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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN G. POSA and BENJAMIN E. POSA

Appeal 2014-009852
Application 13/209,025
Technology Center 3600

Before JASON V. MORGAN, BRUCE R. WINSOR, and JUSTIN BUSCH, *Administrative Patent Judges*.

BUSCH, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the rejection of claims 1–26 under 35 U.S.C. § 103(a) as obvious. Non-Final Act. 5–15. Oral arguments were heard on November 15, 2016. A transcript of the hearing will be added to the record in due course. We have jurisdiction under 35 U.S.C. § 6(b).

CLAIMED SUBJECT MATTER

Claims 1 and 10 are independent claims. The claims "relate generally to still and video-image gathering and, in particular, to apparatus and methods providing automatic zoom functions in conjunction with pan or tilt actions." Spec. ¶ 2. Claim 1 is representative and reproduced below:

> 1. An image-viewing system, comprising:
>
> a body with a lens to gather an image including target subject matter;
>
> an image sensor having a resolution in pixels for receiving the image;
>
> a viewfinder for displaying at least a portion of the image received by the image sensor;
>
> apparatus for automatically zooming out the image including the target subject matter displayed in the viewfinder if relative movement is detected between the target subject matter and the body, and automatically zooming in the image including the target subject matter displayed in the viewfinder if the relative movement between the target subject matter and the body slows down or stops; and
>
> wherein the apparatus is operative to automatically zoom out or zoom in, regardless of the position of the target subject matter in the viewfinder, in response to movement of the target subject matter relative to the body, movement of the body relative to the target subject matter, or movement of both the target subject matter and body sufficient to cause relative movement therebetween.

REJECTIONS

Claims 1, 3, 4, 6–10, 12, 13, 15–18, 21, 22, 25, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Akazawa (JP 2006-115525 A) and Yanagi (JP 2009-033450, Feb. 12, 2009). Non-Final Act. 5–11.

Claims 2 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Akazawa, Yanagi, and Kuno (JP 2005-346958, Dec. 27, 1993). Non-Final Act. 11.

Claims 5 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Akazawa, Yanagi, and Grosvenor (US 2006/ 0050982 A1; pub. Mar. 9, 2006). Non-Final Act. 12.

Claims 19 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Akazawa, Yanagi, and Jung et al. (US 2005/ 0074185 A1; pub. Apr. 7, 2005). Non-Final Act. 12–13.

Claims 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Akazawa, Yanagi, and Miyasako (US 2010/0271494 A1; pub. Oct. 28, 2010). Non-Final Act. 14–15.

OPINION

Rejection of Claims 1, 3, 4, 6–10, 12, 13, 15–18, 21, 22, 25, and 26

The Examiner finds the combination of Akazawa and Yanagi teaches each of the limitations of independent claims 1 and 10. Specifically, the Examiner finds Akazawa teaches each of the limitations of claim 1 except "Akazawa fails to specifically disclose displaying a zoomed in and zoomed out image." Non-Final Act. 6. The Examiner finds that Yanagi, however, teaches "display[ing] an automatically zoomed in or zoomed out image in order to keep it from framing out and to capture a[] high quality image." *Id.* The Examiner states:

> [I]t would have been obvious to one of ordinary skill in the art at the time the invention was made to drive the electronic or optical zoom of Akazawa to display the image within a zoom frame (*rather than the entire image with an overlaid zoom frame*). Doing so would result in the combination of prior art elements to

> yield predictable results -- namely the ability to effectively capture a moving image and display the captured image to a user

Non-Final Act. 7 (emphasis added).

Appellants argue the proposed rationale for combining Akazawa and Yanagi is not rational. App. Br. 3–4. First, Appellants assert both Akazawa and Yanagi already independently provide "the ability to effectively capture a moving image and display the captured image to the user." *Id.* (citing Declaration Barry H. Schwab ("Schwab Decl.") ¶ 12). Appellants further argue that combining the teachings as suggested by the Examiner would change the principle of operation of Akazawa by eliminating the display of "zoom frames" in its viewfinder and, instead displaying only the image within the zoom frame. *Id.* at 5 (citing Schwab Decl. ¶ 11). Appellants also point to the Non-Final Action, *id.*, where the Examiner agrees "that if Akazawa were modified to display the entire image similar to Yanagi, the zoom frame would become superfluous," Non-Final Act. 3. Appellants argue eliminating the zoom frame would change the principle of operation of Akazawa because all of Akazawa's framing operations would no longer be available. App. Br. 5.

