

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

MAKOR ISSUES & RIGHTS LTD.,
Patent Owner.

Case IPR2016-01535
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 certain claims of U.S. Patent No. 6,480,783 B1 (“the ’783 patent”). Paper 12.² Makor Issues & Rights Ltd. (“Patent Owner”) filed a Preliminary Response. Paper 7. 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 18, “PO Resp.”), and Petitioner filed a Reply to the Patent Owner Response (Paper 20, “Pet. Reply”). An oral hearing was held on October 19, 2017, and a copy of the transcript has been made part of the record. Paper 31 (“Tr.”).³

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 record before us, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 12–14, and 18 of the ’783 patent are unpatentable. Petitioner has not shown, however, that claims 15, 16, and 19 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 28.

² The Petition (Paper 12) was refiled pursuant to our Order of December 12, 2016, because the original Petition (Paper 2) exceeded the allotted word count by over 5,000 words. Paper 11, 2.

³ Both parties requested to present arguments collectively for IPR2016-01535, IPR2016-01536, and IPR2016-01537. Papers 23, 24, 26, 31.

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 12 is independent and illustrative of the claims at issue:

12. Method of operating a central traffic guidance unit comprising method of calculating an optimal fastest short and long range composite travel route for a predetermined extended time period corresponding to client’s position or requested starting and destination points;

collecting GPS data at predetermined time intervals from sample vehicles moving within a predefined geographical region;

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

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

storing and updating statistical data on traffic loads on individual roads;

subdividing said statistical data into subdivisions according to time factors;

collecting GPS data and computing individual statistical travel time estimates (regular times) for predetermined roads, and storing the results according to said subdivisions;

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

computing real time traffic jam identification at various locations of the individual roads by utilizing the sample vehicles for measuring time delays; and

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