UNITED STATES PATENT AND TRADEMARK OFFICE

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14/669,387	03/26/2015	David Alexander Schwarz	RPS920140122USNP(710.387)	1170

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UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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Ex parte DAVID ALEXANDER SCHWARZ, MING QIAN,
GEOFFREY SIMON BULA, and JOHN WELDON NICHOLSON
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Appeal 2019-003857
Application 14/669,387
Technology Center 2600
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Before ALLEN R. MacDONALD, JASON V. MORGAN, and
JAMES B. ARPIN, *Administrative Patent Judges*.

MORGAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Introduction

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the
Examiner's decision to reject claims 1–20, all of the pending claims. We
have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37
C.F.R. § 1.42. Appellant identifies the real party in interest as Lenovo
(Singapore) PTE. LTD. Appeal Br. 3.

Summary of the Disclosure

Appellant's claimed subject matter relates to performing an action in response to a user's gesture based on sensor data received by a wearable device. Abstract.

Representative Claim (Key Limitations Emphasized and Bracketing Added)

1. A method, comprising:

receiving, at a band of a wearable device located at a body part of a user, gesture data from at least one electromyography sensor operatively coupled to the band of the wearable device, wherein the gesture data is based upon a gesture providing movement of at least a portion of the body part and performed by the user;

[1] *identifying, using a processor, the gesture performed by the user using the gesture data and a comparison body part geometry model,* [1a] *wherein the identifying is performed using a fused data stream comprising the gesture data fused into a single data stream and comparing the fused data stream to a prediction model*; and

performing at the wearable device an action based upon the gesture identified.

The Examiner's Rejections and Cited References

The Examiner rejects claims 1, 11, and 20 under 35 U.S.C. § 112(a) as failing to comply with the written description requirements. Final Act. 3–4.

The Examiner rejects claims 1–4, 7–14, and 17–20 under 35 U.S.C. § 103 as unpatentable over the combined teachings of Lake et al. (US 2014/0240223 A1; published Aug. 28, 2014) ("Lake") and Westerman et al. (US 2008/0211766 A1; published Sept. 4, 2008) ("Westerman"). Final Act. 4–12.

The Examiner rejects claims 5 and 6 under 35 U.S.C. § 103 as unpatentable over the combined teachings of Lake, Westerman, and Jaeger et al. (US 7,084,860 B1; issued Aug. 1, 2006) ("Jaeger"). Final Act. 13.

The Examiner rejects claims 15 and 16 under 35 U.S.C. § 103 as unpatentable over the combined teachings of Lake, Westerman, Jaeger, and Sugden (US 8,937,663 B2; issued Jan. 20, 2015). Final Act. 13–14.

The Examiner alternatively rejects claims 15 and 16 under 35 U.S.C. § 103 as unpatentable over the combined teachings of Lake, Westerman, Jaeger, and Moore et al. (US 2015/0070129 A1; published Mar. 12, 2015) ("Moore"). Final Act. 14.

ADOPTION OF EXAMINER'S FINDINGS AND CONCLUSIONS

We agree with and adopt as our own the Examiner's findings as set forth in the Answer and in the Final Action, from which this appeal was taken, and we concur with the Examiner's conclusions. We have considered Appellant's arguments, but do not find them persuasive of error. We provide the following explanation for emphasis.

ANALYSIS
35 U.S.C. § 112(a)

Appellant previously amended recitation [1] of claim 1 by adding the limitations "and a comparison body part geometry model, wherein the identifying is performed using a fused data stream comprising the gesture data fused into a single data stream and comparing the fused data stream to a prediction model." Amend. 2 (May 8, 2018). In rejecting claim 1 as failing to have sufficient written description support in the Specification, the Examiner finds the newly added limitation "is not described in the original

3

disclosure." Final Act. 3. Specifically, the Examiner finds that "there is no disclosure support for '***body part geometry model***' or '***comparison body part geometry model***.'" Ans. 5. The Examiner notes that Specification only discusses a "geometry" once (*id.* at 4 (citing Spec. ¶ 18)) and a "model" in two paragraphs (*id.* at 5 (citing Spec. ¶¶ 42, 43)). But the Examiner concludes these isolated disclosures fail to "explicitly and adequately describe" the features of recitation [1]. *Id.* at 4.

Appellant contends the Examiner erred in concluding the Specification "does not sufficiently describe 'fused data stream.'" Appeal Br. 22; Reply Br. 26. Appellant submits the Specification discloses collecting "the data streams from all the sensors (e.g., EMG, pressure, tension, stretch, etc.) and combin[ing] all the streams . . . [to] be sent to a prediction model that identifies a decision tree corresponding to features of the data streams." Appeal Br. 23 (citing Spec. ¶ 43); Reply Br. 27. Appellant further submits the Specification provides "different examples in different embodiments that specifically call out different fusion techniques and discuss[] fusing sensor data." Appeal Br. 23 (citing Spec. ¶¶ 19–22); Reply Br. 27.

Appellant's arguments are not persuasive of error because Appellant only identifies support for limitations pertaining to a "fused data stream." Appeal Br. 22–23; Reply Br. 26–27. The Examiner's findings, however, are based on the Specification's inadequate written description support for the "comparison body part geometry model" limitation of recitation [1]. Ans. 4–6. Appellant's arguments, which are silent with respect to this limitation, fail to rebut the Examiner's findings. Therefore, we agree with the Examiner that

the Specification fails to provide sufficient written description support for recitation [1].

Accordingly, we sustain the Examiner's 35 U.S.C. § 112(a) rejection of claim 1, and claims 11 and 20, which Appellant does not argue separately with respect to this rejection.

