

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

PORSCHE CARS NORTH AMERICA, INC.,  
Petitioner

v.

YECHEZKAL EVAN SPERO,  
Patent Owner.

---

Case IPR2023-01231  
U.S. Patent 10,894,503 B2

---

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

MOORE, *Administrative Patent Judge*.

DECISION  
Granting Institution of *Inter Partes* Review  
*35 U.S.C. § 314*  
Granting Motion for Joinder  
*35 U.S.C. § 315(c)*

## I. INTRODUCTION

Porsche Cars North America, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 20–25 and 59–64 of U.S. Patent No. 10,894,503 B2 (Ex. 1001, “the ’503 patent”). Petitioner filed also a Motion for Joinder seeking to join Petitioner as a party to *Volkswagen Group of America, Inc. v. Yechezkal Evan Spero*, IPR2023-00197 (“the VW IPR”), instituted June 21, 2023. *See* Paper 3 (“Mot.”). Yechezkal Evan Spero (“Patent Owner”) filed a Preliminary Response. *See* Paper 8 (“Prelim. Resp.”). Patent Owner did not oppose joinder. 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 and its affiliate Dr. Ing. h.c. F. Porsche Aktiengesellschaft as the real parties in interest. *See* Pet. 129. Patent Owner identifies itself and Torchlight Technologies LLC, the exclusive licensee of the ’503 patent, as the real parties in interest. *See* Paper 6, 1 (Patent Owner’s Mandatory Notices).

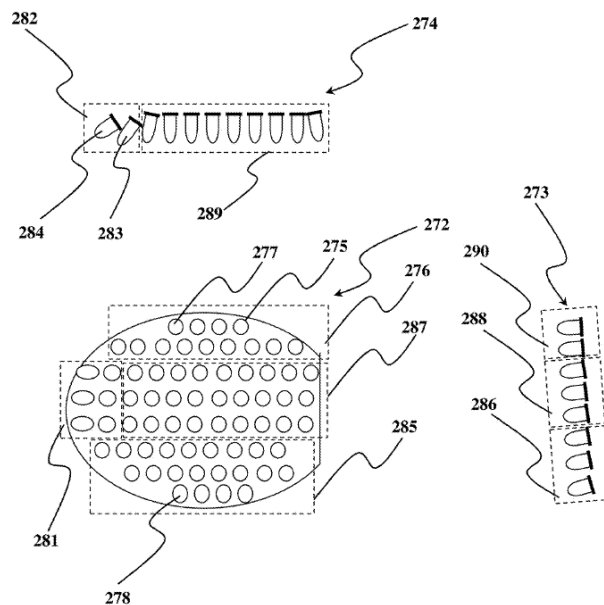
### B. RELATED MATTERS

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

*LLC v. General Motors LLC et al.*, No. 1:22-cv-00752 (D. Del). *See* Pet. 129; Paper 6, 1–2.<sup>1</sup> They also identify IPR2023-00197, IPR2023-00328, IPR2023-00335, and IPR2023-01026. *Id.*

### C. THE '503 PATENT

The '503 patent is titled “Detector Controlled Headlight System” and is directed to “[a]n automated headlight system for vehicles [that] replaces the high and low beam with a continuum of beam patterns, with further variable spatial distribution of intensities and color spectrum.” Ex. 1001, Abstract. The embodiment that corresponds to the challenged claims is depicted in Figure 15, reproduced in part below:



*Figure 15 shows a “multiple light-source headlamp.” Ex. 1001, 15:64.*

The figure depicts “a headlamp 270 of a land, sea or air vehicle” . . . in front view 272, side view of a section 273 and top view of a section 274.” Ex. 1001, 53:17–19.

<sup>1</sup> Patent Owner further lists matters involving two different patents related to the '503 patent. *See* Paper 6, 2–3.

A solid-state light source, “such as an LED 275 with [a] specific location within the cluster 276 has a specific spatial light distribution, color wavelength and aiming relative to the vehicle, such as straight ahead, and or downwards and or off towards the right or left.” Ex. 1001, 53:19–23. Different LED 277, which is “at a second location within the same cluster[,] may have a similar or dissimilar aiming, wavelength and spatial light distribution.” *Id.* at 53:19–32.

The patent explains that, because drivers may find yellow colored headlamps less offending than blueish colors, a controller that “receives traffic data from sensors” can “shift wavelength specific radiant power contributions of SLSs such that the resultant on the CIE chromacity diagram would be yellowish” but that if “there is no car immediately ahead or oncoming traffic,” then the controller can shift the color to “bluish white, allowing the driver to better ascertain road conditions further up ahead.” Ex. 1001, 53:53–62.

Claims 20 and 59 are independent and are directed to vehicle headlight systems. Claim 20 is reproduced in full below:

20. A vehicle headlight system, comprising:

one or more headlamps affixed to a vehicle, each headlamp including at least three directional light sources aimed at different angles relative to the vehicle, the light sources configured to have one or more controllable light characteristics, wherein a first light source of the more than one light sources at a first angle is less visually disturbing to traffic than a second light source of the more than one light sources aimed at a second angle, different from the first angle;

control circuitry configured to adjust the at least one light characteristic of at least one of the directional light sources;

one or more sensors configured to sense information defined as pertinent to determining illumination output from the one or more headlamps and communicating the sensed information to a processor as sensor data;

the processor, in communication with at least the sensors and the control circuitry, configured to:

process the sensor data to determine, within a field-of-view, at least a first subsection including a detected vehicle and at least a second subsection not including the detected vehicle,

determine optimal use of the differently aimed directional light sources to maximize vehicle operator visibility in at least the second subsection, while minimizing a disturbing effect, resulting from the illumination output, on the vision of other traffic in at least the first subsection, and

direct the control circuitry to adjust the directional light sources to achieve the determined optimal use.

D. PRIOR ART AND ASSERTED GROUNDS

Petitioner asserts the following unpatentability grounds:

Claims Challenged	Basis	References
20, 24, 25	§ 103	Beam, <sup>2</sup> Thominet <sup>3</sup>
59, 63, 64	§ 103	Beam, Thominet, Stam <sup>4</sup>
21–23	§ 103	Beam, Thominet, Kobayashi <sup>5</sup>
60–62	§ 103	Beam, Thominet, Stam, Kobayashi
20, 24, 25, 59, 63, 64	§ 103	Karlsson, <sup>6</sup> Harbers <sup>7</sup>
21–23, 60–62	§ 103	Karlsson, Harbers, Gotou <sup>8</sup>

<sup>2</sup> U.S. Patent No. 6,144,158 (Exhibit 1005).

<sup>3</sup> U.S. Patent App. Pub. No. 2001/0019486 A1 (Exhibit 1006).

<sup>4</sup> PCT Patent App. Pub. No. WO 01/70538 (Exhibit 1007).

<sup>5</sup> U.S. Patent No. 6,049,749 (Exhibit 1008).

<sup>6</sup> PCT Patent App. Pub. No. WO 98,54030 (Exhibit 1010).

<sup>7</sup> PCT Patent App. Pub. No. WO 01/01038 (Exhibit 1011).

<sup>8</sup> U.S. Patent No. 5,588,733 (Exhibit 1012).

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.