NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

KEYNETIK, INC.,
Appellant

v.

SAMSUNG ELECTRONICS CO., LTD.,
Appellee

2020-1270

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2018-00985.

Decided: December 23, 2020

EDWARD F. BEHM, Armstrong Teasdale, LLP, Philadelphia, PA, argued for appellant. Also represented by MARK W. HALDERMAN.

PHILLIP W. CITROEN, Paul Hastings LLP, Washington, DC, argued for appellee. Also represented by NAVEEN MODI, CHETAN BANSAL, STEPHEN BLAKE KINNAIRD, JOSEPH PALYS.

Before DYK, CLEVENGER, and O'MALLEY, *Circuit Judges*.

O'MALLEY, *Circuit Judge*.

Appellant KEYnetik, Inc. ("KEYnetik") appeals a final written decision of the Patent Trial and Appeal Board ("Board") finding claims 22 and 23 of U.S. Patent No. 7,966,146 B2 ("the '146 patent") unpatentable as obvious. *Samsung Elecs. Co., Ltd. v. KEYnetik, Inc.*, No. IPR2018-00985, 2019 Pat. App. LEXIS 13623 (P.T.A.B. Nov. 5, 2019) ("*Board Decision*"). KEYnetik argues that the Board committed two errors in construing the claimed "sleep command" limitation, and that the Board's obviousness analysis was premised on its erroneous construction.

While we find no error in the Board's conclusion regarding the scope of the claimed "sleep command," we agree with KEYnetik that the Board erred with respect to the claim limitation requiring that the "sleep command" be sent "after the command is executed." We therefore *affirm-in-part* and *reverse-in-part* the Board's claim construction. Because the Board's obviousness determination stemmed from its erroneous construction, we *vacate* the Board's final written decision and *remand* for further proceedings.

BACKGROUND

KEYnetik owns, by assignment, the '146 patent, which relates generally to using accelerometers to sense movement of a device and translating sensed movement into commands. '146 patent at Abstract and col.1, ll. 20–27. The patent describes a device "having at least one mounted accelerometer configured to sense movement on at least one sensitivity axis." *Id.* at col. 3, ll. 5–6. An exemplary device is a "handheld computing device with a visual display" that has "a cursor in communication with the visual display [that] is moved across the display in response to sensed motion." *Id.* at col. 10, ll. 9–12. Figure 9, below,

shows an embodiment of the article—a "handheld computer:"

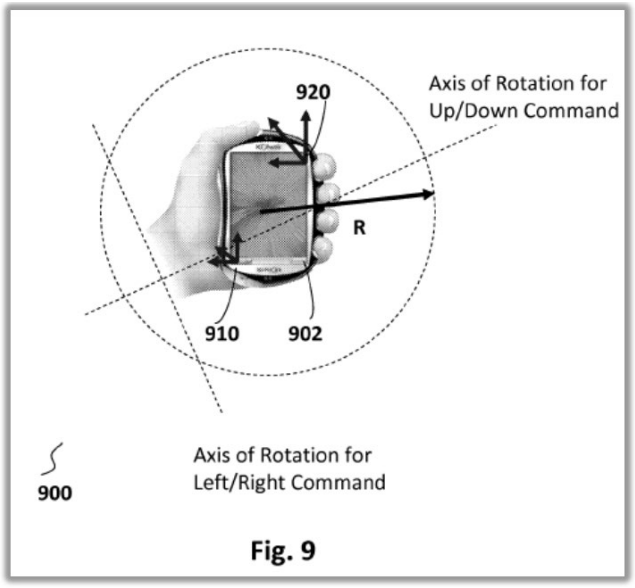

Fig. 9

The claimed "article" includes: (1) a "motion input algorithm;" and (2) a "step motion algorithm." *Id.* at claim 22. The "motion input algorithm" converts movement data from the accelerometer into commands. *Id.* at col. 10, ll. 1–49. "Step motion" allows a user to change position while operating a device. *Id.* at col. 13, ll. 55–59. The specification defines "step motion" as "a code to translate user intentions into a precise command such as movement of a pointer over the grid cells and to allow readjustment of the system between steps." *Id.* at col. 13, ll. 51–54. The "simple step motion code" described in the '146 patent introduces an "insensitivity" timeout, or a "sleep period," as part of its "Simple Step Motion algorithm." *Id.* at col. 14, ll. 3–5. During the "insensitivity" timeout or "sleep period," "the system automatically balances itself to compensate for the changes in orientation towards gravity and other external forces." *Id.* at 14:3–14.

