

NOTE: This disposition is nonprecedential.

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

FEDERAL EXPRESS CORPORATION,
Appellant

v.

QUALCOMM INCORPORATED,
Appellee

**JOHN A. SQUIRES, UNDER SECRETARY OF
COMMERCE FOR INTELLECTUAL PROPERTY
AND DIRECTOR OF THE UNITED STATES
PATENT AND TRADEMARK OFFICE,**
Intervenor

2024-1235

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. IPR2022-
00584.

Decided: April 29, 2026

DANIEL C. TUCKER, Finnegan, Henderson, Farabow,
Garrett & Dunner, LLP, Reston, VA, argued for appellant.
Also represented by CHRISTOPHER B. ANDERSON, JEFFREY
A. BERKOWITZ, LUKE HAMPTON MACDONALD, JOSEPH

MICHAEL SCHAFFNER, MICHAEL VINCENT YOUNG, SR.

STEPHANIE DEBROW, Norton Rose Fulbright US LLP, Austin, TX, argued for appellee. Also represented by MARK T. GARRETT, EAGLE HOWARD ROBINSON; JONATHAN S. FRANKLIN, Washington, DC; DANIEL LEVENTHAL, RICHARD STEPHEN ZEMBEK, Houston, TX.

STEVEN A. MYERS, Appellate Staff, Civil Division, United States Department of Justice, for intervenor. Also represented by BRIAN M. BOYNTON, BRADLEY HINSHELWOOD; PETER J. AYERS, MICHAEL S. FORMAN, AMY J. NELSON, FARHEENA YASMEEN RASHEED, Office of the Solicitor, United States Patent and Trademark Office, Alexandria, VA.

Before HUGHES, CUNNINGHAM, and STARK, *Circuit Judges*.
CUNNINGHAM, *Circuit Judge*.

Federal Express Corporation (“FedEx”) appeals a final written decision by the Patent Trial and Appeal Board (“Board”) in an *inter partes* review brought by Qualcomm Incorporated (“Qualcomm”). The Board determined that claims 1 through 25 of U.S. Patent No. 7,623,033 (“the ’033 patent”) are unpatentable as obvious. *Qualcomm Inc. v. FedEx Corp. Servs., Inc.*, No. IPR2022-00584, at 102 (P.T.A.B. Oct. 6, 2023) (“*Decision*”).¹ On appeal, FedEx only challenges the Board’s claim construction and

¹ Citations to the Board’s decision in this opinion are to the version included in the joint appendix. For example, *Decision* at 1 is found at J.A. 1. FedEx substituted for FedEx Corporate Services, Inc. in this appeal after a merger. ECF No. 35; ECF No. 36.

FEDERAL EXPRESS CORPORATION v.
QUALCOMM INCORPORATED

3

determination as to claim 7. Appellant's Br. 22–23. For the reasons discussed below, we *reverse*.

I. BACKGROUND

The '033 patent claims methods and systems for tracking items. '033 patent col. 16 ll. 2–16, 33–35, col. 16 l. 62 to col. 17 l. 11. Claims 1 and 7 recite:

1. A method for tracking items, comprising:

storing, in memory, first association data reflecting an association between an item tracking device and a beacon device when the item tracking device is within a predetermined range of the beacon device, wherein the item tracking device corresponds to a first item, and the beacon device corresponds to an area that contains multiple items including the first item;

detecting sensor data about an environment of the beacon device;

associating the sensor data with a group of items, of the multiple items, that are within the predetermined range of the beacon device; and

periodically transmitting the associated sensor data from the beacon device to a database.

7. The method of claim 1, wherein the transmitted sensor data triggers a programming change for at least one of the item tracking device and the beacon device.

Id. col. 16 ll. 2–16, 33–35.

In its final written decision, the Board determined that claim 7 was unpatentable as obvious over the combination

of Hashimoto² and Bhuptani.³ *Decision* at 87–88. The Board first declined to adopt FedEx’s construction of “programming change,” which required a “change in function.” *Id.* at 33. Instead, the Board determined that “programming change” is not limited to a “change in function,” and could instead include “storing new or modified instructions in a memory . . . located at the respective device,” which “more broadly includes instructions in addition to those that change the function of the device.” *Id.* at 34. Accordingly, the Board determined that “programming change” should be given its plain and ordinary meaning and no separate construction of the term was necessary. *Id.* at 35.

