

NOTE: This disposition is nonprecedential.

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

KONINKLIJKE PHILIPS N.V.,
Appellant

v.

QUECTEL WIRELESS SOLUTIONS CO. LTD.,
Appellee

2023-1221

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. IPR2021-
00561.

Decided: June 18, 2024

GEORGE CHRISTOPHER BECK, Foley & Lardner LLP,
Washington, DC, argued for appellant. Also represented
by JOHN CUSTER, KEVIN M. LITTMAN, LUCAS I. SILVA, Bos-
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ROBERT COURTNEY, Fish & Richardson P.C., Minneap-
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MICHAEL TIMOTHY HAWKINS, NICHOLAS STEPHENS; THOMAS
H. REGER, II, Dallas, TX.

Before MOORE, *Chief Judge*, TARANTO, *Circuit Judge*, and
CECCHI, *District Judge*.¹

TARANTO, *Circuit Judge*.

Koninklijke Philips N.V. (Philips) owns U.S. Patent No. 8,134,929, which describes and claims methods for controlling transmission power based on channel conditions in a communication system. After Philips sued Quectel Wireless Solutions Co. Ltd. for infringing the patent, Quectel successfully sought an inter partes review (IPR), under 35 U.S.C. §§ 311–319, of claims 1, 2, 9–11, 15, 16, 18, 22–24, 31–33, 36, 37, and 39 of the patent. The Patent Trial and Appeal Board, in its final written decision in the review, determined that all challenged claims were unpatentable for obviousness under 35 U.S.C. § 103. *Quectel Wireless Solutions Co. v. Koninklijke Philips N.V.*, No. IPR2021-00561, 2022 WL 4581868 (P.T.A.B. Sept. 29, 2022) (*Decision*). Philips appeals, presenting arguments all dependent on challenging the Board’s claim construction. Exercising our jurisdiction under 28 U.S.C. § 1295(a)(4)(A), we affirm.

The ’929 patent teaches that mobile communications systems can “use transmitter power control . . . schemes [] to maintain an adequate received signal quality despite variations in the channel conditions.” ’929 patent, col. 1, lines 5–9. The patent explains that, in conventional systems, “[i]f the channel quality degrades, thereby causing the received signal quality to degrade, the [] transmitter power level is increased to compensate, and when the channel quality recovers, the transmitter power level is decreased.” *Id.*, col. 1, lines 10–14. But that approach, the patent says, can increase interference for other system

¹ Honorable Claire C. Cecchi, District Judge, United States District Court for the District of New Jersey, sitting by designation.

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users and render power use inefficient. *Id.*, col. 1, lines 53–60. Recognizing those problems, the ’929 patent teaches an alternative: a system that reduces rather than increases transmission power if signal quality is below a certain level and increases data transmission power if signal quality is above a certain level. *See, e.g., id.*, col. 1, line 61, through col. 2, line 5; *id.*, figs.2, 4. Independent claim 23, which the parties agree is the representative independent claim for purposes of this appeal, recites:

23. A method of operating a radio communication system, comprising,

[23.1] at a first radio station, *transmitting over a channel in a predetermined time period* to a second radio station *a data block* comprising information symbols (I) and parity check symbols (C),

[23.2] receiving a Transmitter Power Control (TPC) command indicating either a reduction or an increase in channel quality; and

[23.3] in response to the indication of a reduction in channel quality according to a first criterion, decreasing the data transmit power and,

[23.4] *in response to the indication within the predetermined time period* of an increase in channel quality according to a second criterion, increasing the data transmit power;

[23.5] wherein the radio station transmits multiple data signals simultaneously so that data transmit power variation occurs on a subset of the multiple data signals.

Id., col. 11, lines 46–63 (emphases added; bracketed numbers also added, as parties and Board did).

This appeal involves the meaning of the “predetermined time period” claim terms. Philips’s position is that the claims require the acts of “decreasing the data transmit

power” and “increasing the data transmit power,” required by limitations 23.3 and 23.4, to take place within the “predetermined time period” recited in limitations 23.1 and 23.4. *Decision*, 2022 WL 4581868, at *4. The Board rejected that position, concluding that, although the “indication . . . of an increase in channel quality” must occur within the predetermined time period, “the plain meaning of the claim language does not require the increasing and decreasing of the data transmit power during the same predetermined time period.” *Id.* at *6. The Board also determined that the specification does not support reading Philips’s proposed restriction into the claims. *Id.* at *7. The Board thus concluded that the claim limitations at issue do not “require that the increasing and decreasing of the data transmit power must take place within the same ‘predetermined time period.’” *Id.* at *8. Philips challenges that construction on appeal.

