

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

MAKOR ISSUES & RIGHTS LTD.,
Patent Owner.

Case IPR2017-00816
Patent No. 6,480,783 B1

Before HYUN J. JUNG, BEVERLY M. BUNTING, and
ROBERT L. KINDER, *Administrative Patent Judges*.

KINDER, *Administrative Patent Judge*.

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

Google, LLC¹ (“Petitioner”) filed a Petition pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 4 and 6 of U.S. Patent No. 6,480,783 B1 (“the ’783 patent”). Paper 2. Makor Issues & Rights Ltd. (“Patent Owner”) filed a Preliminary Response. Paper 6. Applying the standard set forth in 35 U.S.C. § 314(a), we instituted an *inter partes* review of all challenged claims. (Paper 13, “Dec.”).

During the trial, Patent Owner filed a Patent Owner Response (Paper 14, “PO Resp.”), and Petitioner filed a Reply to the Patent Owner Response (Paper 19, “Pet. Reply”). An oral hearing was held on May 3, 2018, and a copy of the transcript has been made part of the record. Paper 24 (“Tr.”).²

We have jurisdiction under 35 U.S.C. § 6. This Decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of the claims for which we instituted trial. Based on the final trial record, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 4 and 6 of the ’783 patent are unpatentable.

¹ Petitioner submitted an updated mandatory notice indicating that “Google Inc. converted from a corporation to a limited liability company and changed its name to Google LLC on September 30, 2017.” Paper 10.

² Both parties requested to present arguments collectively for IPR2017-00815–818. *See* Papers 21, 22.

I. BACKGROUND

A. *Real Party in Interest*

Petitioner names itself and Waze Inc. as the real parties-in-interest.
Pet. 2.

B. *The '783 patent (Ex. 1001)*

The '783 patent is titled “Real Time Vehicle Guidance and Forecasting System Under Traffic Jam Conditions.” Ex. 1001, (54). The '783 patent issued on November 12, 2002, from U.S. Patent Application No. 09/528,134 filed on March 17, 2000. *Id.* at (45), (21), (22).

The '783 patent generally relates to “[a] system and method for real time vehicle guidance by [a] Central Traffic Unit [(CTU)].” *Id.* at Abst. (57). The Specification describes a vehicle guidance system, which includes vehicles equipped with Individual Mobile Units (IMUs) including Global Positioning System (GPS) units for determining their present position. *Id.* The IMUs are linked communicatively to the CTU computer server. *Id.* The system uses a group of Sample Mobile Units (SMUs) equipped with RF transmitters that communicate their position to the CTU at predetermined time intervals. *Id.* The CTU uses the reported positions of the sample vehicles to create and maintain a network of real time traffic load disposition information for various geographical areas. *Id.* The IMUs may use the real time traffic load disposition information to determine an optimal travel route. *Id.* As explained in the '783 patent, “[t]he CTU broadcasts the updated traffic data collected from a number of sample vehicles via Multicast Broadcasting System thereby enabling the IMUs to dynamically update the desired optimal travel routes.” Ex. 1001, 1:10–14.

The Specification of the '783 patent also describes the ability to detect a bottleneck or traffic jam situation when it arises and to estimate a current travel time for a corresponding section of road. *Id.* at Abst. (57). The '783 patent describes three methods for determining travel time over a road segment: (i) theoretical travel times, (ii) regular empirical travel times, and (iii) current travel times. Ex. 1001, 11:46–12:38. Theoretical travel times are based on a calculation of road or section length and maximum speed allowed on the section. *Id.* at 11:46–58. Theoretical travel times are replaced by regular empirical travel times after the CTU monitors all SMU vehicles and records their travel times along sections of roads. *Id.* at 11:59–62. These regular travel times are averaged and transformed into empirical speed coefficients and stored in a central database associated with a number of categories such as type of road, day of the week, or month. *Id.* at 11:62–66. After sufficient data has been accumulated to estimate accurately regular empirical travel times along a section, the CTU will provide those regular empirical travel times rather than theoretical travel times. *Id.* at 12:5–10.

Current travel times are times obtained from a number of vehicles that have recently traveled along a section of road. Ex. 1001, 12:11–22. The travel times are monitored in real time and the corresponding data for these times are stored in special data structures. *Id.* The data structures for the current travel times contain Exit Lists (EXLs), which are multicasted at short time intervals from the CTU to end-user databases and made available for use by route-finding routines. *Id.* at 12:12–22. A goal of the current travel time monitoring and use “is to detect bottleneck situations, and to modify estimated Current Travel Time (CTT) accordingly.” *Id.* at 12:29–31. The

'783 patent describes “[t]he criterion for using CTT rather than Regular Travel Times (RTT) for various sections is that EXL contains recent enough data.” *Id.* at 12:31–33.

C. Illustrative Claim

Claim 4 is independent and illustrative of the claims at issue:

4. Client mobile unit guidance system for motor vehicles, the system comprising computing units capable of updating current travel times tables, predicted or estimated travel times tables and statistical travel times data tables continuously or according to predetermined time intervals from a central traffic unit, wherein the systems further includes:

receiving device for allowing collection of GPS data at predetermined time intervals from sample vehicles moving within a predefined geographical region;

map database containing digital road maps of a predefined geographical region together with predetermined relevant data on road factors;

said computer system operatively connected to the communications system capable of processing in real time said GPS data and transforming them into appropriately structured data suitable for being stored on the computer;

a database suitable for storing and updating statistical data on traffic loads on individual roads;

statistical application for collecting structured GPS data, computing individual statistical travel time estimates (regular times) for predetermined roads, and storing the results;

statistical means application for periodical updating of the said statistical data using statistical criteria for determining volumes of data necessary for obtaining valid and reliable estimates; and

computational tools for real time traffic jam identification at various locations of the individual roads by utilizing the sample vehicles for measuring time delays,

wherein the received data are used for estimating statistical models of traffic situations, and the client mobile units are

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