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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 14/809,149 | 07/24/2015 | Eun Ji KANG | 8421-196 | 1026 |
| 83219 | 7590 | 08/31/2020 | EXAMINER | |
| Renaissance IP Law Group LLP (PIP) 17933 NW Evergreen Place, Suite 121 Beaverton, OR 97006 | | | SALVUCCI, MATTHEW D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2613 | |
| | | | NOTIFICATION DATE | DELIVERY MODE |
| | | | 08/31/2020 | ELECTRONIC |

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte EUN JI KANG, HOON MO YANG, and JONG HO ROH

Appeal 2019-003385
Application 14/809,149
Technology Center 2600

Before CAROLYN D. THOMAS, JAMES B. ARPIN,
and GREGG I. ANDERSON, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge* ANDERSON.

Opinion Dissenting filed by *Administrative Patent Judge* THOMAS.

ANDERSON, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–19 and 22. We have jurisdiction under 35 U.S.C. § 6(b).

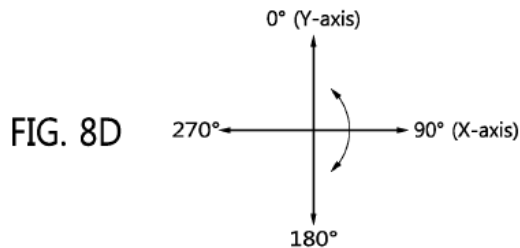
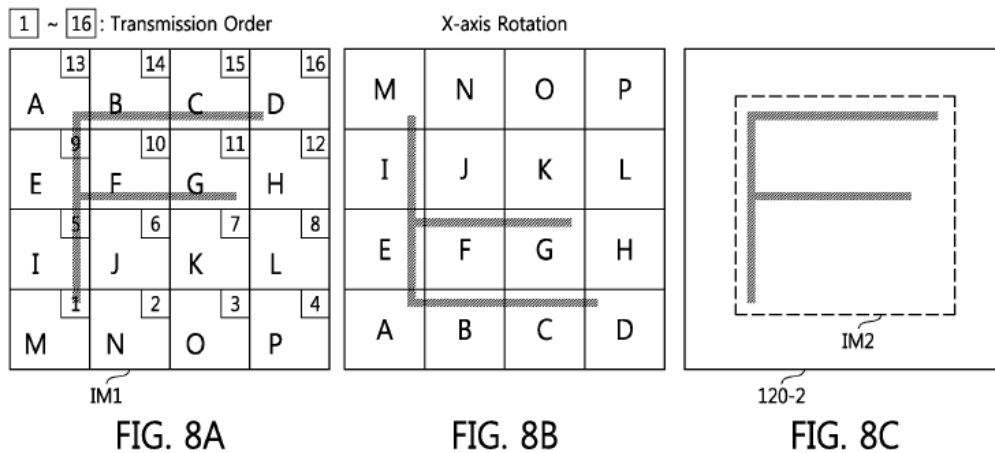
We reverse.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Samsung Electronics Co., Ltd. Appeal Br. 1.

CLAIMED SUBJECT MATTER

The claims are directed to Application Processor for Determining Data Transmission Order Based on Position of Display and Devices Including the Same. Spec.,² Title. A portable electronic device includes a first display side and a second display side, formed on a side opposite the first display side. *Id.* ¶ 5. The two sides form a double-sided display for first and second images. *Id.* Sensors detect at least one position change of the double-sided display. *Id.*

Figures 8A through 8D are reproduced below.



² We use “Spec.” to refer to the Specification filed July 24, 2015, “Final Act.” to refer to the Final Action mailed May 24, 2018, “Appeal Br.” to refer to the Appeal Brief filed November 27, 2018, “Ans.” to refer to the Examiner’s Answer mailed January 25, 2019, and “Reply Br.” to refer to the Reply Brief filed March 25, 2019.

Figures 8A–8C “depict a transmission order that first data IM1 is read by an image rotator, an arrangement of pixels read in the transmission order, and an arrangement of second data IM2 displayed on a second display side [of] a double-sided display.” *Id.* ¶ 42. One position change is shown by reference to Figure 8D, which illustrates a position change where the double-sided display folded and rotated around the X-axis. *Id.* Figures 8A–8D, and other similar drawing figures, illustrate operations of the image rotator displaying the letter F when the display system rotates or is folded and then rotates. *Id.* ¶ 108. The resulting image of the second data IM2 is processed by display control logic circuit “to look right (like ‘10:53 PM’ in FIGS. 2 and 4) to a user’s eyes.” *Id.* ¶ 111.

Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A system, comprising:

a status signal generator configured to output a status signal to indicate one of a plurality of positions of at least one double-sided display; and

an image rotator coupled to the status signal, the image rotator configured to receive image data in a read order, and to output the image data in a transmission order, the transmission order being the same as the read order if the status signal indicates a first position of the at least one double-sided display, and the transmission order being a reverse of the read order if the status signal indicates a second position of the at least one double-sided display.

REFERENCES

The Examiner relies upon the following references:

| Name ³ | Reference | Date |
|-------------------|--------------------|---------------|
| Takami | US 2007/0070470 A1 | Mar. 29, 2007 |
| Yamazaki | US 2010/0277443 A1 | Nov. 4, 2010 |

REJECTION

Claims 1–19 and 22 are rejected under 35 U.S.C. § 103 as unpatentable under 35 U.S.C. § 103 over the combined teachings of Yamazaki and Takami. Final Act. 5–25.

OPINION

Issue: Has the Examiner shown a rational basis or motivation to combine Yamazaki and Takami?

Referring to claim 1, the Examiner finds Yamazaki discloses an e-book reader “in which display control is performed by a scan line driver circuit and a signal line driver circuit.” Final Act. 5–6 (citing Yamazaki ¶ 7) (emphasis omitted). Yamazaki also is relied on to show detecting the position of the display. *Id.* at 6 (citing Yamazaki ¶ 152). The Examiner finds that the recited “image rotator” is not disclosed in Yamazaki and cites Takami for that limitation. *Id.* According to the Examiner, Takami’s “image processing apparatus” is an “image rotator” in that it “reverses the order of arrangement of pixel values” when image data is “back side data” of the “double-sided document.” *Id.* at 6–7 (citing Takami ¶¶ 13, 89) (emphasis omitted). The Examiner’s stated reason for combining Yamazaki and Takami is that “it would have been obvious to one of ordinary skill in the art to have modified Yamazaki with the features of an image rotator,” as taught by Takami. *Id.* at 7–8.

³ All reference citations are to the first named inventor only.

Appellant agrees that Yamazaki teaches “a status signal generator.” Appeal Br. 8, 12. Appellant describes Takami’s teachings without specifically disputing that the “image rotator” limitation of claim 1 is taught by the reference. *Id.* at 9–11. Instead, Appellant argues Yamazaki includes dedicated circuitry to display images and does not need an “image rotator.” *Id.* at 12 (¶ 5), 16. Based in large part on the preceding, Appellant argues there would have been no reason to combine Takami with Yamazaki. *Id.* at 16. Appellant further disputes the combination by asserting the combination “finds its origin in Applicant’s disclosure and claimed subject matter.” *Id.* at 17.

On this record, we agree with Appellant that the Examiner has not shown sufficient reason for the combination of the references’ teachings to achieve the recited system. In the Answer, the Examiner states the position from the Final Action as including “a clear statement that ‘it would have been obvious to one of ordinary skill in the art to have modified Yamazaki with the features’” Ans. 19. This reasoning is conclusory.⁴ “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Thus, the Examiner’s rejection is not sustained.

⁴ We do not find that sufficient reason for the proposed combination could not have been found. We review the record as presented and, here, we find it deficient.

Appeal 2019-003385
Application 14/809,149

DECISION SUMMARY

In summary:

| Claims Rejected | 35 U.S.C. § | Reference(s)/Basis | Affirmed | Reversed |
|------------------------|--------------------|---------------------------|-----------------|-----------------|
| 1-19, 22 | 103 | Yamazaki, Takami | | 1-19, 22 |

REVERSED

THOMAS, *Administrative Patent Judge*, dissenting.

I respectfully dissent from the Majority's decision reversing the Examiner's rejection of claims 1–19 and 22 under 35 U.S.C. § 103 over the combined teachings of Yamazaki and Takami.