There are no factual findings about extra-patent understandings of claim terms before us, so we review the Board’s construction de novo, based on intrinsic evidence. *See, e.g., Personalized Media Communications, LLC v. Apple Inc.*, 952 F.3d 1336, 1339 (Fed. Cir. 2020). “We generally give words of a claim their ordinary meaning in the context of the claim and the whole patent document; and the specification particularly, but also the prosecution history, informs the determination of claim meaning in context, including by resolving ambiguities; but even if the meaning is plain on the face of the claim language, the patentee can, by acting with sufficient clarity, disclaim such a plain meaning or prescribe a special definition.” *Promptu Systems Corp. v. Comcast Corp.*, 92 F.4th 1372, 1377 (Fed. Cir. 2024) (internal quotation marks and brackets omitted) (citing authorities, including *Personalized Media*, 952 F.3d at 1339–40). In this matter, prosecution history has played no substantial role in the parties’ contentions, so, like the Board, we limit our claim-construction analysis to the claim language and the specification. Neither the claim

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language nor the specification, we conclude, calls for a different construction from the one adopted by the Board.

The claim language is unambiguous in the respect at issue. The language does not impose a temporal restriction requiring that the claimed decreasing or increasing of the “data transmit power” occur during the “predetermined time period” mentioned in the claim. The absence of such a restriction is particularly clear given how easy it would have been to write one.

The “predetermined time period” language appears in only two limitations in claim 23. The first recitation, in limitation 23.1, requires only that “a data block” be transmitted in the “predetermined time period.” *See* ’929 patent, col. 11, lines 48–51. It says nothing about decreasing or increasing power. The second recitation, in limitation 23.4, *id.*, col. 11, lines 58–60, requires only that “the indication . . . of an increase in channel quality” occur “within the predetermined time period”: The “within” phrase is embedded inside the “indication . . . of an increase in channel quality” phrase; and the “increasing the data transmit power” phrase is not adjacent to the “within the predetermined period” phrase—indeed, it is separated by a comma from the phrase of which the “within the predetermined period” phrase is a part. The ordinary meaning of this limitation is that the indication, but not the increasing, must occur “within the predetermined time period.” *See, e.g.*, Antonin Scalia & Bryan A. Garner, *Reading Law: The Interpretation of Legal Texts* 152 (2012) (reciting canon that a modifier “normally applies only to the nearest reasonable referent”); *Hall v. United States Department of Agriculture*, 984 F.3d 825, 838 (9th Cir. 2020) (reciting canon); *Grecian Magnesite Mining, Industrial & Shipping Co. v. Commissioner of Internal Revenue Service*, 926 F.3d 819, 824 (D.C. Cir. 2019) (same); *Travelers Indemnity Co. v. Mitchell*, 925 F.3d 236, 243 (5th Cir. 2019) (same); *HTC Corp. v. IPCom GmbH & Co.*, 667 F.3d 1270, 1274 (Fed. Cir. 2012) (“Modifiers should be placed next to the words they modify.”).

Philips's reading is thus contrary to the unambiguous ordinary meaning of the claim language actually chosen by Philips.

Reflecting its disregard of the actual language of the claim, Philips's position suffers from another textual problem. The indication-and-decreasing step (23.3) nowhere mentions the "predetermined time period," whereas the indication-and-increasing step (23.4) does, yet Philips argues that both decreasing and increasing must occur in the predetermined time period. Philips's Opening Br. at 48. Philips says that the absence of "predetermined time period" language in 23.3 is insignificant because including it would have been "redundant." *Id.* Philips must then treat the presence of "predetermined time period" language in 23.4 as likewise redundant—and Philips's expert so insisted. J.A. 2969 (stating that "[i]f the words 'the predetermined time period' were not in [limitation 23.4], it would not change the way that I would interpret that limitation, nor do I believe it would change the way a person of ordinary skill in the art would interpret that limitation"). "[W]hile not inevitably disqualifying a construction in every patent, . . . '[i]t is highly disfavored to construe terms in a way that renders them void, meaningless, or superfluous.'" *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 801, 809–10 (Fed. Cir. 2021) (quoting *Wasica Finance GmbH v. Continental Automotive Systems, Inc.*, 853 F.3d 1272, 1288 n.10 (Fed. Cir. 2017)) (collecting cases).

