

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SL CORPORATION,
Petitioner,

v.

ADAPTIVE HEADLAMP TECHNOLOGIES, INC.,
Patent Owner.

Case IPR2016-00193
Patent 7,241,034 C1

Before MICHAEL P. TIERNEY, *Vice Chief Administrative Patent Judge*,
RAMA G. ELLURU and SCOTT C. MOORE, *Administrative Patent
Judges*.

MOORE, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

SL Corporation (“Petitioner”) filed a Petition (Paper 2; “Pet.”) to institute an *inter partes* review of claims 3–39 of U.S. Patent No. 7,241,034 C1 (Ex. 1001; “the ’034 patent”). Adaptive Headlamp Technologies, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 9; “Prelim. Resp.”). The Board instituted a trial as to claims 7–10, 12–21, 23, 24, and 28–39 of the ’034 patent. Paper 10 (“Dec. on Inst.”).

After institution of trial, Patent Owner filed a Patent Owner Response (“PO Resp.”) to the Petition. Paper 16. Petitioner filed a Reply (“Reply”) to the Patent Owner Response. Paper 20. Petitioner relies on the Declaration of Harvey Weinberg (Ex. 1002) in support of its Petition, and the Reply Declaration of Harvey Weinberg (Ex. 1035) in support of its Reply. Patent Owner relies on the Declaration of Joe Katona (Ex. 2002) in support of its Response.

An oral hearing was held on February 23, 2017. The record contains a transcript of this hearing. Paper 25 (“Tr.”).

We have jurisdiction over this dispute under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. Petitioner has shown by a preponderance of the evidence that claims 7–10, 12–21, 23, 24, and 28–39 are unpatentable under 35 U.S.C. § 103(a).

II. BACKGROUND

A. *Related Proceedings*

The ’034 patent was subject to an *ex parte* reexamination (Control No. 90/011,011) and an *inter partes* reexamination (Control No. 95/001,621).

See Pet. 1–2; Ex. 1001. These reexamination proceedings were merged and resulted in issuance of an *inter partes* reexamination certificate. See *id.*

The '034 patent is asserted by Patent Owner in several pending litigations in the U.S. District Court for the District of Delaware. Pet. 3–4; Paper 5. Petitioner is not a party to any of these Delaware litigations. See *id.* However, Petitioner identifies Hyundai Motor America and Hyundai Motor Company as being real parties in interest. Pet. 3. Hyundai Motor America is a named defendant in one of the Delaware litigations. *Id.*

B. The '034 Patent

The '034 patent discloses a structure and method for operating a directional control system for vehicle headlights. Ex. 1001, Abstract. Figure 1 of the '034 patent is reproduced below.

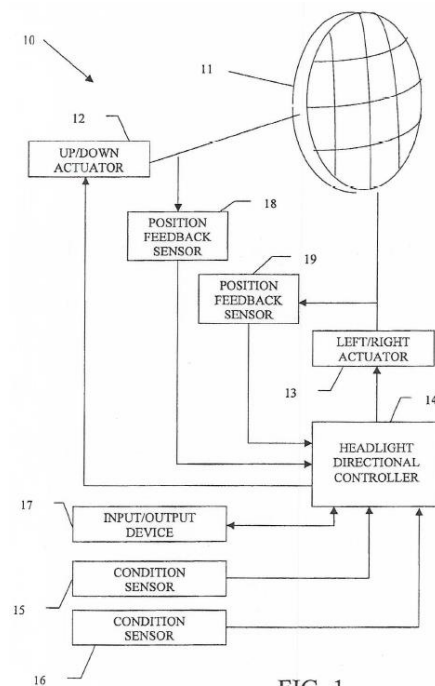


Figure 1 is a block diagram of automatic directional control system 10 for a vehicle headlight. *Id.* at 2:28–30, 63–65. Headlight 11 is mounted on a

vehicle in a manner that permits the direction of projected light to be adjusted by actuators 12 and 13. *Id.* at 3:10–13, 26–28. Condition sensors 15 and 16 sense operating conditions of the vehicle, and generate electrical signals that are responsive to the sensed operating conditions. *Id.* at 3:61–64. Headlight directional controller 14 receives the electrical signals generated by condition sensors 15 and 16, and responds by selectively operating actuators 12 and 13 to adjust the position of headlight 11. *Id.* at 3:49–58. The disclosed automatic directional control system also includes feedback sensors 18 and 19, which generate signals representative of the actual up/down and left/right position of headlight 11, and supply these signals to controller 14. *Id.* at 4:8–24. These feedback signals can be used to calibrate the disclosed system. *Id.* at 6:10–17.

C. *Challenged Claim*

Challenged claim 7 is independent, and the remaining challenged claims depend, directly or indirectly, from claim 7. Claim 7 is reproduced below.

7. An automatic directional control system for a vehicle headlight, comprising:

two or more sensors that are each adapted to generate a signal that is representative of at least one of a plurality of sensed conditions of a vehicle such that two or more sensor signals are generated, said sensed conditions including at least a steering angle and a pitch of the vehicle;

a controller that is responsive to said two or more sensor signals for generating at least one output signal only when at least one of said two or more sensor signals changes by more than a predetermined minimum

threshold amount to prevent at least one of two or more actuators from being operated continuously or unduly frequently in response to relatively small variations in at least one of the sensed conditions; and

said two or more actuators each being adapted to be connected to the vehicle headlight to effect movement thereof in accordance with said at least one output signal;

wherein said two or more sensors include a first sensor and a second sensor; and

wherein said first sensor is adapted to generate a signal that is representative of a condition including the steering angle of the vehicle and said second sensor is adapted to generate a signal that is representative of a condition including the pitch of the vehicle.

D. References Relied Upon

Petitioner relies on the following references:

References	Exhibit No.
UK Published Patent Application GB 2 309 774 A (pub. Aug. 6, 1997) (“Takahashi”)	1019
Japan Patent Application Publication H10-324191 (pub. Dec. 8, 1998) (“Kato”)	1024
US Patent 6,229,263 B1 (iss. May 8, 2001) (“Izawa”)	1026
US Patent 6,293,686 B1 (iss. Sept. 25, 2001) (“Hayami”)	1027
Purported admissions by the Patent Owner in the '034 patent specification (“Patent Owner Admissions”)	1001

Pet. 13; Dec. on Inst. 36–37.

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