Figure 12 of the '146 patent is a flowchart illustrating a step motion algorithm:

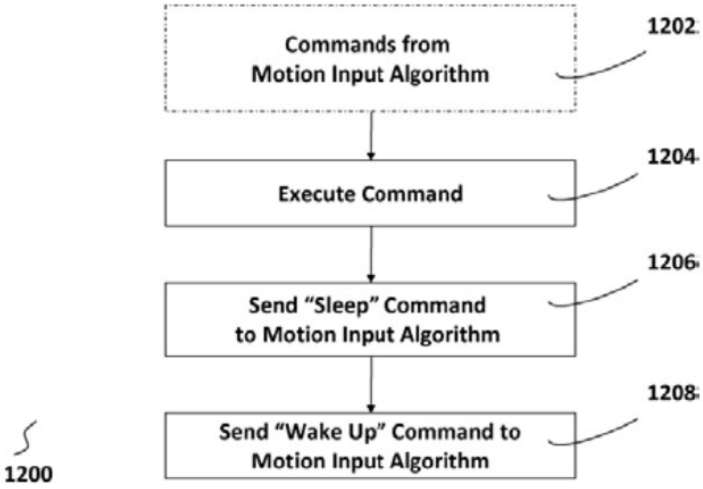

Fig. 12

The specification explains that, after a command from the motion input algorithm is received (1202) and executed (1204), a "sleep command is sent to a motion input algorithm (1206)." *Id.* at col. 14, ll. 22–24. "The sleep command blocks any new commands from the motion input algorithm." *Id.* at col. 14, ll. 24–25. During the "sleep" period, "the user can bring the handheld device back to restore the viewing angle or change the position to stay comfortable." *Id.* at col. 14, ll. 14–16. After the "sleep" time elapses, the "simple step motion algorithm" sends a "'Wake up' command to the motion input algorithm (1208) to resume sending motion input commands." *Id.* at col. 14, ll. 37–39.

As noted, claims 22 and 23 are at issue on appeal. Claims 22 recites:

> 22. An article comprising:
>
> a body having at least one mounted accelerometer, configured to sense movement on at least one sensitivity axis;

> a computer readable carrier including a motion input algorithm configured to translate the sensed movement received from the at least one accelerometer into a command, and a step motion algorithm to process the command, the step motion algorithm including instructions comprising:
>
> instructions to execute a command from the motion input algorithm,
>
> instructions to send a sleep command to the motion input algorithm after the command is executed; and
>
> instructions to re-activate the motion sensing algorithm from the sleep command after elapse of a defined period of time.

'146 patent, col. 18, ll. 10–25. Claim 23 recites "[t]he article of claim 22, wherein the sleep communication instructions temporarily block execution of a new command from the motion sensing algorithm." *Id.* at col. 18, ll. 26–28.

Samsung Electronics Co., Ltd. ("Samsung") petitioned for inter partes review ("IPR") of claims 22 and 23, asserting obviousness based on two prior art references. The first reference, U.S. Patent No. 7,535,456 ("Liberty"), discloses "techniques and devices for processing motion data associated with a device, e.g., a handheld device, to remove unintentional movement associated therewith." *Liberty*, at col. 1, ll. 30–33. In particular, Liberty describes a three-dimensional "pointing device" that allows a user to move a cursor on a display screen through "fine mode clicking" or "coarse mode clicking." *Id.* at col. 3, ll. 56–61; *Id.* at col. 17, ll. 12–25. The second reference, U.S. Patent No. 6,847,351 ("Noguera"), discloses a "pointer positioning scheme" that "allows a user to control where a pointer is displayed on a display screen simply by changing the orientation of the hand-held device, while automatically adjusting to different preferred orientations of the hand-held device."

Noguera, at col. 2, ll. 13–18. It "filters out unintentional device orientation changes, such as periodic device orientation changes that might be caused by carrying the handheld device while, for example, walking or driving." *Id.* at col. 2, ll. 20–23.

The Board instituted review. After briefing and oral argument, the Board issued its final written decision finding the asserted claims unpatentable as obvious over Noguera in view of Liberty. In doing so, the Board construed the "sleep command" in claim 22 to "temporarily deactivate[] the motion input algorithm from translating sensed movement into a command for a defined period of time." *Board Decision*, 2019 Pat. App. LEXIS 13623, at *11. The Board agreed with Samsung that, although "no new commands are executed during the sleep period," "nothing in the claims or the specification precludes using data sensed during the sleep period in commands that are executed after the system is reactivated." *Id.* at *9–10. The Board further construed claim 22's sending the "sleep command" "after the command is executed" to "indicate[] a temporal relationship between the executed command and the sleep command that requires the executed command to occur and then at some point later in time the sleep command is issued." *Id.* at *11. The Board made clear that there are no temporal or other limits to the "at some point in time" aspect of its construction.

