

NOTE: This disposition is nonprecedential.

**United States Court of Appeals  
for the Federal Circuit**

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**GOOGLE LLC,**  
*Appellant*

v.

**JI-SOO LEE,**  
*Cross-Appellant*

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2017-2227, 2017-2272

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Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2016-00022.

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Decided: March 28, 2019

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GREGORY A. CASTANIAS, Jones Day, Washington, DC, argued for appellant. Also represented by ISRAEL SASHA MAYERGOYZ, Chicago, IL; DAVID B. COCHRAN, Cleveland, OH; JOSHUA R. NIGHTINGALE, Pittsburgh, PA.

JAMES E. HOPENFELD, Singer Bea LLP, San Francisco, CA, argued for cross-appellant.

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Before PROST, *Chief Judge*, MAYER and LOURIE,  
*Circuit Judges*.

PROST, *Chief Judge*.

Google LLC (“Google”) petitioned for *inter partes* review (“IPR”) of claims 64, 77, and 79 of U.S. Patent No. 6,532,413 (“the ’413 patent”). The Patent Trial and Appeal Board (“Board”) held claims 64 and 77 unpatentable and upheld claim 79. Google appeals the Board’s decision upholding claim 79, and Ji-Soo Lee (“Lee”) cross-appeals the Board’s decision holding claims 64 and 77 unpatentable. Having considered the parties’ arguments, we reverse as to Google’s appeal and we affirm as to Lee’s cross-appeal.

## I

The ’413 patent is purportedly assigned to Lee.<sup>1</sup> The ’413 patent relates to “a method and an apparatus for providing time-invariant geographical information such as traffic information, and more particularly to a method and apparatus for efficiently transmitting image-based time-variant geographical information.” ’413 patent col. 1 ll. 8–12. Claim 64 of the ’413 patent is representative of claim 77 and states:

64. Time-variant geographical information device capable of being coupled to a display panel, comprising:

a receiver for receiving a RII(route indication information) including a map identification and a plurality of graphic vectors, each of said graphic vectors for RII including an attribute designating statement, a shape designating statement and a position designating statement, said attribute designating statement being composed of an attribute

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<sup>1</sup> The assignment is disputed in the related district court litigation.

designating command and at least one attribute value;

a memory for storing at least one BM(=basic map), said BM including an image data for representing time-invariant components in a region;

means for selecting a basic map in accordance with said map identification of the RII; and

means for producing a route-information containing image in accordance with said BM and said RII, said route information-containing image representing at least one path to a specific location.

*Id.* at claim 64.

Claim 79 of the '413 patent recites:

79. A computer-readable medium containing a program of instructions to perform a method for a time-variant geographical traffic information, said method comprising the steps of:

receiving a TVI(=time-variant information), said TVI including a map identifier and at least one time-variant data in section-wise;

selecting at least one section map based on the map identifier of said TVI, wherein said section map includes a plurality of sections, each section of said section map including at least one component;

designating an attribute of said component based on the time-variant data of said TVI in section-wise, so as to produce a graphic file for a region; and

producing an information-containing image data in accordance with said graphic file, which is to be applied to a display panel.

*Id.* at claim 79.

Google filed a petition for *inter partes* review challenging claims 64, 77, and 79 of the '413 patent. The Board instituted review of claims 64 and 77 on two grounds: (1) obviousness based on U.S. Patent No. 5,848,373 (“DeLorme”) alone or in combination with U.S. Patent No. 5,243,528 (“Lefebvre”); and (2) obviousness based on “U.S. Patent No. 5,968,109 (“Israni”) alone or in combination with U.S. Patent No. 5,274,387 (“Kakihara”). *Google Inc. v. Lee*, No. IPR2016-00022, 2016 WL 2848912, at \*18 (PTAB Apr. 25, 2016) (“*Institution Decision*”). The Board instituted review of claim 79 on one ground: obviousness based on Japanese Patent No. JPH 08-7197 (“Degawa”) alone or in combination with Japanese Patent No. JPH 09-16892 (“Maruoka”). *Id.*

In its final written decision, the Board held that Google had shown by a preponderance of the evidence that claims 64 and 77 were unpatentable as obvious over the combination of Israni and Kakihara but that Google had not shown by a preponderance of the evidence that claim 79 was unpatentable as obvious. *Google Inc. v. Lee*, No. IPR2016-00022, Paper No. 30, at 39 (PTAB Apr. 21, 2017) (“*Final Written Decision*”).

Google timely appealed the Board’s determination that claim 79 was not obvious, and Lee timely cross-appealed the Board’s determination that claims 64 and 77 were obvious. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

## II

Obviousness is a question of law based on underlying factual determinations. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015). We review the Board’s ultimate obviousness determination de novo and underlying factual findings for substantial evidence. *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). Substantial evidence is “such relevant evidence as a reasonable mind might accept as adequate to support a

conclusion.” *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938).

