

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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IEE SENSING, INC.,  
Petitioner,

v.

DELPHI TECHNOLOGIES, INC.,  
Patent Owner.

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Case IPR2018-00179  
Patent 8,500,194 B2

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Before HYUN J. JUNG, CARL M. DeFRANCO, and  
JAMES J. MAYBERRY, *Administrative Patent Judges*.

JUNG, *Administrative Patent Judge*.

DECISION TO INSTITUTE  
*35 U.S.C. § 314(a)*

## I. INTRODUCTION

IEE Sensing, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting institution of an *inter partes* review of claims 1–8 of U.S. Patent No. 8,500,194 B2 (Ex. 1001, “the ’194 patent”). Delphi Technologies, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”). Under 35 U.S.C. § 314, an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

Upon consideration of the Petition and Preliminary Response, and for the reasons explained below, we determine that Petitioner has shown that there is a reasonable likelihood that it would prevail with respect to at least one of the challenged claims. As such, we institute an *inter partes* review of claims 1–8 of the ’194 patent as challenged in the Petition.

## II. BACKGROUND

### A. *Related Proceedings*

The parties indicate that there are no related judicial or administrative proceedings. Pet. iii; Paper 5, 2.

### B. *The ’194 Patent (Ex. 1001)*

The ’194 patent issued August 6, 2013, from an application filed October 20, 2010, and claims priority to a provisional application filed November 20, 2009. Ex. 1001, [22], [45], [60], 1:8–11.

The ’194 patent relates to “seat assemblies using seat heating elements for both seat heating and occupant detection wherein the occupant detection circuit is electrically isolated from the seat heating circuit during occupant

sensing.” Ex. 1001, 1:17–21. According to the ’194 patent, “[o]ccupant detection systems using a heating element for both seat heating and occupant detection are known.” *Id.* at 1:25–26.

In one embodiment of the ’194 patent, a seat assembly has a seat cushion providing a seat surface, and heating element 14 is adjacent the seating surface. *Id.* at 3:6–12. Figure 3 of the ’194 patent is reproduced below.

