

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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NATUS MEDICAL INC., NATUS NEUROLOGY INC.,  
EMBLA SYSTEMS LLC, and EMBLA SYSTEMS LTD.,  
Petitioner,

v.

NOX MEDICAL EHF,  
Patent Owner.

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Case IPR2016-01822  
Patent 9,059,532 B2

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Before ERICA A. FRANKLIN, SUSAN L. C. MITCHELL, and  
AMANDA F. WIEKER *Administrative Patent Judges*.

MITCHELL, *Administrative Patent Judge*.

DECISION  
Institution of *Inter Partes* Review  
37 C.F.R. § 42.108

## I. INTRODUCTION

### *A. Background*

Petitioner Natus Medical Inc., Natus Neurology Inc., Embla Systems LLC, and Embla Systems Ltd. (collectively, “Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1–9 and 13 (the “challenged claims”) of U.S. Patent No. 9,059,532 B2 (Exhibit 1001, “the ’532 patent”). See 35 U.S.C. §§ 311–319. Patent Owner Nox Medical Ehf (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). To institute an *inter partes* review, we must determine that the information presented in the Petition shows “a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). For the reasons set forth below, we conclude that Petitioner has established a reasonable likelihood that it would prevail in showing the unpatentability of the challenged claims of the ’532 patent. Therefore, we institute an *inter partes* review for claims 1–9 and 13 of the ’532 patent on the ground identified in the Order section of this Decision.

### *B. Related Proceedings*

The parties indicate that the ’532 patent was asserted against Petitioner in *Nox Medical Ehf. v. Natus Neurology Inc.*, Civ. Action No. 15-709-RGA (D. Del. 2015). Pet. 1; Paper 5, 2.

### *C. The ’532 Patent (Ex. 1001)*

The ’532 patent involves a belt connector for use on a human or animal that electrically connects an electrode belt to a biometric device for measuring biosignals, such as cardiographic measurements, or for

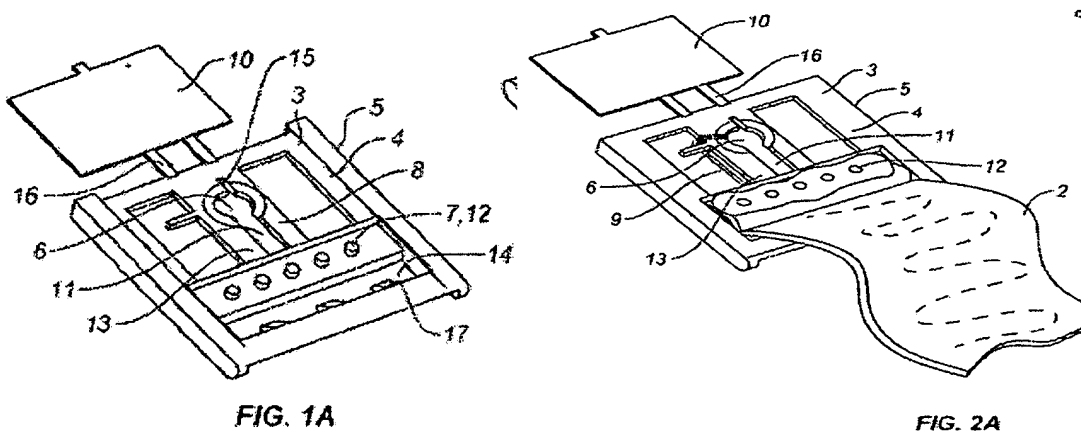
performing respiratory inductive plethysmography. *See* Ex. 1001, Abst., 1:5–8, 22–24, 2:20–23. Such a belt connector is preferably made from one single piece of “a molded plastic frame having a front side and a rear side, the frame having a receiving hole, having radial flexibility to function as a female snap button fastener for receiving and fastening on a front side of the frame a male snap protrusion.” *Id.* at 1:24–32. The radial flexibility is further described as achieved by one or more slots formed by one or more elongated members “having flexibility transverse to its longitudinal axis (e.g. by being sufficiently thin), thus imparting flexibility to the width of the hole.” *Id.* at 3:6–10.

The '532 patent further describes

fastening means for fastening to the frame a belt end of said electrode belt, and a member adjacent to said snap fastener receiving hole to engage an electrode wire end electrically connected to said belt such that said wire end is in electrical contact with said hole, either by extending into the hole or coming in electrical contact e.g. through a bridging conductor, with a conducting male snap fastener inserted in said receiving hole.

*Id.* at 1:33–40, *see id.* at 3:16–19.

Figures 1A and 2A, set forth below, and their descriptions as set forth in the '532 patent provide further elucidation concerning the claimed electrode belt and belt connector.



Figures 1A and 2A depicted above show different embodiments of the belt connector. *See id.* at 4:55–57, 64–65. Specifically, Figures 1A and 2A show the following:

[A] biometric belt connector (1) is electrically connected to an electrode belt (2). The connector (1) may comprise a molded plastic frame (3) having a front side (4) and a rear side (5), a shaped circular or semi-circular hole (6) with radial flexibility to function as a female snap button fastener, fastening means (7) which comprise a ridge member (12). . . . The frame (3) may include two members (8, 13) adjacent to said hole (6), the two members (8, 13) forming a slot (11) extending from the hole and a second slot (15) across from the first slot (11).

The elongated members and slots provide the hole with sufficient flexibility (i.e. elasticity in the width of the hole) to function as a female snap fastener. The member (13) also functions to engage an electrode wire end (9) from the belt end electrically connecting the belt with the hole and which comes in electrical contact with a conducting male snap fastener inserted in said hole. The connector further comprises a belt slot (14) with teeth members or pins (17), through which slot a loop of said belt (2) can be inserted such that it is held by the teeth/pins when pulled back, to adjust the length of the belt.

The connector further comprises a shield member (10) which may be molded in one piece with the frame (3) and joined to the frame with foldable hinges (16) such that the

shield member can be folded over to cover the rear side of the hole and wire end.

*Id.* at 5:4–33 (emphases omitted).

*D. Illustrative Claims*

Of the challenged claims, claim 1 is the only independent claim of the '532 patent. The remaining challenged claims 2–9 and 13 depend directly or indirectly from claim 1. Claim 1 is illustrative of the challenged claims and recites (with pertinent portions emphasized):

1. An electrode belt and a belt connector for electrically connecting a conductor of the electrode belt to a male portion of a snap connector electrode connected to a biometric device, the belt connector comprising:

a molded plastic frame including a *receiving hole having radial flexibility*, the receiving hole being configured to function as a female snap button fastener for receiving and fastening the frame to a protrusion of the male portion of the snap connector electrode,

a fastener configured to fasten the frame to a first end of said electrode belt, and

an engaging member adjacent to said receiving hole, the engaging member engaging the conductor of the electrode belt *by the conductor passing through the receiving hole while being wrapped around the engaging member, such that when the male portion of the snap connector electrode penetrates the receiving hole, the conductor is forced into physical contact with at least a lateral surface of the male portion of the snap connector electrode,*

wherein radial flexibility of said receiving hole is achieved by one or more slot extending from said hole, and *wherein said receiving hole and one or more slot are formed by at least one elongated member having*

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