We review the Board’s determination of the broadest reasonable interpretation of the claim language de novo. *Straight Path IP Grp., Inc. v. Sipnet EU S.R.O.*, 806 F.3d 1356, 1360 (Fed. Cir. 2015).

### III

We first address Google’s appeal of the Board’s determination that claim 79 was not invalid as obvious in view of the prior art of record.

#### A

Google first argues that the Board departed from or misapplied the claim’s plain meaning when evaluating obviousness in light of the prior art. Specifically, Google contends that the Board committed legal error by “importing an unrecited limitation into the claim language when evaluating [the] patentability” of the “selecting at least one section map based on the map identifier” limitation. Appellant’s Br. 14; *see also id.* at 18–22. Google argues that in doing so, the Board failed to give claim 79 its broadest reasonable interpretation.<sup>2</sup> *Id.* at 20. We agree.

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<sup>2</sup> We note that the U.S. Patent and Trademark Office has since changed the claim construction standard used in IPR proceedings. *See* 37 C.F.R. § 42.100(b); *Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340, 51,340 (Oct. 11, 2018). The new standard applies only to petitions filed on or after November 13, 2018, and therefore does not impact this case. In this IPR, the claims were to be construed using the broadest reasonable interpretation in light of the specification. *See Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2146 (2016).

When evaluating Google’s arguments that Degawa teaches the “selecting at least one section map based on the map identifier” limitation, the Board’s analysis indicates that it understood the claim to require using a map identifier to select a section map that “*is displayed*.” See *Final Written Decision*, at 37–38 (emphasis added). This is evident from the Board’s numerous statements faulting Degawa for failing to disclose a map identifier that selects a road map “for display” or “that is displayed.” See *id.*

Google argues that nothing in claim 79 requires that the claimed map identifier be used to select a map “for display.” Appellant’s Br. 19. Lee responds that “[t]he only reasonable reading of that language is that the ‘section map is displayed’ and that “[t]he section map must, therefore, be displayed because otherwise a graphic file of a region could not be displayed.” Cross-Appellant’s Br. 21–22. But Lee does not identify any specific language in the claim, or support in the specification or prosecution history, showing that the “selecting” step requires selecting a section map for display. We agree with Google that claim 79 does not require that the claimed map identifier be used to select a section map “for display.” Instead, claim 79 is clear that what is displayed is the “information-containing image data” that is recited two steps later. ’413 patent col. 46 ll. 48–50 (listing fourth step as “producing an *information-containing image data* in accordance with said graphic file, which is to be *applied to a display panel*” (emphases added)). The “at least one section map” that is selected in the second step of the method has individual sections, each of which “include[] at least one component.” *Id.* at col. 46 ll. 41–44. The third step of the method, “designat[es] an attribute” of said component and “produce[s] a graphic file for a region.” *Id.* at col. 46 ll. 45–47. The fourth step of the method includes “producing an information-containing image data in accordance with said graphic file.” *Id.* at col. 46 ll. 48–50. Then, and only then, is the “information-containing image data” applied to a display. *Id.*

The broadest reasonable interpretation of “selecting at least one section map based on the map identifier” would not require using a map identifier to select a section map that *is displayed* or *is for display*.

We have reversed or vacated and remanded final written decisions of the Board when the Board departs from the proper construction when assessing patentability in view of the prior art. *See, e.g., D’Agostino v. MasterCard Int’l Inc.*, 844 F.3d 945, 950 (Fed. Cir. 2016) (finding that the Board erred in “depart[ing] from or misappl[ying]” the clear meaning of a claim “whether as a matter of claim construction or as a matter of application to [the prior art]”); *Corning v. Fast Felt Corp.*, 873 F.3d 896, 900–01 (Fed. Cir. 2017) (finding that the Board erred by deviating from the broadest reasonable construction of the claim when evaluating obviousness in light of the prior art), *cert. denied, Fast Felt Corp. v. Owens Corning*, 138 S. Ct. 2633 (2018). Here, we conclude that the Board erred in effectively importing the additional limitation “for display” into the “selecting” step.

## B

In this case, it is not necessary to remand for the Board to reassess the evidence under the correct construction. We have held that reversal, rather than remand, is appropriate where, “[o]n the evidence and arguments presented to the Board, there is only one possible evidence-supported finding: [that] the Board’s determination . . . when the correct construction is employed, is not supported by substantial evidence.” *Corning*, 873 F.3d at 901–02 (reversing, rather than remanding, when “only one answer is supported by substantial evidence”); *see also Belden*, 805 F.3d at 1077 (reversing, rather than remanding, when “the record is one-sided”).