Additionally, the Board found that, even applying FedEx’s construction, Hashimoto “discloses a change in processing . . . as well as a change in storing and delivering information.” *Id.* at 87. Specifically, Hashimoto discloses: (1) using Radio Frequency Identification (“RFID”) tags to store freshness dates and altering those freshness dates based on temperature data, J.A. 1648 ¶¶ 115–17; and (2) using a temperature sensor to detect that temperature has exceeded a threshold and writing that temperature in a RFID tag, J.A. 1628 at Fig. 2; J.A. 1645 ¶ 48; J.A. 1647 ¶¶ 85, 91. The Board determined that the first disclosure constituted a “change in processing,” and the second disclosure constituted a “change in storing and delivering information.” *Decision* at 87. Accordingly, the Board determined that Qualcomm “established by a preponderance of the evidence that claim 7 is unpatentable

² U.S. Patent Application Publication No. 2006/0006987 (filed Nov. 12, 2004; published Jan. 12, 2006), J.A. 1626–52 (“Hashimoto”).

³ Manish Bhuptani & Shahram Moradpour, *RFID Field Guide: Deploying Radio Frequency Identification Systems* (2005) (“Bhuptani”).

FEDERAL EXPRESS CORPORATION v.
QUALCOMM INCORPORATED

5

under 35 U.S.C. § 103(a) as obvious over the combination of Hashimoto and Bhuptani.” *Id.* at 87–88.

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

II. STANDARD OF REVIEW

“We review the Board’s legal conclusions de novo and its fact findings for substantial evidence.” *Game & Tech. Co. v. Wargaming Grp. Ltd.*, 942 F.3d 1343, 1348 (Fed. Cir. 2019). “Whether a claimed invention is unpatentable as obvious is a question of law that is reviewed de novo, based on underlying findings of fact reviewed for substantial evidence.” *Redline Detection, LLC v. Star Envirotech, Inc.*, 811 F.3d 435, 449 (Fed. Cir. 2015).

“Substantial evidence means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *FanDuel, Inc. v. Interactive Games LLC*, 966 F.3d 1334, 1343 (Fed. Cir. 2020) (internal quotation marks and citation omitted). “The substantial evidence standard . . . involves examination of the record as a whole, taking into account evidence that both justifies and detracts from an agency’s decision.” *OSI Pharms., LLC v. Apotex Inc.*, 939 F.3d 1375, 1381 (Fed. Cir. 2019) (internal quotation marks and citation omitted).

III. DISCUSSION

FedEx argues that the Board erred in its construction of “programming change.” Appellant’s Br. 46–54. Additionally, FedEx argues that the Board’s finding that Hashimoto discloses a “programming change” would not be supported by substantial evidence under a correct

construction of “programming change.”⁴ *Id.* at 54–62. We address each argument in turn.

A.

FedEx argues that the intrinsic and extrinsic evidence show that a “programming change” is a “change in function,” consistent with the phrase’s ordinary meaning. Appellant’s Br. 47–51. FedEx also argues that the Board misread the specification and incorrectly concluded that the specification included instructions in addition to those that change the function of the device. *Id.* at 52–53 (citing *Decision* at 34). Qualcomm argues that the Board’s construction of “programming change” is correct because FedEx’s reading would improperly limit claim 7 to the examples in the specification and that the examples of programming changes described in the specification are not limited to changes that alter the function of a device. Appellee’s Br. 36–43. Qualcomm also argues that the extrinsic evidence confirms that the plain and ordinary meaning of “programming change” is broader than a “change in function.” *Id.* at 43–47. We agree with FedEx.

Here, claim 7 requires that “the transmitted sensor data triggers a *programming* change for at least one of the item tracking device and the beacon device.” ’033 patent

⁴ FedEx also argues that the Board erred by failing to adjudicate whether Qualcomm was required, under 35 U.S.C. § 312(a)(2), to name Roambee Corporation as a real party in interest in its petition. Appellant’s Br. 29; *see also id.* at 24–46. FedEx pressed this same argument in a related appeal, which has been resolved by a separate opinion issued this same date. *See Fed. Express Corp. v. Qualcomm Inc.*, No. 2024-1236, __ F.4th __ (Fed. Cir. Apr. 29, 2026). Accordingly, as in that case, we reject the part of FedEx’s appeal challenging the Board’s real party-in-interest determination.

FEDERAL EXPRESS CORPORATION v.
QUALCOMM INCORPORATED

7

col. 16 ll. 33–35 (emphasis added). “Claim terms are generally given their plain and ordinary meaning, which is the meaning one of ordinary skill in the art would ascribe to a term when read in the context of the claim, specification, and prosecution history.” *Kyocera Senco Indus. Tools Inc. v. Int’l Trade Comm’n*, 22 F.4th 1369, 1378 (Fed. Cir. 2022) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313–14 (Fed. Cir. 2005) (en banc)). Read in the context of the specification, the plain and ordinary meaning of “programming change” is correctly understood to be limited to a change to the function of the program. Although the patent acknowledges that “the specification and examples be considered as exemplary only,” the specification is nonetheless instructive in understanding the disputed term. ’033 patent col. 15 ll. 64–65; *Wis. Alumni Rsch. Found. v. Apple Inc.*, 905 F.3d 1341, 1351 (Fed. Cir. 2018) (internal quotation marks and citation omitted) (“Where . . . a patent repeatedly and consistently characterizes a claim term in a particular way, it is proper to construe the claim term in accordance with that characterization.”).

