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Paper 28
Date: February 12, 2018

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

MAKOR ISSUES & RIGHTS LTD.,
Patent Owner.

Case IPR2016-01536
Patent No. 6,615,130 B2

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

BUNTING, *Administrative Patent Judge.*

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

I. BACKGROUND

Google, LLC, ("Petitioner"),[1] filed a Petition pursuant to 35 U.S.C. §§ 311–319 requesting *inter partes* review of claims 1–4 (the "challenged claims") of U.S. Patent No. 6,615,130 B2 ("the '130 patent"). Paper 2. Patent Owner, Makor Issues & Rights Ltd. ("Patent Owner") filed a Preliminary Response. Paper 7. Upon consideration of the information presented in the Petition, we determined that there was a reasonable likelihood that Petitioner would prevail with at least one challenged claim, and instituted this trial, pursuant to 35 U.S.C. § 314(a), as to claims 1–4 of the '130 patent. Paper 9 ("Decision on Institution" or "Dec.").

Subsequent to institution, Patent Owner filed a Patent Owner Response (Paper 14, "PO Resp."), and Petitioner filed a Reply (Paper 16, "Reply"). We ordered (Paper 21) the parties to concurrently submit a claim construction brief addressing whether any limitation of the challenged claims is subject to § 112 ¶ 6. Papers 25, 26. A transcript of the oral hearing held on October 19, 2017 has been entered into the record as Paper 27 ("Tr.").[2]

This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a). For the reasons that follow, we conclude that Petitioner has demonstrated, by a preponderance of the evidence, that claims 1–4 of the '130 patent are unpatentable.

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[1] Petitioner submitted an updated mandatory notice indicating that Google Inc., changed its name to Google LLC on September 30, 2017. Paper 24.
[2] Both parties requested to present arguments collectively for IPR2016-01535, IPR2016-01536, and IPR2016-01537. Papers 19, 20, 22, and 27.

A. Real Party in Interest

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

B. Related Proceedings

The parties state that the '130 patent has been asserted in *Makor Issues & Rights Ltd. v. Google Inc.*, Case No. 1:16-cv-00100 (D. Del.). Pet. 2; Paper 6, 1. Petitioner filed additional petitions challenging the patentability of both the '130 patent and a related patent:

1. IPR2016-01535 (U.S. Patent No. 6,480,783)
2. IPR2016-01537 (U.S. Patent No. 6,615,130)
3. IPR2017-00815 (U.S. Patent No. 6,480,783)
4. IPR2017-00816 (U.S. Patent No. 6,480,783)
5. IPR2017-00817 (U.S. Patent No. 6,480,783)
6. IPR2017-00818 (U.S. Patent No. 6,615,130)

C. The '130 Patent (Ex. 1001)

The '130 patent is titled "Real Time Vehicle Guidance and Traffic Forecasting System." Ex. 1001, (54). The '130 patent issued on September 2, 2003, from U.S. Patent Application No. 09/800,116 filed on March 6, 2001, and is a continuation-in-part of application No. 09/528,134, filed on March 17, 2000. *Id.* at (45), (21), (22), and (63).

The '130 patent relates generally to "communication with vehicles for the purpose of supplying traffic condition information and analyzing data relating to traffic conditions." *Id.* at 1:14–16. The Specification describes a vehicle guidance system, which includes the Central Traffic Unit ("CTU") and a fleet of vehicles or Mobile Guidance Units ("MGUs"), "i.e., traveling vehicles with mobile phones connected to the communication system." *Id.* at 3:27–29. Vehicle position is monitored using a wireless technology, *e.g.*,

"GSM/GPS" while the vehicle is moving, and "by concurrent measuring of their current travel times along a broad range of roads." *Id.* at 3:35–36. The vehicle driver may request route guidance reflecting the fastest route to a destination, as well as an updated route based on real time traffic information as illustrated in Figure 1, reproduced below. *Id.* at 3:37–49.

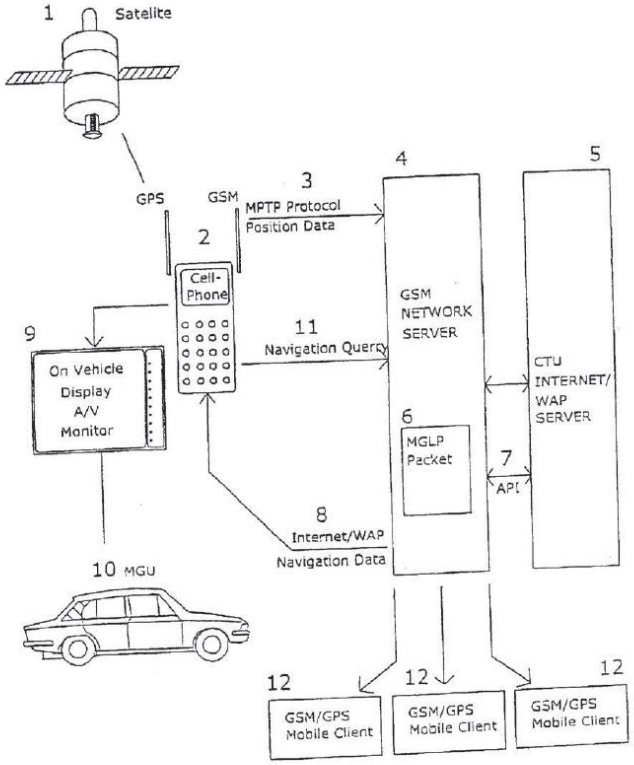

Figure 1 illustrates information exchange in the guidance system.

The CTU collects traffic congestion data using the location of MGUs mounted in a fleet of vehicles traveling throughout a broad range of road systems. *Id.* at 6:45–49. The location data is stored "on the GSM Network Server in Multiple-GPS Locator Packet (MGLP)." *Id.* at 6:49–51. The CTU processes the location data, converts into travel time data, and stores the

travel time data in the database for use as regular travel time data and current travel time data, and for use in calculating the fastest route. *Id*. at 6:54–57.

Updating of planned routes in the CTU is accomplished using "both statistical (empirical) travel times and current travel times." *Id*. at 11:6–8. The '130 patent discloses that current travel times are utilized in the vicinity of the present vehicle location and statistical travel times elsewhere. *Id*. at 11:20–23. The '130 patent also discloses that geographic areas may be subdivided into subregions, referred to as zones. *Id*. at 11:24–31. As a vehicle enters a zone, the IMU database receives updated information pertaining to traffic load in the neighborhood. *Id*. at 11:33–37. Updating of relevant traffic jam information is accomplished based on local zones. *Id.* at 11:49–50.

The '130 patent describes three techniques for determining travel time over a road segment based on factors categorized as (i) generally stable changes in road conditions, (ii) regular predictable changes in road conditions, and (iii) sudden unpredictable changes in road conditions. Ex. 1001, 11:52–12:11. The stable or theoretical travel times are based on a calculation of road or section length and maximum speed allowed on the section. *Id.* at 11:52–67. Statistical or empirical travel times are considered better approximations to reality than theoretical travel times because factors in the second category of regular predictable changes in road conditions are taken into account. *Id*. at 12:28–32. The statistical or empirical travel times are averaged, transformed into empirical speed coefficients, and stored in a central database. *Id.* at 12:35–42. Eventually, theoretical travel times are replaced by statistical or empirical travel times. *Id.* To account for traffic conditions arising from sudden and unexpected circumstances, which result

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