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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ERIN RAMSAY and PEDRO GREGORIO

Appeal 2019-001371
Application 13/046,263
Technology Center 2600

Before ROBERT E. NAPPI, JOHN P. PINKERTON, and
MATTHEW J. McNEILL, *Administrative Patent Judges*.

PINKERTON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 2, 9–18, and 22–29, which are all of the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies Immersion Corporation as the real party in interest. Appeal Br. 1.

STATEMENT OF THE CASE

Introduction

Appellant generally describes the disclosed and claimed invention as relating to “haptic feedback and more particularly to systems and methods for pre-touch and true touch.” Spec. ¶ 2.²

Claims 1, 18, and 23 are independent. Claim 1 is illustrative of the subject matter on appeal and is reproduced below:

1. A system comprising:
 - a touch-sensitive interface configured to:
 - detect a first user interaction within a first threshold distance from the touch-sensitive interface;
 - transmit a first interface signal associated with the first user interaction:
 - detect a second user interaction when greater than a second threshold area of a user’s skin contacts the touch-sensitive interface; and
 - transmit a second interface signal associated with the second user interaction;
 - a processor in communication with the touch-sensitive interface and configured to:
 - receive the first interface signal;
 - determine a haptic effect based at least in part on the first interface signal; and
 - preload a haptic signal associated with the haptic effect;
 - a cache in communication with the processor and configured to store the preloaded haptic signal and

² Our Decision refers to the Final Office Action mailed Jan. 9, 2018 (“Final Act.”); the Appeal Brief filed June 4, 2018 (“Appeal Br.”); the Reply Brief filed Dec. 4, 2018 (“Reply Br.”); the Examiner’s Answer mailed Oct. 5, 2018 (“Ans.”); and the original Specification filed Mar. 11, 2011 (“Spec.”).

transmit the haptic signal based in part on the second interface signal; and

a haptic effect generator in communication with the cache and configured to receive the haptic signal from the cache and output a haptic effect based at least in part on the haptic signal.

Appeal Br. 20 (Claims App.).

References

Name	Patent or Publication Number	Date
Waldman	US 5,311,175	May 10, 1994
Takashima et al. ("Takashima")	US 9,336,969 B2	May 10, 2016
Yeh et al. ("Yeh")	US 2007/0070044 A1	Mar. 29, 2007
Shimotani et al. ("Shimotani")	US 2011/0164063 A1	July 7, 2011

Rejections on Appeal³

Claims 1, 2, 9–18, 22, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Waldman and Takashima.

Claims 25, 27, and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Waldman, Takashima, and Shimotani.

Claims 24, 26, and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Waldman, Takashima, and Yeh.

³ The Leahy-Smith America Invents Act ("AIA") included revisions to 35 U.S.C. § 100 *et seq.* effective on March 16, 2013. Because this application was filed before March 16, 2013, the Examiner examined the claims under the pre-AIA version of 35 U.S.C. § 103. Final Act. 2.

ANALYSIS

The dispositive issue raised by the arguments in Appellant’s briefs is whether the combination of Waldman and Takashima teaches or suggests the limitation “detect a second user interaction when greater than a second threshold area of a user’s skin contacts the touch-sensitive interface,” as recited in claim 1, and as similarly recited in claims 18 and 23.⁴

The Examiner rejected independent claims 1, 18, and 23 under 35 U.S.C. § 103(a) as being unpatentable over Waldman and Takashima. Final Act. 2–4. In the Final Action, the Examiner finds that Waldman does not teach the disputed limitation. *Id.* at 3. However, the Examiner finds that Takashima teaches this limitation because “Takashima teaches a press detection sensor where a second threshold area of a user’s skin contacts the touch-sensitive interface.” *Id.* (stating “Figs. 8A-8E teach[] how a system recognizes a user not touching the sensor to full pressure force pas[t] the second threshold Vth2”) (emphasis omitted). In the Answer, the Examiner finds that the claim language reciting “detects the interaction when a ‘greater than a second threshold of a user’s skin’ contacts the touch sensitive surface[,] does not mean the system sensing the user’s skin but instead detects something greater than the ‘second threshold’ which could also be force/pressure threshold.” Ans. 2. The Examiner also finds that Takashima “teaches how the pressure applied is compared with two threshold values and how execution of functions take place as a result of pressure applied.” *Id.* (citing Takashima, Figs. 8A–8D, and related description). The Examiner

⁴ Appellant argues claims 1, 18, and 23 together. Appeal Br. 15–17. Thus, we select claim 1 as representative with claims 18 and 23 standing or falling with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

further finds that Figures 8B–8D of Takashima show how a finger contacting the surface changes the amount of pressure measured. *Id.* Moreover, the Examiner finds that because Takashima’s Figures 8B–8D “show pressure directly being effected by the roll of the user finger on the surface and more surface area is covered by the finger as it rolls to apply more pressure, then it is understood the pressure measurement is due to more skin being applied to cover more surface area as the finger rolls.” *Id.* at 2–3.