Given these constructions, the Board concluded that the combination of Noguera and Liberty rendered obvious claims 22 and 23. Specifically, the Board found that Noguera in view of Liberty discloses the claimed "sleep command," and that it is sent "after" the motion input command is executed. *Id.* at *22.[1]

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[1] Samsung had also asserted that claims 22 and 23 were anticipated by Liberty. Given its obviousness

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

DISCUSSION

"[W]e review the Board's ultimate claim constructions de novo and its underlying factual determinations involving extrinsic evidence for substantial evidence." *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1297 (Fed. Cir. 2015). Where, as here, "the IPR stems from a petition filed before November 13, 2018, the claims are given the 'broadest reasonable interpretation' consistent with the specification." *Game & Tech. Co. v. Wargaming Grp. Ltd.*, 942 F.3d 1343, 1351 (Fed. Cir. 2019) (quoting *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142 (2016)).

On appeal, KEYnetik argues that the Board's claim construction was unreasonably broad and "divorced from the actual teaching[s] of the specification." Appellant Br. 20. According to KEYnetik, the claimed "sleep command:" (1) "must prohibit the execution of commands based on any movement sensed during the 'sleep period'—i.e., the temporary period resulting from the 'sleep command'—even after re-activation of the motion sensing algorithm;" and (2) "is logically correlated to, and conditioned upon the completion of the preceding algorithmic step (i.e., the execution of a motion input command)." *Id.* at 20–21.

As to the first issue, the Board construed the term "sleep command" to require "temporarily deactivat[ing] the motion input algorithm from translating sensed movement into a command for a defined period of time." *Board Decision*, 2019 Pat. App. LEXIS 13623, at *11. Looking to the claim language and the specification, the Board explained that "no new commands are executed during the sleep period, but . . . no prohibitions are placed on the collection and

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determination, the Board declined to address anticipation. *Id.* at *27.

use of sensed data after the expiration of the sleep period." *Id.* at *9–10. Given the intrinsic evidence, we see no error in the Board's construction as to the scope of the claimed "sleep command."[2]

As to the second issue, claim 22 recites a "step motion algorithm," including three claimed sets of instructions. Specifically, the "step motion algorithm" includes: (1) "instructions to execute a command from the motion input algorithm," (2) "instructions to *send a sleep command* to the motion input algorithm *after the command is executed*," and (3) "instructions to re-activate the motion sensing algorithm from the sleep command after elapse of a defined period of time." '146 patent, col. 18, ll. 19–25 (emphases added). The Board construed sending the "sleep command" "after the command is executed" to indicate "a temporal relationship between the executed command and the sleep command that requires the executed command to occur and then at some point later in time the sleep command is issued." *Board Decision*, 2019 Pat. App. LEXIS 13623, at *11. As noted, according to the Board, the "claims provide

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[2] KEYnetik argues that the Board's construction of the claimed "sleep command" violated its due process rights because the Board relied upon a "single sentence in the specification" that was not previously cited. Appellant Br. 43. We disagree. The Board's analysis—which looked to the claim language and the specification as a whole—was not limited to a single sentence in the specification. KEYnetik cites no authority for the proposition that the Board is limited to citing only those portions of the patent brought to its attention, and we have found none. Indeed, our case law is clear that the "broadest reasonable interpretation" must "take into account 'the context of the entire patent.'" *Personalized Media Commc'n, LLC v. Apple Inc.*, 952 F.3d 1336, 1340 (Fed. Cir. 2020) (quoting *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1374 (Fed. Cir. 2019)).

no limit as to intervening acts that could occur between the executed command and the sending of the sleep command." *Id.* In reaching this conclusion, the Board found that the claims "do not describe any further relationship between the executed command and the sleep command." *Id.*

We conclude that the Board's construction of sending the "sleep command "after the command is executed" is unreasonably broad. Even when giving claims the broadest reasonable interpretation, the Board cannot adopt a construction that is unreasonable under general claim construction principles. *Microsoft*, 789 F.3d at 1298. We have explained that "[t]he protocol of giving claims their broadest reasonable interpretation . . . does not include giving claims a legally incorrect interpretation." *Id.* (quoting *In re Skvorecz*, 580 F.3d 1262, 1267 (Fed. Cir. 2009)). Rather, "claims should always be read in light of the specification and teachings in the underlying patent." *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010). A construction that is "unreasonably broad" and does not "reasonably reflect the plain language and disclosure" of the patent will not pass muster. *Microsoft*, 789 F.3d at 1298 (quoting Suitco, 603 F.3d at 1260).

Here, claim 22 recites a "step motion algorithm" with three sets of instructions indicating *what* must be done and *when* it must be done. In relevant part, it states: "send a sleep command to the motion input algorithm after the command is executed." '146 patent, col. 18, ll. 21–22. As such, the claim language is clear that the "sleep command" is sent "after" the executed command. *Id.* While the parties agree that use of the word "after" in the claim indicates a temporal relationship, they disagree as to the length of time that can occur between the executed command and the sleep command. As explained below, looking at the patent as a whole, we conclude that the "sleep command" must be sent shortly after and in direct response to the executed command.