Although I agree with the Majority that Appellant appears to be solely relying on a combinability argument, i.e., Appellant conceding that Yamazaki teaches “a status signal generator” and failing to rebut the specific teachings relied upon in Takami (*see* Decision 5), I disagree with the Majority that the Examiner failed to provide a “sufficient reason” for making the combination.

The U.S. Supreme Court has held that in analyzing the obviousness of combining elements, a court need not find specific teachings, but rather may consider “the background knowledge possessed by a person having ordinary skill in the art” and “the inferences and creative steps that a person of ordinary skill in the art would employ.” *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). To be nonobvious, an improvement must be “more than the predictable use of prior art elements according to their established functions,” and the basis for an obviousness rejection must include an “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.* at 417–18.

Here, the Examiner specifies that “Takami teaches image processing including rotation of images” (Final Act. 6), and also states that “*Takami teaches that this will allow for data to be output on the appropriate side of a page.*” *Id.* at 7 (emphasis added). In the Answer, the Examiner appears to clarify that at least the latter statement *supra* is the motivation for making the combination. *See* Ans. 19. In other words, the Examiner presented a

Appeal 2019-003385
Application 14/809,149

motivation, apparently taken from the Takami reference itself. As such, I believe the Examiner has provided a sufficient reason, with some rational underpinning, for making the combination.

Here, it appears the Majority is merely relying on the Examiner's statement which reads: "Therefore, it would have been obvious to one of ordinary skill in the art to have modified Yamazaki with the features of an image rotator . . . as taught by Takami" (*see* Final Act. 7–8), and ignoring the sentence that precedes this statement, because the Majority notes the Examiner's "reasoning is conclusory." *See* Decision 5. Although, we generally see the motivation incorporated into the "[t]herefore, it would have been obvious" statement, I see no prohibition on stating the motivation elsewhere, as long as attention is directed thereto. Here, in the Answer, the Examiner directs our attention to the motivation. *See* Ans. 19.

Regarding the aforementioned stated motivation, which Appellant appears to acknowledge (*see* Appeal Br. 16–17), Appellant argues "it is plain that Yamazaki does not need an image rotator because image data is always displayed on the displays of a double-sided display." Appeal Br. 16.

To the extent that Appellant is arguing that Yamazaki teaches away from using an image rotator, as taught by Takami, I do not find, and Appellant does not establish, that Yamazaki criticizes, discredits, or otherwise discourages the use of an image rotator. "The prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed" *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004).

Appellant further contends that "the stated motivation to combine Yamazaki and Takami is not provided by the disclosure of Yamazaki."

Appeal 2019-003385
Application 14/809,149

Appeal Br. 16. However, the motivation need not be found in the references sought to be combined. [A]nalysis [of whether the subject matter of a claim would have been obvious] need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ. *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d at 988); see also *DyStar Textilfarben GMBH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1361 (Fed. Cir. 2006) (“The motivation need not be found in the references sought to be combined, but may be found in any number of sources, including common knowledge, the prior art as a whole, or the nature of the problem itself.”).

Finally, Appellant contends that “the stated motivation to combine . . . actually finds its origin in [Appellant’s] disclosure and claimed subject matter.” Appeal Br. 17. I disagree with Appellant. Any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made and does not include knowledge gleaned only from applicant’s disclosure, such a reconstruction is proper. *In re McLaughlin*, 443 F.2d 1392, 1395 (CCPA 1971). Here, the Examiner found actual teachings in the cited art, i.e., unrebutted teachings, and has provided a rationale for the combination. Further, the teachings suggest that the combination involves the predictable use of prior art elements according to their established functions.

In the Reply Brief, Appellant fails to further rebut the Examiner’s highlighted motivation, but instead offers belated new arguments against Takami. See generally Reply Br. These belated arguments are technically waived. See *Ex parte Borden*, 93 USPQ2d 1473, 1474 (BPAI 2010)

Appeal 2019-003385
Application 14/809,149

(informative) (“[T]he reply brief [is not] an opportunity to make arguments that could have been made in the principal brief on appeal to rebut the Examiner’s rejections, but were not.”).

Because I believe the Examiner offered a sufficient motivation, with a rational underpinning, for combining the teachings of Yamazaki with Takami, and clarified in the Answer what that motivation was, I would affirm the Examiner’s rejection of claims 1–19 and 22 under 35 U.S.C. § 103.