

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TOYOTA MOTOR CORPORATION

Petitioner

Patent No. 5,845,000

Issue Date: December 1, 1998

Title: OPTICAL IDENTIFICATION AND MONITORING SYSTEM USING
PATTERN RECOGNITION FOR USE WITH VEHICLES

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 5,845,000
PURSUANT TO 35 U.S.C. § 312 and 37 C.F.R. § 42.104**

Case No. IPR2013-00424

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LISTING OF EXHIBITS

Exhibit 1001	U.S. Patent No. 5,845,000 to Breed
Exhibit 1002	U.S. Patent No. 6,553,130 to Lemelson
Exhibit 1003	File History of U.S. App. No. 08/105,304 to Lemelson
Exhibit 1004	U.S. Patent No. 5,214,408 to Asayama
Exhibit 1005	Pomerleau, Dean, “Neural Networking Perception for Mobile Robot Guidance,” CMU-CS-92-115, AD-A249927, February 16, 1992
Exhibit 1006	Japanese Unexamined Patent Application Publication JP-H06-267303 to Mizukoshi
Exhibit 1007	Certified English Translation of Japanese Unexamined Patent Application Publication JP-H06-267303 to Mizukoshi
Exhibit 1008	Japanese Unexamined Patent Application Publication JP-S62-131837 to Yanagawa
Exhibit 1009	Certified English Translation of Japanese Unexamined Patent Application Publication JP-S62-131837 to Yanagawa
Exhibit 1010	File History of U.S. App. No. 08/247,760 to Breed
Exhibit 1011	U.S. Patent No. 6,772,057 to Breed
Exhibit 1012	Infringement Contentions of American Vehicular Sciences LLC with respect to U.S. Patent No. 5,845,000 in the litigation captioned <i>American Vehicular Sciences LLC v. Toyota Motor Corporation et al.</i> , 12-cv-00406 (E.D. Tex.)
Exhibit 1013	Expert Declaration of Dr. Nikolaos Papanikolopoulos

Pursuant to 35 U.S.C. §§ 311-319 and 37 C.F.R. Part 42, real party in interest, Toyota Motor Corporation (“Toyota” or “Petitioner”) respectfully requests *Inter Partes* Review (“IPR”) of claims 10, 11, 16, 17, 19, 20, and 23 of U.S. Patent No. 5,845,000 (“the ’000 patent”), filed June 7, 1995 and issued December 1, 1998 to David S. BREED, and currently assigned to American Vehicular Sciences LLC (“AVS” or “the Patent Owner”) according to the U.S. Patent and Trademark Office (“the US PTO”) assignment records. For the reasons set forth below, there is a reasonable likelihood that Petitioner will prevail with respect to at least one claim challenged in this Petition.

I. Mandatory Notices (37 C.F.R. § 42.8)

A. Real Party-in-Interest (37 C.F.R. § 42.8(b)(1))

Petitioner, Toyota, is the real party-in-interest.

B. Related Matters (37 C.F.R. § 42.8(b)(2))

The ’000 patent is currently the subject of the following litigations: *American Vehicular Sciences LLC v. Toyota Motor Corp. et al.*, No. 6:12-CV-406 (E.D. Tex.) (“AVS 406 Litigation”); *American Vehicular Sciences LLC v. Mercedes-Benz U.S. Int’l, Inc.*, Case No. 6:13-CV-308 (E.D. Tex.); and *American Vehicular Sciences LLC v. BMW Group*, Case No. 6:12-CV-413 (E.D. Tex.). Petitioner is a named defendant in the AVS 406 Litigation. The earliest that Petitioner or any of its subsidiaries was served with the complaint was July 26, 2012. This Petition is also being filed with IPR2013-00419, -00420, -00421, -00422 and -00423, which address patents that were asserted against Toyota in a related case: *American Vehicular Sciences LLC v. Toyota Motor Corp. et al.*, 12-

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