-7000, BQI01DR-10000, BQI01DR-10100

Dear Mr. Johnson:

Cirronet Incorporated, is the designer and manufacturer of this product. GE Medical is the owner and installer of the product. (Note that the submission was actually entered under their older company name - Data Critical.

This submission qualified under the WMTS rules for 608-614 MHz operation. The system is basically a 15.247-type frequency hopping link with the typical Access-Point-talking-to-many-remotes-topology. At the time of submission Cirronet used a total of 32 channels in their hop-set ranging from 608.6656 MHz to 612.898133 MHz. Channel centers were spaced 136.533 KHz. These channels were chosen because of anticipated out-of-band occupancy issues and the fact that their hop-set length could not exceed 32 channels. Cirronet initially thought that they would need about 600 KHz of bandwidth at the lower band-edge to meet out of band emissions. Starting at 608.6656 MHz and working up 32 channels in 136.533 KHz steps gave them their highest channel - 612.898133 MHz.

Since that submission, Cirronet has learned two things that lead them to request extra channels for their hop-set. The first is that they were too conservative in requiring 600 KHz of guard bandwidth at the lower edge of the band. Based on their reading of the submission test results, it now appears that Cirronet only needed approximately 400 KHz of guard band. Given their channel spacing, this allows the addition of 2 channels at the lower end of the band and up to 5 new channels at the top of the band to their hop-set. Cirronet will still have a hard-coded limit of 32 channels in their hop-set but the idea would be to drop some of the middle channels (see next paragraph) and use more of the edge frequencies in normal operation.

The other factor driving them to request extra channels is the availability of spectrum at 608-614 MHz in many hospitals. GE Medical has found that many of the incumbent radios in typical hospital installations occupy the middle of this band. This effectively leaves only the outer edges of the band for GE's system to operate. The 1.5 MHz sub-band operation required for all 95H certified products working in this band can sometimes be used to mitigate the problem. However, Cirronet thinks a better solution is to add channels near the band edges, redesign the hop-sets to more effectively utilize the spectrum near those edges, and leave the incumbents to occupy the middle of the band. This way, mutual interference will be avoided and the spectrum will be better shared.

Cirronet only proposes adding channels to the hop-set. The actual hopping mechanism, acquisition technique, multiple access techniques, etc. outlined in the original submission remains unchanged.

Sincerely,

Louis A Feudi
Operations Manager