Referring to Figure 12, the specification explains that a user can tilt the device—"[a] command from motion input algorithm is received (1202) and executed (1204)"—and cause the cursor to move on the device screen. *Id.* at col. 14, ll. 19–20; 29–37. "Following execution of the command at step (1204), a sleep command is sent to a motion input algorithm (1206). The sleep command blocks any new commands from the motion input algorithm." *Id.* at col. 14, ll. 22–25. The "sleep command" allows the user to move the device a second time (tilting the device back to its initial position) "without requiring the cursor to return to its initial placement within the grid." *Id.* at col. 14, ll. 33–37. After the "sleep" period elapses, "the simple step motion algorithm sends a 'Wake up' command to the motion input algorithm (1208) to resume sending motion input commands with the current placement serving as a reference point of origin." *Id.* at col. 14, ll. 37–41.

Although the Board's construction allows any interval of time between the executed command and the sending of the sleep command, the specification states that the "sleep command *is sent*" after the executed command—not that it may be sent "at some point later in time," as the Board found. *See id*. at col. 14, ll. 22–24 (emphasis added); *Board Decision*, 2019 Pat. App. LEXIS 13623, at *11. The Board's open-ended construction would encompass a sleep command that is sent days, hours, months, or even years after the executed command. Indeed, at oral argument, counsel for Samsung indicated that the period of time between the executed command and the sleep command could be weeks. *See* Oral Arg. at 25:09–29, *available at* http://oralarguments.cafc.uscourts.gov/default.aspx?fl=20-1270_12102020.mp3 (Q: "Do you agree that a temporal limitation, that there has to be some short period of time that we are talking about rather than weeks?" A: "Your Honor, I don't think that the claims or the specification necessarily require that."). But the specification's use of the phrase "is

sent" implies an immediacy that simply precludes that construction.

To find otherwise would eviscerate the stated purpose of the claimed invention. As we recently reiterated, "[a] patent's statement of the described invention's purpose informs the proper construction of claim terms, including when the task is to identify the broadest reasonable interpretation." *Kaken Pharm. Co. v. Iancu*, 952 F.3d 1346, 1352 (Fed. Cir. 2020); *see also In re Power Integrations, Inc.*, 884 F.3d 1370, 1376–77 (Fed. Cir. 2018) (because the patent at issue "strives to eliminate unnecessary components and create a more compact circuit," the Board's construction that would include a "bulky" component was "unduly broad" and "inconsistent" with the patent's "focus").

Here, the specification explains that the claimed "simple step motion" serves to "simplif[y] calculations allowing forces caused by the returning motion to be ignored." '146 patent, col. 13, ll. 61–65. It does so by introducing an "insensitivity timeout"—or "sleep period"—during which the user can "bring the device back into the previous position" or "change the orientation any way the user wants." *Id.* at col. 14, ll. 3–5; 13:66–14:2. During the sleep period, the claimed invention "automatically balances itself to compensate for the changes in orientation towards gravity and other external forces." *Id.* at col. 14, ll. 11–16. The fundamental purpose of the claimed invention is to ignore the returning motion during the sleep period. The Board's construction, which would encompass a "sleep command" that follows an executed command at *any* time thereafter, is inconsistent with that purpose. For example, as KEYnetik explains, if a user tilts a device (the executed command), and the "sleep command" does not issue for 10 minutes, any "returning motion" resulting from the tilt of the device back to its original position would not be ignored, resulting in the cursor returning to its initial placement on the device screen. Appellant Br. 31. Accordingly, the Board adopted

a construction that is inconsistent with—and indeed, would eviscerate—the purpose of the invention.

We conclude that the Board's construction of "after the command is executed" was unreasonably broad and incompatible with the purpose of the claimed invention. When read in the context of the claim language and the specification, the broadest reasonable interpretation is clear: sending the "sleep command" "after the command is executed" requires that the time between the last "executed command" before the user intends for the sleep period to begin and the sending of the "sleep command" be short, without substantial intervening activity. Because the Board based its obviousness determination on its unreasonable construction, we remand with instructions to conduct a new analysis using the appropriate construction.

CONCLUSION

For the foregoing reasons, we *affirm* the Board's claim construction as to the scope of the claimed "sleep command," *reverse* the Board's claim construction with respect to the "after the command is executed" claim term, *vacate* the Board's final written decision, and *remand* the matter to the Board for further proceedings.

AFFIRMED-IN-PART, REVERSED-IN-PART, VACATED, AND REMANDED

COSTS

No costs.