

NOTE: This disposition is nonprecedential.

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

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**KONINKLIJKE PHILIPS N.V.,**  
*Appellant*

v.

**QUECTEL WIRELESS SOLUTIONS CO. LTD.,**  
*Appellee*

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2023-1223

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Appeal from the United States Patent and Trademark  
Office, Patent Trial and Appeal Board in No. IPR2021-  
00562.

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Decided: August 6, 2024

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argued for appellant. Also represented by JOHN CUSTER,  
LUCAS I. SILVA; GEORGE CHRISTOPHER BECK, Washington,  
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olis, MN, argued for appellee. Also represented by PATRICK  
BISENIUS, MICHAEL TIMOTHY HAWKINS; THOMAS H. REGER,  
II, Dallas, TX.

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Before MOORE, *Chief Judge*, PROST, *Circuit Judge*, and  
MAZZANT, *District Judge*.<sup>1</sup>

Opinion for the court filed by *Chief Judge* MOORE.

*Circuit Judge* PROST concurs in the result.

MOORE, *Chief Judge*.

Koninklijke Philips N.V. (Philips) appeals an *inter partes* review final written decision of the Patent Trial and Appeal Board (Board) holding claims 1–13 and 27–33 of U.S. Patent No. 10,257,814 are unpatentable under 35 U.S.C. § 103. We affirm.

#### BACKGROUND

The Universal Mobile Telecommunications System (UMTS) is a cellular system standardized by the 3rd Generation Partnership Project (3GPP). J.A. 1563 ¶ 38. High-Speed Downlink Packet Access (HSDPA) is a functionality that allows UMTS to support higher data transfer capability on the “downlink,” when a terminal (*e.g.*, a cell phone) receives a transmission (*e.g.*, voice data) from a base station (*e.g.*, a satellite). J.A. 2500 ¶ 28. In an HSDPA system, available transmission resources are assigned codes that are communicated via control channels. ’814 patent at 1:12–16. Each terminal is assigned a single contiguous block of codes (called spreading codes). *Id.* at 1:16–19. Before starting a transmission, a base station sends a signal to each terminal communicating which spreading codes are assigned to that terminal. *Id.* at 1:23–25. Each terminal monitors four control channels for receipt of this information. *Id.* at 1:33–36. These signals create potentially

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<sup>1</sup> Honorable Amos L. Mazzant, III, District Judge, United States District Court for the Eastern District of Texas, sitting by designation.

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significant signaling overhead in the system. *Id.* at 1:41–43.

The '814 patent aims to reduce signaling overhead in an HSDPA system. *Id.* at 1:47–49. By preconfiguring parameters such as the starting point for a terminal's assigned resource block, fewer signaling bits are required to assign transmission resources. *Id.* at 2:55–64. Claim 1 recites:

1. A method of indicating, to a secondary station, a set of at least one transmission resource from among a plurality of transmission resources, said indicated set of at least one transmission resource being described by a plurality of parameters, said method comprising:

preconfiguring, at the secondary station, at least one association between a control signalling channel selected from among a plurality of control signalling channels, and a value of at least one fixed parameter describing the indicated set of at least one transmission resource;

coding into an address at least one remaining dynamic parameter from the plurality of parameters describing the indicated set of at least one transmission resource; and

transmitting the address, to the secondary station, using the selected control signalling channel.

*Id.* at 6:40–56.

Quectel Wireless Solutions Co. Ltd. (Quectel) petitioned for *inter partes* review of claims 1–13 and 27–33 of the '814 patent, asserting two grounds of unpatentability. Specifically, Quectel argued claims 1–13 and 27–33 would have been obvious over U.S. Patent Application Publication No. 2003/0147371 (Choi) and U.S. Patent No. 7,801,087 (Gollamudi), and claims 4 and 30 would have been obvious

over Choi, Gollamudi, and U.S. Patent Application Publication No. 2005/0105487 (Rudolf). The Board instituted and held all challenged claims unpatentable based on both asserted grounds. Philips appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

#### DISCUSSION

Obviousness is a question of law based on underlying facts. *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1326 (Fed. Cir. 2016). We review the Board's ultimate determination of obviousness de novo and its underlying findings of fact for substantial evidence. *Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 991 (Fed. Cir. 2017).

##### I. Motivation to Combine

Whether a skilled artisan would have been motivated to combine prior art references is a question of fact. *Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1364 (Fed. Cir. 2015). "A finding is supported by substantial evidence if a reasonable mind might accept the evidence as adequate to support the finding." *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1330 (Fed. Cir. 2019).

Philips challenges the Board's determination that claims 1–13 and 27–33 would have been obvious over Choi and Gollamudi. Philips argues substantial evidence does not support the Board's finding that a skilled artisan would be motivated to combine Choi and Gollamudi.

In its petition, Qectel presented three example implementations to illustrate the proposed Choi-Gollamudi combination. The Board found a skilled artisan would have been motivated to combine Choi and Gollamudi as described in all three implementations.

Qectel's brief indicates that affirmance of the Board's finding of motivation to combine for any one of the example implementations should result in affirmance in full. Philips' briefs do not dispute this. At oral argument,

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Philips stated the three implementations are indeed independent bases for affirmance. Oral Arg. at 1:15–1:35, [https://oralarguments.cafc.uscourts.gov/default.aspx?fl=23-1223\\_07102024.mp3](https://oralarguments.cafc.uscourts.gov/default.aspx?fl=23-1223_07102024.mp3). Surprisingly, Quectel then stated remand would be necessary as to certain dependent claims if the first implementation was found to be unsupported by substantial evidence. *Id.* at 16:16–17:13. During rebuttal, Philips was unable to give a definitive answer on the issue, as the focus of the appeal was independent claim 1 and the parties had never, up to that point, disputed the issue. In letters submitted after oral argument, both parties acknowledged the Board’s obviousness analysis for dependent claim 7 rested solely on the first example implementation.