35 U.S.C. § 103

In rejecting claim 1 as obvious, the Examiner initially found that "Lake does not expressly disclose" limitation [1a], "wherein the identifying is performed using a fused data stream comprising the gesture data fused into a single data stream and comparing the fused data stream to a prediction model." Final Act. 5. Thus, the Examiner relied on Westerman's concept of multi-touch (MT) data fusion—combining or fusing information flowing from various sources, "such that events in each data stream are time aligned with each other" (Westerman ¶ 6)—to teach or suggest modifying Lake "to identify gesture data by using a fused data stream to use the gesture data into a single data stream and comparing the fused data stream to a prediction model" (Final Act. 6). Final Act. 5–6 (citing, e.g., Westerman, Figs. 1–25, ¶¶ 30–60). The Examiner concluded the combination would have been obvious as a way of providing "a strong set of user control means [because] additional information from other sensing modalities when combined or fused with the chording and movement data can significantly enhance the interpretive abilities of the electronic device and/or significantly improve the ease of use[] as well as streamline input operation[s] for the user." *Id.* at 6 (citing Westerman ¶¶ 4–8).

The Examiner now clarifies that, like Westerman, "Lake teaches combining [(i.e., fusing)] multiple parameter input data to determine [a]

gesture command, but [that Lake] does not explicitly use the terminology of a 'fused data stream' comprising the gesture data fused into a single data stream." Ans. 12. That is, the Examiner finds that Lake alone teaches or suggests limitation [1a], but that "it would have been obvious to a person of ordinary skill in the art . . . to use [the] well known terminology of a fused data stream" found in Westerman. *Id.* at 14.

Appellant contends the Examiner erred by only providing "a conclusory statement, that '[i]t would have been obvious . . . to modify Lake to identify gesture data by using a fused data stream to use the gesture data into a single data stream . . . .'" Appeal Br. 24 (citing Final Act. 6), 27–28 (citing *In re Nuvasive, Inc.*, 842 F.3d 1376, 1382 (Fed. Cir. 2016)); Reply Br. 28, 30. But in arguing the Examiner only provides a conclusory statement, Appellant omits and does not address the reasoning and evidence proffered by the Examiner in the sentence immediately following the purportedly conclusory statement. *Compare* Appeal Br. 24 *with* Final Act. 6 (citing Westerman ¶¶ 4–8) ("[t]he motivation would have been . . ."). Thus, the Examiner's articulated reason, which has a rational underpinning, why the combination of Lake and Westerman would have been obvious is unrebutted.

Appellant further argues "one skilled in the art would not combine the teachings of Lake with Westerman because" combining the Lake muscle control teachings and the Westerman multi-touch data fusion teachings "would not result in the claimed limitations." Appeal Br. 25; Reply Br. 29–30. In particular, Appellant argues that Lake—in disclosing "a system in which the 'detected user gestures from the sensors are processed into a control signal for allowing the user to interact with content displayed on the

controllable connected device'" (Appeal Br. 28 (quoting Lake, Abstract); Reply Br. 30)—fails to teach or suggest the limitations of claim 1 because "Lake teaches a system in which a muscle interface interacts with either a wire or wireless connection to a connected device" (Appeal Br. 28 (further citing Lake ¶¶ 29, 34, Fig. 1)). But Appellant's conclusory assertions fail to distinguish the claimed invention from Lake.

> Appellant also argues Westerman's system does not
>
> even mention[] "identifying, using a processor, the gesture performed by the user using the gesture data and a comparison body part geometry model, *wherein the identifying is performed using a fused data stream comprising the gesture data fused into a single stream and comparing the fused data stream to a prediction model.*"

Id. at 29; Reply Br. 33. The Examiner's rejection, however, is based on Westerman's teachings and suggestions *in combination with* Lake, which the Examiner finds teach or suggest "identifying, using a processor, the gesture performed by the user using the gesture data and a comparison body part geometry model." Final Act. 5 (citing Lake ¶¶ 43–44, 90–105, Figs. 1–9). Appellant's arguments with respect to Westerman individually do not show error in the Examiner's reliance on the combined teachings and suggestions of Lake and Westerman.

Furthermore, Appellant fails to address the Examiner's finding that Lake alone teaches or suggests the recitations of claim 1, albeit with terminology that differs with respect to the "fused data stream" limitations of recitation [1a]. Ans. 12–14. An obviousness rejection is properly sustainable based on a subset of the references originally relied on to make the rejection. *See In re Bush*, 296 F.2d 491, 496 (CCPA 1961). Because Appellant fails to show error in the Examiner's reliance on Lake alone to teach or suggest all

of the recitations of claim 1, including disputed recitation [1a], Appellant fails to show error in the Examiner's conclusion that claim 1 would have been obvious in light of the combined teachings and suggestions of Lake and Westerman.

Accordingly, we sustain the Examiner's 35 U.S.C. § 103 rejection of claim 1, and the Examiner's 35 U.S.C. § 103 rejections of claims 2–20, which Appellant does not argue separately with respect to the obviousness rejections. Appeal Br. 24.

CONCLUSION

Claims Rejected	35 U.S.C. §	References/Basis	Affirmed	Reversed
1, 11, 20	112(a)	Written Description	1, 11, 20	
1–4, 7–14, 17–20	103	Lake, Westerman	1–4, 7–14, 17–20	
5, 6	103	Lake, Westerman, Jaeger	5, 6	
15, 16	103	Lake, Westerman, Jaeger, Sugden	15, 16	
15, 16	103	Lake, Westerman, Jaeger, Moore	15, 16	
Overall Outcome			**1–20**	

TIME PERIOD FOR RESPONSE

No time period for taking subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED