

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC, SAMSUNG ELECTRONICS CO., LTD.,
and SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioner,

v.

NARISTE NETWORKS PTY. LTD.,
Patent Owner.

IPR2023-01374
Patent RE48,206 E

Before BENJAMIN D. M. WOOD, LYNNE H. BROWNE, and
RICHARD H. MARSCHALL, *Administrative Patent Judges*.

WOOD, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. *Background*

Google LLC, Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. (collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 37–45 of U.S. Patent No. RE48,206 E (Ex. 1001, “the ’206 patent”). Nariste Networks Pty. Ltd. (“Patent Owner”) did not file a preliminary response.

We have authority under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted “unless . . . 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). Upon considering the Petition, we determine that Petitioner has satisfied this threshold requirement, and therefore we institute *inter partes* review of claims 37–45 of the ’206 patent.

B. *Related Proceedings*

Petitioner identifies *Nariste Networks Pty. Ltd. v. Samsung Elecs. Co., Ltd.*, No. 2:23-cv-00031 (E.D. Tex.) as a related matter. Pet. 2.

C. *The ’206 Patent*

The ’206 patent is a reissued patent titled “Reduced Power Use in Mobile GPS-Based Technologies,” and relates to power conservation for GPS-enabled devices. Ex. 1001, code (54), 1:22–24. According to the ’206 patent, “[t]echniques for the positioning of mobile devices in a wireless environment are important for a number of applications, such as emergency location services, ad hoc networks, and vehicle tracking.” *Id.* at 1:28–31. The ’206 patent teaches that mobile phones are generally equipped to

determine their positions using Global Positioning Systems (“GPS”) technologies, which “use line-of-sight measurements to satellites.” *Id.* at 1:32–40. “GPS-based techniques are known to provide accurate position measurements,” but “are prone to a lengthy GPS acquisition time” when begun from a so-called “cold start,” because “an exhaustive search to find the satellites in view” is necessary. *Id.* at 1:59–66. A cold start can be avoided by keeping the device’s GPS receiver switched on at all times, which allows the device to maintain up-to-date satellite positioning data, but keeping the device in this “hot-start mode” drains the device’s battery resources to an unacceptable degree. *Id.* at 2:4–15. To address this problem, phones have been equipped to periodically power down the GPS device for a relatively short period of time, so that when it is powered back on the device “effectively commences in hot start mode.” *Id.* at 2:37–42. The phone’s user initially sets the “power-up period,” or “ P_u ”; for example, “setting $P_u=30$ minutes means the GPS device powers up every 30 minutes to acquire a position fix.” *Id.* at 2:46–49. “Once the fix is obtained (usually within seconds), the GPS device enters power-down mode.” *Id.* at 2:49–51.

But “[s]imply guessing what value to set P_u is not optimal,” according to the ’206 patent. Ex. 1001, 2:52–53. The ’206 patent therefore provides “a system for adaptively predicting when a GPS-enabled wireless communication device should be powered on” by monitoring P_u and automatically adjusting its value in response to changing circumstances to conserve battery power while maintaining desired position accuracy. Ex 1001, 2:59–63, 3:40–44, 5:59–61, 6:24–28.

Figure 2 of the ’206 patent is a “high-level block diagram” of a system for adaptively predicting when a GPS-enable[d] wireless

communication device should be powered on in accordance with an embodiment of the invention” (Ex. 1001, 3:40–43), and is reproduced below:

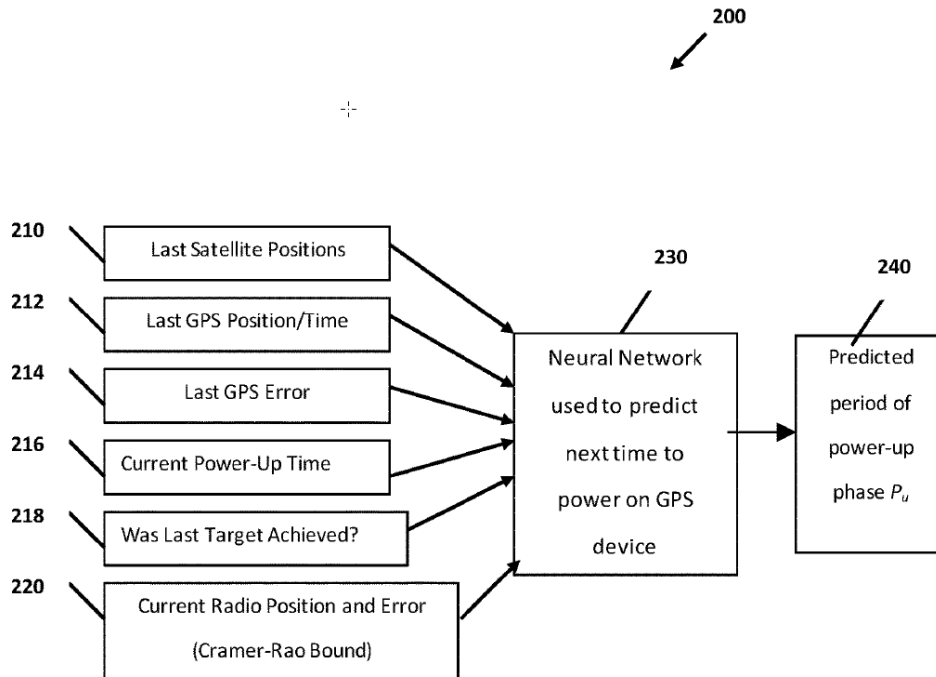


FIG. 2 (Amended)

As shown in Figure 2, system 200 comprises a neural network module 230 that receives various inputs 210–220 to produce a predicted period of the power-up phase P_u (i.e., the next time to power on the GPS device), 240. Ex. 1001, 3:51–55. The predictions may depend upon various inputs including last satellite positions 210, last GPS position/time 212, last GPS error 214 (i.e., error between the predicted position of the mobile device and that of the actual position reported by its GPS), current power-up time 216, information about whether or not the last target was achieved 218 (i.e., whether accuracy requirements were satisfied), and current radio position and error 220. *Id.* at 6:56–62, 6:34–37.

D. The Challenged Claims

Petitioner challenges claims 37–45 of the ’206 patent. Pet. 3. Claims 37, 40, and 43 are independent. Claim 37 is representative and reproduced below:¹

37. [Pre] A method of acquiring a position on a mobile wireless communication device for a wireless communications network, said mobile wireless communication device possessing wireless communications capability for said wireless communications network and an embedded GPS module for GPS capability, said GPS referring to GPS-based techniques, said method comprising:

[A] determining when said embedded GPS module should be powered on, said embedded GPS module then being powered on,

[B] said [determining²] when said embedded GPS module should be powered on being dependent on at least one of a current radio position and a position error of said mobile device determined from the wireless communications network, said wireless communications network being different from said GPS.

Ex. 1001, 16:4–20.

E. Asserted Grounds of Unpatentability

Petitioner contends that the challenged claims are unpatentable based on the following specific grounds (Pet. 3–4):

¹ We use Petitioner’s bracketed identifiers for each limitation. *See* Pet. 19–27. We also omit the italics used to indicate that claim 37 is a new reissue claim.

² Based on our review of similar language in claims 40 and 43, the word “determining” appears to have been inadvertently omitted from claim 37.

Ground	Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1	37–45	103	Watters ³
2	37, 40, 43	103	Nohara ⁴
3	38, 41, 44	103	Watters, Lau ⁵
4	37–45	103	Watters, Nohara
5	38, 41, 44	103	Watters, Nohara, Lau

Petitioner also relies on the Declaration of Scott Andrews (Ex. 1002) to support its asserted grounds.

II. ANALYSIS

A. *Legal Standards Used in the Merits Analysis*

“In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)); *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

³ U.S. Patent No. 5,982,324 (issued Nov. 9, 1999) (Ex. 1005).

⁴ U.S. Patent Appl. Pub. No. 2002/0151314 A1 (published Oct. 17, 2002) (Ex. 1006).

⁵ U.S. Patent No. 6,975,941 (issued Dec. 13, 2005) (Ex. 1007).

A claim is unpatentable under 35 U.S.C. § 103 if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious . . . to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, objective evidence of nonobviousness, i.e., secondary considerations. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

Petitioner contends that, for the ’206 patent:

One of ordinary skill in the art would have had a bachelor's degree in electrical engineering, computer engineering, computer science, or a related field, and at least two years of experience in the research, design, development, and/or testing of GPS and/or cellular positioning devices and techniques, and related firmware and software, or the equivalent, with additional education substituting for experience and vice versa.

Pet. 7 (citing Ex. 1002 ¶¶ 33–69).

At this stage of the proceeding, we adopt Petitioner’s unopposed definition for purposes of this Decision. We also presume that the cited prior art references reflect the level of ordinary skill at the time of the invention. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (explaining the level of ordinary skill in the art may be evidenced by the cited references themselves).

C. Claim Construction

We construe claim terms “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b). Under this standard, claim terms are generally given their plain and ordinary meaning as would have been understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). Any special definitions for claim terms must be set forth in the Specification “with reasonable clarity, deliberateness, and precision.” *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

At this stage of the proceeding, we do not perceive the need to expressly construe any claim terms, as the threshold question of institution can be decided without doing so. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (approving Board decision not to construe claim language where construction is not material to the dispute).