Despite this colloquy, we decline to decide issues not properly raised and briefed on appeal. Absent exceptional circumstances, arguments not raised in an appellant’s opening brief are waived. *Bozeman Fin. LLC v. Fed. Rsrv. Bank of Atlanta*, 955 F.3d 971, 974 (Fed. Cir. 2020). Philips does not argue in its opening brief that remand is required for some dependent claims if less than all implementations of the Choi-Gollamudi combination are affirmed. Philips presented no separate arguments to the Board against obviousness of the challenged dependent claims. Despite Quectel’s suggestion at oral argument that certain dependent claims may warrant a different outcome, we decline to consider this waived argument. We need only address one implementation to dispose of this appeal.

In challenging the Board’s finding of motivation to combine for the second example implementation, Philips argues a skilled artisan would not be motivated to combine Choi and Gollamudi because this implementation would introduce significant drawbacks to the system. Philips contends this implementation would impose limitations on the base station’s flexibility to make certain code assignments, resulting in unused and therefore wasted transmission resources. Philips argues the contrary testimony of Quectel’s

expert, Dr. Wells, is conclusory and therefore insufficient to sustain the Board's finding. Due to the inflexibility and inefficiency in this implementation, Philips argues, substantial evidence does not support a finding of motivation to combine. We do not agree.

Philips and Quectel presented conflicting expert testimony to the Board regarding the benefits and drawbacks of the system described in the second example implementation. Specifically, the experts disputed how a skilled artisan would have weighed those benefits and drawbacks. The Board credited Dr. Wells' testimony that, "even if there was some reduced flexibility in this example, 'the power savings and other benefits achieved through modification of Choi based on Gollamudi would have ordinarily outweighed any reduction in the flexibility in the different combinations of the number of [codes] that can be assigned to a set of [terminals].'" J.A. 31 (quoting J.A. 2192–94 ¶ 17 (Wells Declaration)). The Board found the second implementation would result in power savings and other benefits and a skilled artisan would consider these benefits to outweigh any reduction in flexibility.

Substantial evidence supports the Board's findings on motivation to combine. "That the Board gave more credit to one expert witness than another is not grounds for reversal." *Parus Holdings, Inc. v. Google LLC*, 70 F.4th 1365, 1374 (Fed. Cir. 2023). The Board relied on Dr. Wells' testimony that the second example implementation would reduce transmit power requirements, save electricity, decrease inter-cell interference, and increase overall system performance. See J.A. 32; J.A. 1583–85 ¶¶ 72–77 (Wells Declaration). The Board also credited Dr. Wells' testimony that a skilled artisan would have prioritized the power savings achieved by the second implementation over any reduction in flexibility with respect to how many codes can be assigned to each terminal. J.A. 31; J.A. 2192–94 ¶ 17. Philips argues this testimony is conclusory for failure to quantify the power savings and therefore cannot

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constitute substantial evidence supporting the Board's finding, *see Koito Mfg. Co. v. Turn-Key-Tech, LLC*, 381 F.3d 1142, 1152 (Fed. Cir. 2004), but Philips presented no evidence questioning the significance or legitimacy of the power savings identified by Dr. Wells. Philips has not shown the Board erred in relying on Dr. Wells' testimony, which articulated specific benefits achieved by the second implementation and explained why a skilled artisan would be motivated to combine Choi and Gollamudi accordingly.

## II. OBJECTIVE INDICIA OF NONOBVIOUSNESS

Objective indicia, when present, must be considered in an obviousness determination. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538–39 (Fed. Cir. 1983). When a patentee asserts that commercial success supports its contention of nonobviousness, it must establish a nexus between the evidence of commercial success and the merits of the claimed invention. *ClassCo, Inc. v. Apple, Inc.*, 838 F.3d 1214, 1220 (Fed. Cir. 2016). Where objective evidence is tied to a product that embodies the claimed features and is coextensive with them, a nexus is presumed. *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019). Absent a presumption, a patentee can “prove nexus by showing that the evidence of secondary considerations is the ‘direct result of unique characteristics of the claimed invention.’” *Id.* at 1373–74 (quoting *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996)).

Philips challenges the Board's rejection of objective indicia of nonobviousness. Philips argues the claimed invention was adopted by 3GPP into the UMTS standard based on a technical proposal submitted by Philips. Philips contends its evidence shows the patented feature was adopted due to its unique characteristics and the Board erred in disregarding the evidence as lacking a nexus to the claimed invention.

A claimed invention's adoption as part of an industry standard is certainly objective indicia of nonobviousness.

We do not agree that the Board improperly rejected this evidence. The Board’s finding was one of weight, not admissibility. The Board found Philips’ evidence of nonobviousness and any nexus between that evidence and the claimed invention was “weak at best.” J.A. 57, 61. We see no error in the Board’s conclusion that in this case Philips’ evidence of objective indicia of nonobviousness does not rebut Quectel’s strong prima facie case that the claimed invention would have been obvious in view of Choi and Gollamudi.

CONCLUSION

We have considered the parties’ remaining arguments and find them unpersuasive. We affirm the Board’s determination that claims 1–13 and 27–33 of the ’814 patent would have been obvious.

**AFFIRMED**

COSTS

No costs.