

NOTE: This disposition is nonprecedential.

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

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

v.

**KONINKLIJKE PHILIPS N.V.,**  
*Appellee*

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2023-1155

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Appeal from the United States Patent and Trademark  
Office, Patent Trial and Appeal Board in No. IPR2021-  
00560.

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Decided: May 9, 2024

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Before LOURIE, REYNA, and CHEN, *Circuit Judges*.

LOURIE, *Circuit Judge*.

Quectel Wireless Solutions Co. Ltd. (“Quectel”) appeals from a final written decision of the United States Patent and Trademark Office Patent Trial and Appeal Board (“the Board”) holding that Quectel had failed to show claims 11–17 of U.S. Patent 7,089,028 to be unpatentable. *Quectel Wireless Sols. Co. v. Koninklijke Philips N.V.*, IPR2021-00560, 2022 WL 4112074 (P.T.A.B. Sept. 8, 2022) (“*Decision*”). For the following reasons, we *affirm*.

#### BACKGROUND

The ’028 patent, assigned to Koninklijke Philips N.V. (“Philips”), relates to techniques for mobile communications systems to regulate the power of radio communications between mobile stations and immobile base stations. Uplink communications are those transmitted from the mobile station to a base station, and downlink communications are those transmitted from a base station to a mobile station. In the ’028 patent system, there are dedicated uplink and downlink control channels and an uplink data channel. ’028 patent, col. 3 ll. 26–30. Radio communication systems generally use closed loop power control, where the mobile station determines the required changes in the power of transmissions from the base station and signals those changes to the base station, and vice versa. *Id.* col. 1 ll. 27–31. According to the specification, conventional power management techniques took time for power control loops to converge satisfactorily. *Id.* col. 1 ll. 40–46. The ’028 patent discloses systems that avoid or minimize failed data transmissions during convergence. In one claimed embodiment, after the exchange of a “request” and “acknowledgement,” the “initial transmission” of “control information” on the uplink data channel is “determinedly delayed” until the base station and the mobile station have had sufficient time to receive the control signals so data will not be corrupted or lost. *Id.* col. 8 ll. 4–22. Representative claim 11 is reproduced below.

## 11. A secondary station, comprising:

means for transmitting a request for resources to a primary station;

means for receiving an acknowledgment of a reception of the request for resources by the primary station;

[c] wherein, *subsequent to a reception of the acknowledgement by said secondary station, control information is initially transmitted on an uplink control channel and a downlink control channel between the primary station and said secondary station;*

wherein, subsequent to the reception of the acknowledgement by said secondary station, data is initially transmitted on an uplink data channel from said secondary station to the primary station; and

wherein the initial transmission of data on the uplink data channel is determinedly delayed until after the initial transmission of control information on the uplink control channel and the downlink control channel.

*Id.* (emphasis added).

Quectel petitioned for *inter partes* review, arguing that (1) claims 11–12 and 15–17 would have been obvious over Lomp<sup>1</sup> in view of Luddy,<sup>2</sup> and (2) claims 11–13 and 15–17 would have been obvious over Lomp in view of Chen.<sup>3</sup>

The parties disputed the meaning of claim element 11[c], emphasized above, with a similar limitation in independent claim 15. Quectel argued that the claimed “initial

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<sup>1</sup> U.S. Patent 5,799,010 to Lomp et al. (“Lomp”).

<sup>2</sup> U.S. Patent 5,953,356 to Luddy (“Luddy”).

<sup>3</sup> U.S. Patent 6,067,458 to Chen (“Chen”).

transmission” of control information on the uplink and downlink control channels need not be the first transmission of control information on those channels, but rather can be an initial transmission of “that particular message, that control signal.” *Decision* at \*4 (emphasis omitted) (quoting J.A. 534, Oral Hearing Tr. 58:4–6). Philips argued that the claim limitation requires a particular uplink control channel, a particular downlink control channel, and the initial transmission of control information on those particular channels after an acknowledgement. *Id.* at \*3–4.

The Board found that the language of claim limitation 11[c] requires that “subsequent to a reception of the acknowledgement by said secondary station, control information is transmitted for the first time on the particular claimed uplink and downlink control channels between the primary station and the secondary station,” with a similar construction for claim 15’s comparable limitation. *Id.* at \*6. In reaching that determination, the Board gave great weight to the plain and ordinary meaning of “initially,” interpreting it as “something that occurs first, or at the beginning.” *Id.* at \*4. It further found its interpretation supported by the specification. *Id.* at \*4–5. The Board also rejected Quectel’s argument that that construction imported the term “any” into the claims before “initial transmission.” *Id.* at \*4.

The Board found, both under its determined construction of “initially transmitted” *and* under Quectel’s proposed construction of that term, that neither the Lomp and Luddy combination nor the Lomp and Chen combination taught limitation 11[c] or the similar limitation in claim 15. *Id.* at \*11, \*14–15. It therefore found that Quectel had not shown by a preponderance of the evidence that the challenged claims were unpatentable. *Id.* at \*14–15.