D. Ground 1: Obviousness of Claims 37–45 Over Watters

Petitioner contends that claims 37–45 are obvious over Watters. Pet. 19–37.

1. Watters (Ex. 1005)

Watters is titled “Combining GPS With TOA/TDOA of Cellular Signals to Locate Terminal,” and describes combining GPS technology and cellular technology to provide position location. Ex. 1005, codes (54), (57).

Figure 10 of Watters is reproduced below.

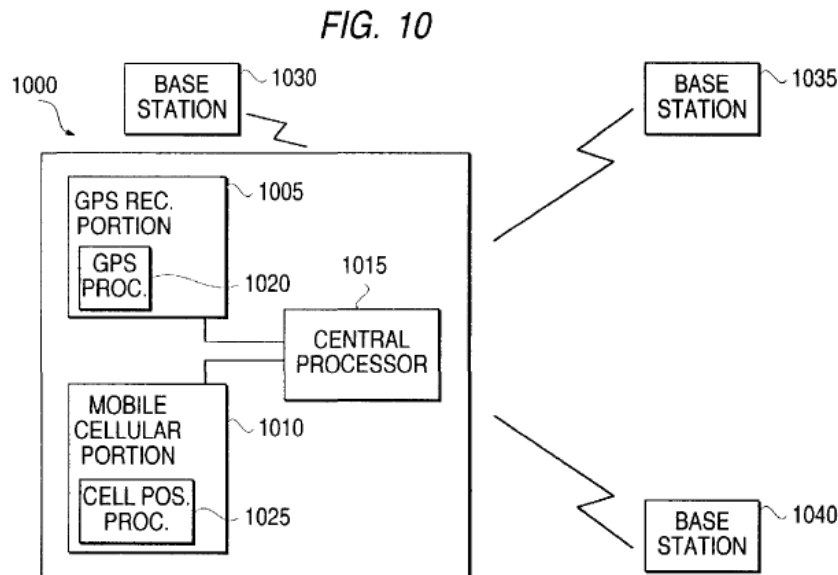
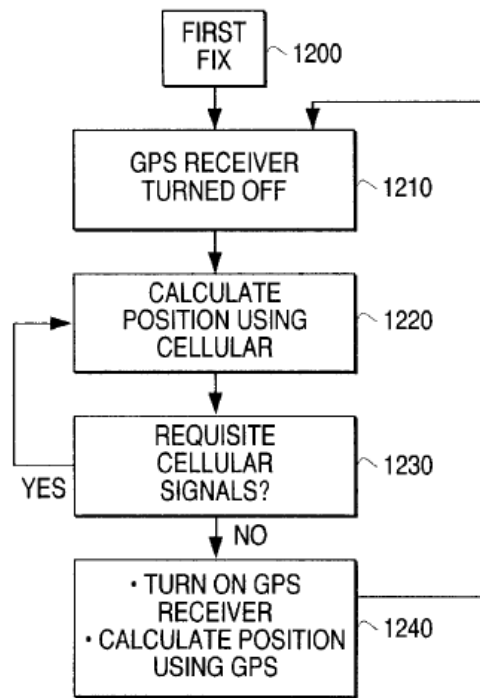


Figure 10 above is a block diagram of mobile terminal 1000 and base stations 1030, 1035, 1040, which are part of a cellular network. *Id.* at 9:21–23, 19:48–50, 19:58–62. Mobile terminal 1000 includes GPS receiver portion 1005, mobile cellular portion 1010, and central processor 1015. *Id.* at 19:48–50. GPS receiver portion 1005 includes GPS processor 1020 for calculating position, and mobile cellular portion 1010 contains cellular position processor 1025 that computes position using the cellular network infrastructure. *Id.* at 19:54–58.

Watters discloses that “GPS provides good accuracy of position,” but “[t]o save power consumption (i.e., save battery power), it may be desirable to rely on the cellular network infrastructure to calculate position.” *Id.* at 22:25, 22:38–40. This approach is illustrated by a flowchart depicted in Figure 12 of Watters, reproduced below:

FIG. 12



As shown in the Figure 12 flowchart, a mobile terminal uses its GPS receiver to obtain a “first fix”⁶ (step 1200); the GPS receiver is turned off to save power (step 1210), and the cellular network is then used to determine position (step 1220). Ex. 1005, 22:47–50. At step 1230, “a determination is made whether the requisite number of signals in the cellular network infrastructure are available for calculating position (e.g., three signals in the

⁶ “[W]hen the GPS receiver is first turned on, it must calculate its initial position. This initial determination is known as a ‘first fix’ on location. Typically, the receiver must first determine which satellites are in clear view for tracking. If the receiver is able to immediately determine satellite visibility, the receiver will target a satellite and begin its acquisition process. If there is no almanac or position information already stored in the receiver, then the GPS receiver enters a ‘search the sky’ operation that searches for satellites. Once the satellites are tracked, the receiver begins receiving the necessary data.” Ex. 1005, 2:39–49.

