

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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UNIFIED PATENTS, LLC,  
Petitioner,

v.

TORCHLIGHT TECHNOLOGIES LLC,  
Patent Owner.

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IPR2022-01500  
Patent 11,208,029 B2

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Before JON M. JURGOVAN, JASON W. MELVIN, and  
AARON W. MOORE, *Administrative Patent Judges*.

MELVIN, *Administrative Patent Judge*.

DECISION  
Granting Institution of *Inter Partes* Review  
*35 U.S.C. § 314*

## I. INTRODUCTION

Unified Patents, LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1, 2, 10–13, 23, and 24 of U.S. Patent No. 11,208,029 B2 (Ex. 1001, “the ’029 patent”). Torchlight Technologies LLC (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). Pursuant to 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), we have authority to determine whether to institute review.

An *inter partes* review may not be instituted unless “the information presented in the petition . . . and any response . . . shows that there is 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 shown a reasonable likelihood it will prevail in establishing the unpatentability of at least one challenged claim, and we institute *inter partes* review.

### A. REAL PARTIES IN INTEREST

Petitioner identifies itself as the real party in interest. Pet. 1. Patent Owner also identifies itself as the real party in interest, noting that it is the exclusive licensee of the ’029 patent, which is owned by Yechezkal Evan Spero. Paper 6, 1 (Patent Owner’s Mandatory Notices). Patent Owner challenges Petitioner’s identification, and we discuss that challenge below. *See infra* at 16 (§§ II.E, II.F).

### B. RELATED MATTERS

The parties identify the following related litigation: *Torchlight Technologies LLC v. Daimler AG et al.*, No. 1:22-cv-00751 (D. Del); *Torchlight Technologies LLC v. General Motors LLC et al.*, No. 1:22-cv-

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00752 (D. Del.). Pet. 2; Paper 6, 1. Patent Owner additionally identifies *Volkswagen Group of America, Inc. v. Yechezkal Evan Spero*, IPR2022-01586 (PTAB October 3, 2022). Paper 6, 1.

### C. THE '029 PATENT

The '029 patent is titled “Adaptive Headlight System” and relates to motor vehicle headlamps with LED light sources and a processor to control the headlamp light pattern. Ex. 1001, codes (54), (57). The specification more generally describes a lighting device that “incorporates one or more discrete light sources and their ancillary optical and electrical control equipment in an integrated illuminating element.” *Id.* at 13:34–36. The combined unit is referred to as a Digital Lighting Fixture (DLF). *Id.* at 18:29–33.

The specification further describes transportation vehicle applications. *Id.* at 50:49–57:35. One such application involves a DLF headlamp device that includes a cluster of LEDs to illuminate around a corner. *Id.* at 51:54–63, 54:8–15. With LEDs having a variety of aims, the headlamp’s light distribution pattern may be controlled based on a number of factors, including location data from a GPS system, providing information about upcoming curves in the road. *See id.* at 51:54–67, 54:15–22.

### D. CHALLENGED CLAIMS

Challenged claim 1 is independent and is reproduced below:

1. A system, for a motor vehicle, comprising:  
a plurality of headlamps, each comprising a plurality of LED light sources;  
one or more processors; and

a memory storing instructions that, when executed by one or more of the one or more processors, enable the one or more processors to:

receive first data, including at least map data, indicating a road curvature upcoming along a road on which the motor vehicle is traveling;

determine a light change, the change adapting a light pattern of the headlamps in at least one of color, intensity or spatial distribution to increase light in a direction of the road curvature ahead of the motor vehicle and shaping light based at least in part on the road curvature; and

control at least a first plurality of the LED light sources to provide light based at least in part on the determined light change and prior to the motor vehicle reaching the road curvature.

*Id.* at 95:56–96:8. Claims 2, 10, and 11 depend, directly or indirectly, from claim 1. *Id.* at 96:9–11, 97:39–44. Claim 12 is independent and recites limitations similar to claim 1’s. *Id.* at 97:45–62. Claim 13 depends from claim 12. *Id.* at 97:63–65. Claim 23 is independent and recites limitations similar to claim 1’s. *Id.* at 99:28–43. Claim 24 depends from claim 23. *Id.* at 99:44–46.

#### E. PRIOR ART AND ASSERTED GROUNDS

Petitioner asserts the following ground of unpatentability:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 2, 12, 13, 23, 24	103	Gotou <sup>1</sup> , Harbers <sup>2</sup>

<sup>1</sup> US 5,588,733; filed June 7, 1995, issued Dec. 31, 1996 (Ex. 1003).

<sup>2</sup> US 6,406,172 B1; filed June 22, 2000, issued June 18, 2002 (Ex. 1004).

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 2, 10–13, 23, 24	103	Heinz <sup>3</sup> , Gotou
1, 2, 10–13, 23, 24	103	Heinz, Gotou, Harbers

Pet. 6. Petitioner also relies on the Declaration of Mr. A. Brent York. Ex. 1002.

## II. ANALYSIS

### A. LEVEL OF ORDINARY SKILL IN THE ART

Petitioner asserts that ordinarily skilled artisans “would have had at least a bachelor’s degree in physics, engineering physics, mechanical engineering, electrical engineering, or a related field, and at least two years of work experience in transportation lighting.” Pet. 14 (citing Ex. 1002 ¶¶ 32–35). Patent Owner “disputes Unified’s proposed level of ordinary skill” and proposes that skilled artisans:

would have had a Master’s of Science Degree (or a similar technical Master’s Degree, or higher degree) in an academic area emphasizing electrical engineering, computer engineering, or computer science with experience or education in optics and imaging systems or, alternatively, a Bachelor’s Degree (or higher degree) in an academic area emphasizing electrical, computer engineering or computer science and having two or more years of experience in the field of optical and imaging systems.

Prelim. Resp. 16. Patent Owner, however, does not explain the significance of the differing levels of ordinary skill proposed. To the extent Patent Owner

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<sup>3</sup> German Patent DE 199 23 187 C2, issued May 3, 2001 (Ex. 1006 (certified translation); Ex. 1007 (original)).

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