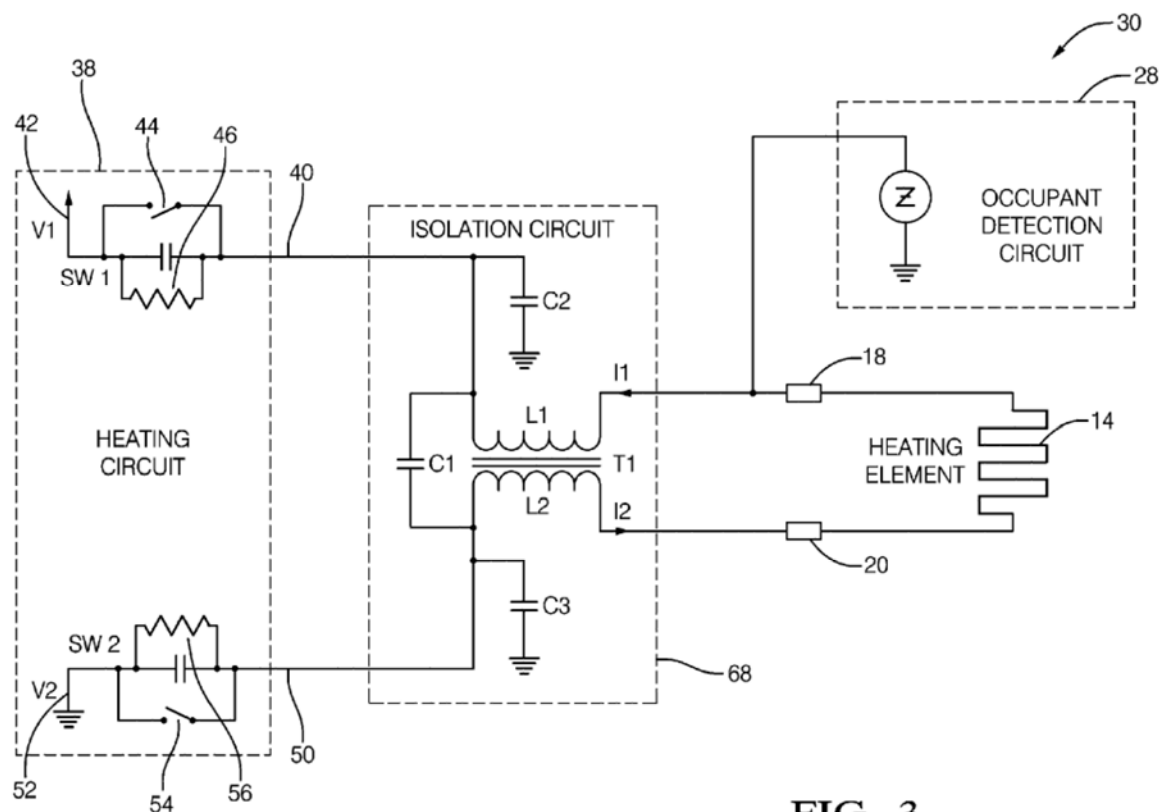


FIG. 3

Figure 3 is a “block diagram of an occupant detection/seat heating system.” *Id.* at 2:66–67. Occupant detection circuit 28 detects an object or occupant by measuring the field impedance of heating element 14. *Id.* at 3:62–64. Heating circuit 38 applies heating current to heating element 14 when switches 44, 54 are closed. *Id.* at 3:51–55. Isolation circuit 68 is

interposed between heating circuit 38 and heating element 14. *Id.* at 3:38–39.

Isolation circuit 68 is configured to prevent heating circuit 38 from influencing occupant detection circuit 28. *Id.* at 4:29–31. As used in the '194 patent,

influencing the occupant detection circuit 28 means that the electrical load or impedance of the heating circuit 38 does not combine with the electric impedance of the heating element 14 in a way that would influence the detection of an occupant by the occupant detection circuit 28 by, for example, changing the apparent electric impedance of the heating element 14 measured by the occupant detection circuit 28.

*Id.* at 4:31–36. In isolation circuit 68, “[s]teady current flows through a first inductor L1 and a second inductor L2, where L1 and L2 are inductively coupled . . . forming a common mode choke T1.” *Id.* at 3:55–58.

### *C. Illustrative Claim*

The '194 patent has 8 claims, all of which Petitioner challenges. Claims 1, 4, and 8 are independent, and claim 1 is reproduced below.

1. An occupant detection system, comprising:
  - a seat assembly comprising a seat cushion having a seating surface;
  - a heating element adjacent the seating surface, said heating element formed of electrically conductive material;
  - a heating circuit electrically coupled to the heating element, said heating circuit configured to supply an electrical current to the heating element effective to generate heat by the heating element;
  - an occupant detection circuit electrically coupled to the heating element, said occupant detection circuit configured to detect an occupant presence near the heating element; and
  - an isolation circuit interposed between the heating circuit and the heating element, said isolation circuit configured to prevent the heating circuit from influencing the occupant

detection circuit, said isolation circuit comprising a common mode choke, wherein the common mode choke comprises a first inductor inductively coupled to a second inductor such that current in the first inductor induces current in the second inductor, wherein the common mode choke is characterized as a four terminal device.

Ex. 1001, 7:2–24.

*D. Asserted Grounds*

Petitioner challenges, under 35 U.S.C. § 103, claims 1–8 as unpatentable over (1) Nix<sup>1</sup> alone, or (2) Kincaid<sup>2</sup> in view of Nix. Pet. 2. In further support of its proposed grounds, Petitioner relies on a Declaration of Thomas G. Matheson (Ex. 1003).

Petitioner states that the “level of ordinary skill in the art is evidenced by the references” and set forth in its declarant testimony. Pet. 2 (citing Ex. 1003 ¶¶ 35–39). Patent Owner also proposes a level of ordinary skill with reference to its Declaration of Scott Andrews. Prelim. Resp. 7–8 (citing Ex. 2002 ¶¶ 48–52). At this stage, we agree with Petitioner that the level of ordinary skill in the art is evidenced by the references. *See* Pet. 2.

### III. ANALYSIS

*A. Claim Construction*

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs. LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard).

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<sup>1</sup> US 2008/0186282 A1, published Aug. 7, 2008 (Ex. 1006)

<sup>2</sup> US 2009/0295199 A1, published Dec. 3, 2009 (Ex. 1007).

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