Quectel timely appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

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## DISCUSSION

We review *de novo* the Board’s construction of a claim term, and any supporting determinations made, based on the intrinsic record. *Personalized Media Commc’ns, LLC v. Apple Inc.*, 952 F.3d 1336, 1339 (Fed. Cir. 2020). Any factual findings the Board made regarding extrinsic evidence are reviewed for substantial evidence. *Id.*

Quectel argues that the Board erred in its construction of “initially transmitted,” and that the Board’s “alternative” finding under Quectel’s allegedly proposed construction still misinterpreted the claim limitation. Specifically, Quectel argues that the Board’s construction improperly excludes control information sent after the restoration following an interruption on previously existing control channels. Appellant’s Br. at 27. Philips responds by arguing that the Board’s construction was correct, that Quectel forfeited its main argument on appeal by not making it before the Board, and that even under Quectel’s proposed construction, the Board’s finding of nonobviousness was supported by substantial evidence.

Quectel’s main evidence in support of its proposed construction is a portion of the ’028 patent that it did *not* cite before the Board: the Abstract’s explanation that power control is established “by delaying initial transmission of a data channel (either at the start of a transmission or after a pause) until after the initial transmission of control channels.” ’028 patent, Abstract; *see also* Appellant’s Br. at 31 n.4 (acknowledging that “it did not specifically address the Abstract in its arguments to the Board”); Oral Arg. at 10:29–32 (acknowledging that Quectel “did not direct the Board to the Abstract on this”).

As an initial matter, it is unclear whether the Abstract is referring to a “pause” where there is a break in connection or where the logical connection is maintained. *See* ’028 patent, col. 4 l. 64–col. 5 l. 1. It also makes no reference to a “request” or an “acknowledgement.” Since that portion of the Abstract was not raised before the Board, we do not

have the benefit of expert testimony on or prior analysis of its meaning.<sup>4</sup> But, regardless, the Abstract’s general description of the claimed invention does not, on the particular facts of this case, override the clear language in the body of the specification. Although a patent’s abstract may provide useful information in determining the scope of the invention, *see Hill-Rom Co. v. Kinetic Concepts, Inc.*, 209 F.3d 1337, 1341 n.\* (Fed. Cir. 2000), we must consider that its “purpose . . . is to enable the Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure.” 37 C.F.R. § 1.72(b); *see also Interdigital Commc’ns, Inc. v. U.S. Int’l Trade Comm’n*, 601 F. App’x 972, 978 (Fed. Cir. 2015) (“[W]e do not think that the summary statements . . . in the Abstract and Summary of the Invention—where full explanations of the term are not expected—are sufficient to justify a broader reading of [a disputed term].”).

We agree with the Board’s construction of claim element 11[c], and the corresponding limitation in claim 15. We find that it is supported by the ’028 patent specification, the claim language itself, and the extrinsic record. The specification explains that “[a]fter the acknowledgement 204 has been sent, two control channels (CON) are established, an uplink control channel 206 and a downlink control channel 208.” ’028 patent, col. 3 ll. 26–29; *see also id.* Figures 2 and 3. After those channels are established “transmissions *start* on the control channels 206, 208.” *Id.* col. 3 ll. 40–41 (emphasis added). Although other portions of the specification refer to a “pause” or “interruption” in transmission, *see, e.g., id.* col. 1 l. 41, col. 4. l. 60–col. 5 l. 5, they do not do so in reference to an “initial transmission.” *See Decision* at \*5.

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<sup>4</sup> Quectel’s expert refers to that portion of the Abstract only in passing as part of his “Subject Matter Overview.” J.A. 968, ¶ 30.

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Quectel’s interpretation of the “initial transmission” as being the first of any particular control message is a strained reading of the claim language. Claim 11 itself simply says that “*control information* is initially transmitted,” not control information of a particular type. ’028 patent, col. 8 ll. 10–11 (emphasis added); *see also id.* col. 8 ll. 44–45 (similar language in claim 15). Nothing in the claim language limits the claimed control message to a particular control message as Quectel suggests. Rather, the Board’s construction is more consistent with a plain and ordinary reading of the claims. *See Decision* at \*4 (citing J.A. 1544, ¶ 110; J.A. 501–02, Oral Hearing Tr. 25:19–26:2).

Because we affirm the Board’s claim construction, and Quectel did not challenge the Board’s invalidity finding under that construction, Appellant’s Br. at 1–2, we therefore affirm the Board’s determination of claims 11–17 of the ’028 patent as unpatentable as obvious. We need not reach Quectel’s argument that the Board erred in analyzing the claims under Quectel’s proposed construction.

#### CONCLUSION

We have considered Quectel’s remaining arguments but find them unpersuasive. For the foregoing reasons, the decision of the Board is *affirmed*.

**AFFIRMED**