In the Answer, the Examiner states that combining Yanagi and Akazawa would not eliminate Akazawa's zoom frame, but that "the zoom frame would be displayed, *instead of only being recorded*." Ans. 14 (emphasis added). Appellants contend the Examiner's assertion is inaccurate because Akazawa already displays the area within the zoom frame (without Yanagi's teachings), "it's just not zoomed in or out because there's no reason to do so" and, accordingly, provides no basis for combining Yanagi with Akazawa. Reply 2–3.

We agree with Appellants that, in addition to capturing an image in its zoom frame, Akazawa already discloses displaying an image including the subject of the zoom frame. Therefore, we agree with Appellants that the reason the Examiner proffers for combining Akazawa and Yanagi lacks a rational underpinning. However, Akazawa also states that "instead of changing the zoom frame, it is also possible to drive zoom mechanism 212 shown in Figure 1 to change the optical zoom amount or both the electronic zoom amount and the optical zoom amount." Akazawa ¶ 70. Accordingly, Akazawa describes zooming in or out *instead of changing the zoom frame*, which provides a specific motivation[1] for one of ordinary skill in the art to contemplate incorporating displaying only the zoomed image, as taught by Yanagi. Appellants' argument, App. Br. 4–5, and testimony, *see* Declaration of Barry H. Schwab ¶ 11, that combining Akazawa and Yanagi would change Akazawa's principle of operation are unpersuasive in light of Akazawa's explicit statement of optically zooming instead of changing the zoom frame. Accordingly, we reverse the Examiner's rejection of claim 1 because the rejection lacks a sufficient rationale for combining Akazawa and Yanagi. We newly reject claim 1, simply modifying the Examiner's rationale for combining Akazawa and Yanagi in light of the additional teachings and suggestions in paragraph 70 of Akazawa discussed above.

Appellants argue independent claim 10, which contains similar limitations to independent claim 1, and dependent claims 3, 4, 6–9, 12, 13, 15–18, 21, 22, 25, and 26, which depend from one of claims 1 and 10, are patentable for the same reasons asserted with respect to claim 1. For the

[1] We leave it to the Examiner to ascertain whether this additional description in Akazawa shows that Akazawa alone anticipates the claimed invention.

reasons discussed above, we agree with the Examiner that claims 4, 6–10, 12, 13, 15–18, 21, 22, 25, and 26 would have been obvious in view of the combined teachings of Akazawa and Yanagi. However, we reverse the Examiner's rejection of claims 4, 6–10, 12, 13, 15–18, 21, 22, 25, and 26 because the rejection lacks a sufficient rationale for combining Akazawa and Yanagi. We newly reject claims 4, 6–10, 12, 13, 15–18, 21, 22, 25, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Akazawa and Yanagi, simply modifying the Examiner's rationale for combining Akazawa and Yanagi in light of the additional teachings and suggestions in paragraph 70 of Akazawa, which were discussed above with respect to claim 1.

Rejection of Claims 2 and 11

The Examiner finds the combination of Akazawa and Yanagi fails to teach a "plurality of display buffers storing versions of the image gathered over time" and detecting the relative movement "by comparing changes in the images stored in the display buffers," as recited in claims 2 and 11 and cites Kuno for those teachings. Non-Final Act. 11–12. Appellants argue the purpose of Kuno's buffers "is not to detect relative movement between target subject matter and a camera body." App. Br. 6. Kuno, however, states that it compares the images in the image memories and "detects a mobile object from the difference between the positioned images in the 1st and 2nd image memories 2 and 3." Kuno, Abstract. We find Appellants' argument unpersuasive because Kuno discloses storing versions of the image gathered over time in memories (a plurality of buffers) and detecting relative movement (movement of an object with respect to the camera) by comparing changes in the images.

Appellants also argue the Examiner's rationale is insufficient because all three cited references already disclose ways of tracking a subject. App. Br. 6. The Examiner states it would have been obvious to an ordinarily skilled artisan to substitute Kuno's known method for detecting positional deviation between frames into Akazawa's known system, which would have yielded predictable results of tracking a subject. Non-Final Act. 11. Appellants have not sufficiently demonstrated a flaw in the Examiner's rationale that the proposed combination of Kuno to the Akazawa-Yanagi system is the mere application of one known technique to a known method, yielding predictable results. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 401, 417 (2007); *see also Agrizap, Inc. v. Woodstream Corp.*, 520 F.3d 1337, 1344 (Fed. Cir. 2008) ("This is a textbook case of when the asserted claims involve a combination of familiar elements according to known methods that does no more than yield predictable results."). However, we reverse the Examiner's rejection of claims 2 and 11 because the rejection lacks a sufficient rationale for combining Akazawa and Yanagi. We newly reject claims 2 and 11 under 35 U.S.C. § 103(a) as being unpatentable over Akazawa, Yanagi, and Kuno, simply modifying the Examiner's rationale for combining Akazawa and Yanagi in light of the additional teachings and suggestions in paragraph 70 of Akazawa, which were discussed above with respect to claim 1.

