

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT AND TRIAL APPEAL BOARD

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OTICON MEDICAL AB; OTICON MEDICAL LLC;  
WILLIAM DEMANT HOLDING A/S,

Petitioner

v.

COCHLEAR BONE ANCHORED SOLUTIONS AB

Patent Owner

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Case No. IPR2017-01018<sup>1</sup>  
U.S. Patent No. 7,043,040 B2

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**PETITIONER'S REPLY TO PATENT OWNER'S SUPPLEMENTAL  
RESPONSE ADDRESSING CLAIMS 7-10**

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<sup>1</sup> Case No. IPR2017-01019 has been consolidated with the instant proceeding. To avoid confusion, certain papers are cited herein using Number "-01018" (e.g., "-01018 Pet.") to distinguish from papers associated with IPR2017-01019.

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## **I. Argument Summary**

Patent Owner's Supplemental Response ("Supp. Resp.") does not dispute that claims 7-10 broadly recite aspects of hearing aid technology that were well known prior to the critical date. Indeed, the broad language of claims 7-10 no more than mirrors a single sentence of the '040 patent description, which provides no technical detail whatsoever. Any attempt to practice claims 7-10 would, at best, rely entirely on teachings of the prior art and knowledge in the public domain. Patent Owner attempts to distract from the straight-forward combinations of the instituted grounds by mischaracterizing the state of the art and by engaging in obviousness analysis that is contrary to law.

## **II. Claim Construction Issues**

Patent Owner offers these constructions: "digital signal processing means" (claim 7) – as meaning "a digital signal processor"; "the signal processing means adapts frequency characteristics" (claim 8) – meaning the "digital signal processing means" of claim 7, with the rest of the claim being interpreted in accordance with its ordinary meaning; "signal processing means for actively counteracting acoustic feed-back problems in the apparatus" (claim 9) – meaning "a digital signal processor configured to actively counteract acoustic feedback problems in the apparatus"; and "directivity means" (claim 10) – meaning "a directivity dependent microphone and/or digital signal processor." Supp. Resp. at 3-5.

For purposes of this IPR proceeding only, and without waiver of its right to argue for indefiniteness in district court, Petitioner respectfully submits that the Board can and should properly address the instituted grounds for claims 7-10 based on Patent Owner's broad constructions.

### **III. Claims 7, 9 - Unpatentable over Vaneecloo, Carlsson and Leysieffer**

Claim 7 recites: "... wherein the electronic circuitry [or claim 6] comprises digital signal processing means." With respect to claim 6, the Board recognized that "modifying the BAHA device of Vaneecloo and Carlsson to include an analog-to-digital converter as taught by Leysieffer would have been obvious to a skilled artisan, *inter alia*, **to obtain advantages associated with digital processing....**" *See* -01018 Inst. Dec'n at 25 (emphasis added). This conclusion is fully supported by the record and clearly extends to the "digital signal processing means" broadly recited in claim 7. The '040 patent fails to disclose any specific DSP circuitry, and both experts in this case have acknowledged that benefits of digital processing in hearing aid devices were known prior to the critical date. Ex. 1121, 49:8-51:5, 57:23-58:18, 60:16-21; Ex. 1002, ¶¶ 155-156, 158-162, 164.

Nonetheless, Patent Owner illogically asserts that a POSA would not "have been motivated to modify [a BAHA] to include a DSP because there would be no reason to do so." Supp. Resp. at 5-6. Patent Owner more specifically alleges that including a DSP in a BAHA would only be beneficial "(1) if sending sound

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