In light of the problems Philips faces with the claim language, Philips relies heavily on the specification in support of its claim-construction position. But we find nothing in the specification that warrants Philips's proposed temporal restrictions. Philips points out that all the disclosed embodiments show at least one decrease and increase in data transmit power occurring during the "predetermined time period." *See* '929 patent, figs.4–7. But that is insufficient to support Philips's proposed construction. "We have repeatedly held that 'it is not enough that the only

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embodiments, or all of the embodiments, contain a particular limitation to limit claims beyond their plain meaning.” *Evolusion Concepts, Inc. v. HOC Events, Inc.*, 22 F.4th 1361, 1367 (Fed. Cir. 2022) (quoting *Unwired Planet, LLC v. Apple, Inc.*, 829 F.3d 1353, 1359 (Fed. Cir. 2016)). The specification reiterates that the invention is “described, *by way of example only*, with reference to the accompanying drawings,” ’929 patent, col. 2, lines 62–63 (emphasis added), and repeatedly refers to the figures as “examples” or as providing illustrative “options,” *e.g.*, *id.*, col. 9, line 42; *id.*, col. 6, lines 36–40. Philips notes that the specification repeatedly describes these embodiments as “in accordance with” or “according to” the invention. *See id.*, col. 3, lines 4–12; *id.*, col. 4, lines 13–19; *id.*, col. 8, lines 14–16. But that language conveys nothing more than that the embodiments are consistent with—not required by—what is identified as the invention.

Philips argues that the Board’s claim construction must be rejected as contrary to the evident purpose of the claimed invention: improving power efficiency relative to conventional systems. This is an argument that the specification clearly enough declares that the argued-for temporal limitation “is important, essential, or critical to the invention.” *Blackbird Tech LLC v. ELB Electronics, Inc.*, 895 F.3d 1374, 1378 (Fed. Cir. 2018) (rejecting similar argument). But the specification does not do so. No language in the specification makes a disavowal or disclaimer of the broader scope that is evident from the claim language, which we have previously found based only on “clear and unmistakable statements” that, for example, describe features as requirements of the “present invention.” *Luminara Worldwide, LLC v. Liown Electronics Co.*, 814 F.3d 1343, 1353 (Fed. Cir. 2016). And Philips fails to identify language in the specification that highlights the criticality of its proposed temporal limitation, a limitation that goes beyond the seemingly key idea of decreasing power when channel quality is sufficiently poor and increasing it when

channel quality is sufficiently good. Philips points only to testimony from Quectel’s expert in support of its view, but that testimony says only that, all else equal, the sooner that changes are made to the data transmit power, the sooner “the [invention’s] benefit comes into play.” J.A. 3920–21. That does not establish criticality of the temporal limit at issue. Philips itself does not assert that changing the data transmit power outside the “predetermined time period” would provide no material efficiency benefit over conventional systems, and, in the absence of clear and unambiguous evidence demonstrating the criticality of the Philips’s proposed temporal limitation, we decline to depart from the ordinary meaning of the claim language.

The specification is no more help to Philips in its assertion that the claim requires the recited steps to be performed in order. Philips’s Opening Br. at 43, 50–58. We have held that “[a]s a general rule, unless the steps of a method claim actually recite an order, the steps are not ordinarily construed to require one,” explaining the needed basis for a contrary conclusion in a particular case: “[A] claim requires an ordering of steps when the claim language, as a matter of logic or grammar, requires that the steps be performed in the order written, or the specification directly or implicitly requires an order of steps.” *Mformation Technologies, Inc. v. Research in Motion Ltd.*, 764 F.3d 1392, 1398 (Fed. Cir. 2014) (cleaned up). Philips does not show that logic or grammar requires the proposed order. And the specification provides only embodiments, as discussed.

Finally, Philips argues that the Board erred in construing certain dependent claims (claims 2 and 24) that recite “suspending” and “resuming transmission of the data block.” Philips proposes that these claimed operations, too, must occur within the “predetermined time period.” But before the Board, Philips treated the language of those dependent claims as mirroring that of the independent claims for relevant purposes, *compare, e.g.*, ’929 patent, col. 11,

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lines 46–63 (claim 23), *with id.*, col. 11, line 64, through col. 12, line 3 (dependent claim 24)—not arguing for a different result regarding “predetermined time period” for claims 2 and 24 if it was wrong about claims 1 and 23. In this circumstance, we reject Philips’s argument for the reasons already set out.

Philips’s remaining arguments depend on its claim-construction position. Having rejected that position, we affirm the Board’s final written decision.

AFFIRMED