Here, the only evidence-supported finding is that Degawa teaches the disputed “selecting at least one section map based on the map identifier” limitation. Google argues

that “a straightforward reading of Degawa demonstrates that the reference discloses exactly what claim 79 recites: ‘selecting at least one section map’ (Degawa’s mesh map) ‘based on the map identifier of said [time-variant information]’ (Degawa’s mesh number J3 that identifies a specific mesh map where traffic congestion exists).” Appellant’s Br. 23 (alternation in original). Before the Board, Google argued, and its expert explained, that Degawa satisfied this limitation. J.A. 174–75 (Pet.), J.A. 893–94 ¶¶ 111–12 (Dr. Michalson Decl.); J.A. 1736–37 ¶ 105 (Dr. Michalson 2nd Decl.); J.A. 1106 ¶ 19 (Degawa). Lee did not dispute that Degawa discloses using a map identifier to select a section map, J.A. 1429–32 (Patent Owner Response), and offered no rebuttal expert testimony on claim 79, J.A. 1435–37 (Mr. Cole Decl.). On claim 79, Lee challenged only whether Degawa disclosed the terms “time-variant information in section-wise” and a “section map” under its proposed constructions, which the Board declined to adopt. See J.A. 1391–96, 1429–32; *Final Written Decision*, at 18.

Other than Lee’s argument under its rejected construction of “section map,” Lee does not point to any evidence in the record before the Board to rebut Google’s showing that Degawa teaches the “selecting” limitation. Instead, Lee argues that it “need not have provided rebuttal evidence on this point because Petitioner did not meet its burden to make a threshold showing that the ‘selection’ element is present in Degawa.” Cross-Appellant’s Br. 24. But, as explained above, Google showed, including with unrebutted expert testimony, that Degawa taught the disputed limitation as properly construed. Based on Google’s showing, and the absence of any rebuttal evidence from Lee, the only conclusion supported by the evidence is that Degawa teaches



the disputed limitation.<sup>3</sup> We therefore reverse, rather than remand, the Board’s decision.

#### IV

We now turn to Lee’s cross-appeal of the Board’s determination that claims 64 and 77 were invalid as obvious.

Lee argues that the Board conducted a legally improper “inference on inference” obviousness analysis. *See* Cross-Appellant’s Br. 25–31 (“[T]he PTAB first drew an inference to find that Kakihara ‘suggests’ the missing claim limitation, then the PTAB combined the modified Kakihara with Israni based on a second inferred ‘motivation’ in order to achieve the claimed invention.”). Our obviousness framework permits modifying one reference and combining it with a second reference. *See Smith & Nephew, Inc. v. Rea*, 721 F.3d 1371, 1380–81 (Fed. Cir. 2013). Moreover, the obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the *inferences and creative steps* that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (emphasis added); *see also ClassCo, Inc. v. Apple, Inc.*, 838 F.3d 1214, 1219 (Fed. Cir. 2016) (“The rationale of *KSR* does not support [the] theory that a person of ordinary skill can only perform combinations of a puzzle element A with a perfectly fitting puzzle element B.”). We

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<sup>3</sup> Moreover, after Google requested outright reversal in its opening brief, Lee did not ask for a remand if we rejected the Board’s claim interpretation requiring “for display.” In *Corning*, we held that “where only one answer is supported by substantial evidence and there is neither a request nor an apparent reason to grant a second record-making opportunity, reversal is warranted.” 873 F.3d at 901–02.

find no legal error in this aspect of the Board’s obviousness analysis.

The only remaining issue is whether the Board’s factual findings underpinning its determination are supported by substantial evidence. We hold that they are. There is substantial evidence of record supporting the Board’s finding that the disputed “attribute designating statement” limitation was satisfied by Kakihara. In reaching this determination, the Board evaluated the disclosure of Kakihara, cited Google’s expert testimony, rejected Lee’s arguments, and discredited Lee’s expert’s testimony. *Final Written Decision*, at 28–29. The Board’s finding that a person of ordinary skill in the art would have been motivated to combine Kakihara with Israni is also supported by substantial evidence. *Id.* at 33–35. For example, the Board found that a person of ordinary skill in the art would have realized that “incorporating Kakihara’s feature of designating a selected route of travel in a different color than other roads . . . into Israni’s navigation system, would advantageously have allowed a driver to better recognize the selected route on the display.” *Id.* at 34 (citing J.A. 155–56 (Pet.); J.A. 1084 at col. 2 ll. 25–34 (Kakihara); J.A. 869 ¶ 77 (Dr. Michalson Decl.)).

We have considered Lee’s remaining arguments and find them unpersuasive. We affirm the Board’s final written decision that claims 64 and 77 of the ’413 patent are invalid as obvious over the combination of Israni and Kakihara.

## V

On Google’s appeal, because the only conclusion supported by the evidence is that Degawa teaches the disputed limitation as properly construed, we reverse the Board’s final written decision upholding claim 79. On Lee’s cross-appeal, because substantial evidence supports the Board’s findings, we affirm the Board’s determination that claims 64 and 77 are unpatentable as obvious over the

combination of Israni and Kakihara. Because all of the challenged claims are unpatentable, we do not remand for the Board to consider the non-instituted grounds.

**AFFIRMED-IN-PART, REVERSED-IN-PART**

COSTS

Costs to Google.