The specification’s discussion of “programming” identifies instructions that “dictat[e], for example, the manner in which a device detects environmental conditions,” ’033 patent col. 8 ll. 27–29; *id.* col. 5 ll. 60–62, and altering programming to “check the temperature more frequently,” *id.* col. 6 ll. 5–7; *id.* col. 10 ll. 7–9. In addition to detected environmental conditions, such as temperature above a certain level, *see id.* col. 10 ll. 5–9, “other parameters can be used as the basis for altering programming” and “programming may be altered for reasons other than the detection of predetermined conditions.” *Id.* col. 10 ll. 9–13. The specification also describes that one method of altering programming is “storing new or modified *instructions* in a memory . . . located at the respective device.” *Id.* col. 5 ll. 62–65 (emphasis added). These descriptions consistently characterize programming as it relates to the

function of the device and a programming change as an alteration of that function.

While the Board and Qualcomm have implied that there can be a change in “instruction” that is not a change in “function,” J.A. 34; Appellee’s Br. 44, a programming change cannot be a mere change in data. Specifically, the claim language and specification distinguish between “programming change” and “transmitted sensor data,” in that the data later triggers a change in “programming.” ’033 patent col. 16 ll. 33–35; *see id.* col. 8, ll. 8–14 (describing the receipt of “sensor data” and the later alteration of “programming”). *See also Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1376 (Fed. Cir. 2014) (explaining the “distinction between ‘instructions’ and ‘data’ is widely recognized in the field of” computing). Moreover, the parties also point to extrinsic evidence in the form of dictionary definitions and expert testimony as alleged claim construction support, but we do not reach this extrinsic evidence. Appellant’s Br. 53–54; Appellee’s Br. 43–47; *see also Decision* at 34 (giving “little, if any, weight” to the extrinsic evidence “in light of the clear disclosure of the intrinsic evidence”). Where the intrinsic evidence “resolves any ambiguity in a disputed claim term, it is improper to rely on extrinsic evidence to contradict the meaning so ascertained.” *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1367 (Fed. Cir. 2003). Accordingly, we disagree with the Board’s construction of “programming change” and hold that a “programming change” requires a change in function.

B.

FedEx argues that substantial evidence does not support the Board’s finding that Hashimoto discloses a “programming change” because Hashimoto does not disclose a change in function. Appellant’s Br. 54–62. Qualcomm argues that the Board did not err in its finding that Hashimoto’s disclosure of changing the freshness date stored on

FEDERAL EXPRESS CORPORATION v.
QUALCOMM INCORPORATED

9

a RFID tag meets claim 7, even under FedEx’s proposed construction. Appellee’s Br. 47–50. We agree with FedEx.

Substantial evidence does not support the Board’s alternative finding that Hashimoto discloses a “programming change” under FedEx’s proposed claim construction.⁵ We analyze the Board’s finding under the claim construction we articulated above, where a “programming change” requires a change in function. Hashimoto’s alteration of the freshness dates does not alter the programming of the system, but merely updates one stored variable value. Both cited paragraphs discuss “reduc[ing] a freshness date by three days” after a temperature is detected to have reached a certain value. J.A. 1648 ¶¶ 116–17. But Hashimoto does not disclose any programming change; it only discloses that the freshness dates are used “to perform shipment management,” with no further explanation regarding what resulting change could occur based on changed freshness dates. J.A. 1648 ¶ 106. Thus, this change in freshness date does not lead to a change in function and is not a programming change as recited in claim 7. Accordingly, substantial evidence does not support the Board’s finding that the combination of Hashimoto and Bhuptani teaches the claim limitations of claim 7.

⁵ The Board erred in its explanation of FedEx’s construction. The Board stated that FedEx improperly argued for a narrower construction than a change in function, “i.e., requir[ing] a change in *how* a computer receives, stores, processes, and/or delivers information.” *Decision* at 87 (internal quotation and citation omitted). The Board then analyzed Hashimoto under this construction. *Id.* However, as both parties note, FedEx never argued for this narrower construction. Appellant’s Br. 58–59; Appellee’s Br. 47–48 & n.15.

10

FEDERAL EXPRESS CORPORATION v.
QUALCOMM INCORPORATED

III. CONCLUSION

We have considered the parties' remaining arguments and find them unpersuasive. We reverse the Board's unpatentability determination for claim 7 based on its erroneous claim construction of "programming change."

REVERSED

COSTS

Costs to FedEx.