TDOA approach).” *Id.* at 22:50–54. “Alternative inquiries at block 1230 include determining how long (in time) it has been since the last GPS update and/or how far (in space) the mobile terminal has moved since the last GPS update.” *Id.* at 22:57–60. For example, if “the mobile terminal has moved a predetermined distance, such as 100 meters, then a GPS update would be called for.” *Id.* at 22:60–64. “[T]he rate at which GPS updates are needed will depend on the conditions under which the mobile is operating, with less frequent updates needed if the mobile terminal is in an area where the cellular network infrastructure signals are known to be of good accuracy.” *Id.* at 22:64–23:2.

2. *Independent Claim 37*

Petitioner contends that independent claim 37 would have been obvious over Watters. Pet. 19–33. In support of this contention, Petitioner submits a detailed mapping explaining how Watters teaches each of the recited limitations, and cites to its declarant’s testimony in further support. *Id.* For example, Petitioner asserts that Watters “teaches to use both a ‘current radio position’ and a ‘position error’ to determine when to switch from cellular based positioning and power on GPS-based positioning.” *Id.* at 27–33 (citing Ex. 1002 ¶¶ 103–114; Ex. 1005, 5:14–34, 5:54–6:12, 22:59–23:2, 23:41–44). According to Petitioner, “Watters teaches dependency on ‘current radio position’ because it discloses determining ‘how far (in space) the mobile terminal has moved since the last GPS update,” and a “POSITA would have understood that determining ‘how far’ a device has traveled requires knowing the starting position and the current position at the time the determination is made.” *Id.* at 29–30 (citing Ex. 1005, 22:59–60; Ex. 1002 ¶ 108). Petitioner further submits that Watters teaches that the determination

is based on “position error” because the timing of GPS updates is based on wireless-network-signal quality, which in turn determines the magnitude of positioning errors. *Id.* at 30–32 (citing Ex. 1005, 22:64–23:2, 23:41–44; Ex. 1002 ¶¶ 111–113). As noted above, Patent Owner did not submit a Preliminary Response.

We have reviewed the record and Petitioner’s contentions, and determine that Petitioner is reasonably likely to prevail in showing that Watters teaches all of the limitations of claim 37, and that claim 37 would have been obvious over Watters. Accordingly, we determine that Petitioner satisfies the threshold requirement for institution of *inter partes* review on the basis of Ground 1.

3. *The Remaining Claims*

“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” 37 C.F.R. § 42.208(a). We must “either (1) institute as to all claims challenged in the petition and on all grounds in the petition, or (2) institute on no claims and deny institution.” Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019),⁷ 5–6, 64; *see also PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1359–60 (Fed. Cir. 2018) (stating a decision to institute is “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”). Thus, because we have instituted *inter partes* review as to Ground 1 and claim 37, we must do the same for claims 38–45.

⁷ Available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf?MURL=TrialPracticeGuideConsolidated>

E. The Remaining Grounds

As for Ground 1, for Grounds 2–5 Petitioner has mapped the limitations of the challenged claims to the teachings of the prior-art references on which the Grounds are based, and, for Ground 3–5, articulated reasons why one of ordinary skill in the art would have combined the references. Pet. 37–68. Petitioner supports its contentions with citations to Mr. Andrews’ declaration. *Id.* As discussed above, because we have decided to institute *inter partes* review based on Ground 1, we must do the same for Grounds 2–5.

III. CONCLUSION

For the foregoing reasons, we determine that Petitioner has shown that there is a reasonable likelihood that it would prevail with regard to at least one of the claims challenged in the Petition. Accordingly, we institute *inter partes* review of claims 37–45 of the ’206 patent on all asserted grounds.

IV. ORDER

For the reasons given, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 37–45 of the ’206 patent on all asserted grounds is *instituted*; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), notice is hereby given of the institution of trial, which will commence on the entry date of this Decision.

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PETITIONER:

William M. Fink
Benjamin Haber
Kyla Butler
O'MELVENY & MYERS LLP
tfink@omm.com
bhaber@omm.com
kbutler@omm.com

PATENT OWNER:

Joshua S. Wyde
Seven T. Jugle
Masood Anjom
ALAVI & ANAIPAKOS PLLC
jwyde@aatriallaw.com
sjugle@aatriallaw.com
manjom@aatriallaw.com