We are persuaded by Appellant’s arguments that the Examiner erred. First, Appellant argues, and we agree, that Takashima does not teach the disputed limitation because Takashima’s discussion of Figures 8A–8E describes detecting a “press force” when pushing down the press detection sensor, and does not describe determining an area of user’s skin contact. Appeal Br. 16 (citing Takashima 9:50–54 (“horizontal axis shown in FIG. 8E denotes a press force $F[N]$ when pushing down the press detection sensor 100”), 10:1–5 (“as shown in FIG. 8B . . . press force F is approximately $F1$ ”)).

Second, we are persuaded by Appellant’s argument that there is no support for the Examiner’s finding that Takashima’s Figures 8B–8D

show pressure directly being effected by the roll of the user finger on the surface and more surface area is covered by the finger as it rolls to apply more pressure, then it is understood the pressure measurement is due to more skin being applied to cover more surface area as the finger rolls.

Appeal Br. 17; Reply Br. 3. In that regard, Appellant argues, and we agree, the Examiner “includes no citation to the prior art discussing pressure correlated to surface area.” Appeal Br. 17. We also agree with Appellant’s argument that the Examiner could not cite Takashima in support of this finding because Takashima discloses using pressure sensors that could not

be used to measure area of contact of a finger. Appeal Br. (citing Takashima, 1:41–45 (“The pressure detection system includes four pressure detection sensors provided at the four corners on the downward side of the display unit and a driver IC which processes the pressure detection signals thereof.”)). Thus, because the Examiner’s finding that it is “understood” the pressure is due to more skin covering more surface area as the finger rolls is unsupported by evidence or technical reasoning, it is based improperly on conjecture or speculation. *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967) (“The Patent Office has the initial duty of supplying the factual basis for its rejection. It may not . . . resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis.”).

Third, Appellant argues the Examiner’s interpretation of the disputed limitation is overly broad and not consistent with the ordinary and customary meaning in view of the Specification. Reply Br. 3. The disputed limitation requires “a touch-sensitive user interface configured to: . . . detect a second user interaction when greater than a second threshold area of a user’s skin contacts the touch-sensitive interface.” The Examiner determines “this does not mean the system sensing the user’s skin but instead detects something greater than the ‘second threshold’ which could also be force/pressure threshold.” Ans. 2. Appellant argues, and we agree, that the claim language, “detect a second user interaction when greater than a second threshold area of a user’s skin contacts the touch-sensitive interface,” “requires detecting an ‘area of a user’s skin’ in contact with a touch-sensitive interface” to determine whether such “area of a user’s skin” is “greater than a second threshold” area of a user’s skin. Reply Br. 3. Appellant also argues, and we agree, that the Examiner acknowledges this is

consistent with the Specification, stating “Applicant’s specification [discloses] the system recognizes pre-touch when the user has contacted the touch-sensitive interface but less than a certain amount of skin is in contact with the surface, based on this description it is understood the system simply recognizes the amount of surface area covered by the finger.” *Id.* at 2–3. Based on the language of the disputed limitation, and the description in the Specification of determining the amount of surface area covered by the finger, we agree with Appellant that the Examiner’s interpretation of the disputed limitation is overly broad and unreasonable. The Examiner’s claim interpretation may be the broadest possible interpretation, but it is not the broadest *reasonable* interpretation consistent with the Specification. *See In re Smith Int’l, Inc.*, 871 F.3d 1375, 1382–83 (Fed. Cir. 2017) (The “correct inquiry” is to give a claim its broadest *reasonable* interpretation, not the “broadest *possible* interpretation.”).

In view of the foregoing, we do not sustain the Examiner’s rejection of independent claims 1, 18, and 23 under 35 U.S.C. § 103(a). For the same reasons, we do not sustain the Examiner’s rejection of dependent claims 2, 9–17, 22, and 24–29. *Cf. In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) (“[D]ependent claims are nonobvious if the independent claims from which they depend are nonobvious”).

DECISION

We reverse the Examiner’s rejection of claims 1, 2, 9–18, and 22–29 under 35 U.S.C. § 103(a).

SUMMARY

In summary:

Appeal 2019-001371
Application 13/046,263

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 2, 9–18, 22, 23	103(a)	Waldman, Takashima		1, 2, 9–18, 22, 23
25, 27, 29	103(a)	Waldman, Takashima, Shimotani		25, 27, 29
24, 26, 28	103(a)	Waldman, Takashima, Yeh		24, 26, 28
Overall Outcome				1, 2, 9–18, 22–29

REVERSED