Rejection of Claims 5 and 14

The Examiner finds neither Akazawa nor Yanagi discloses "an accelerometer or tilt sensor to detect the relative movement," as recited in claims 5 and 14, but that Grosvenor teaches the limitation. Non-Final Act. 12. Specifically, the Examiner finds Grosvenor discloses "a camera (10)

which uses motion sensors (12a/12b) . . . to determine the motion of the camera," and, in response, zoom in or out. *Id.* (citing Grosvenor ¶¶ 30, 32–33). The Examiner states it would have been obvious to modify the Akazawa-Yanagi system with Grosvenor's known method for using motion sensors to determine relative movement. *Id.*; Ans. 15–16.

Appellants argue Grosvenor "fails to explicitly disclose an accelerometer or tilt sensor" and "Grosvenor's motion sensors are used to determine if an acceptable image cannot be captured or a given zoom setting cannot be used due to excessive motion which would result in blurring of an image." App. Br. 7. Appellants also argue the Examiner's rationale is insufficient because all three cited references already disclose "an effective way of tracking a subject," and "[t]he result of combining Akazawa, Yanagi and Grosvenor is not predictable." *Id.*

The Examiner merely relies on Grosvenor for its teaching of using motion sensors to detect movement of the camera relative to the subject image. Grosvenor explains that its motion sensors "may be mini-gyroscopic devices" and the sensors "are operable to detect side to side and up/down rotation of the image capture device 10." Grosvenor ¶ 30. Appellants have not explained sufficiently why Grosvenor's mini-gyroscopic motion sensors do not teach the recited "tilt sensors." Regardless of the ultimate purpose of Grosvenor's motion sensors, Grosvenor indicates that the sensors detect movement. *Id.* Therefore, Appellants' argument that Grosvenor does not teach using motion sensors to detect the relative movement is not persuasive. Moreover, Appellants have not sufficiently demonstrated a flaw in the Examiner's rationale that the proposed combination is the mere application of one known technique (using motion sensors to detect relative movement)

to a known method (the Akazawa-Yanagi system), yielding predictable results. *See KSR*, 550 U.S. at 401, 417. However, we reverse the Examiner's rejection of claims 5 and 14 because the rejection lacks a sufficient rationale for combining Akazawa and Yanagi. We newly reject claims 5 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Akazawa, Yanagi, and Grosvenor, simply modifying the Examiner's rationale for combining Akazawa and Yanagi in light of the additional teachings and suggestions in paragraph 70 of Akazawa, which were discussed above with respect to claim 1.

Rejection of Claims 19 and 20

The Examiner finds neither Akazawa nor Yanagi discloses the "maximum level of zoom-in, zoom-out, or both, are adjustable," as recited in claims 19 and 20, but that Jung teaches the limitation. Non-Final Act. 13. Specifically, the Examiner finds "Jung discloses a camera with an auto zoom function" and "the camera uses the main target size as the optimal zoom position and adjusts the zoom setting to be in-line with the main target size ratio." *Id.* (citing Jung ¶¶ 32–39). The Examiner interprets the optimal zoom setting "to be setting a maximum level of zoom in." *Id.*

Appellants argue Yanagi doesn't teach or suggest anything "that would give rise to the expectation that a subject . . . returns to the center of the image," and "there is no evidence in support of Yanagi returning to the optimal zoom setting as taught by Jung" because Yanagi presumably "zooms in as much as it can." App. Br. 8–9 (emphasis omitted).

Yanagi discloses a system that zooms in when an object is in the center of the image. It is irrelevant whether the same object "returns to the center of the image" because the Examiner merely relies on Yanagi for its

teaching of zooming in on an object when the object enters a particular zone. The Examiner relies on Jung to teach zooming by an adjustable amount. Thus, the Examiner relies on the combined teachings of Yanagi and Jung as teaching or suggesting the disputed limitation in claims 19 and 20. Appellants' arguments are not persuasive because Appellants argue the references individually when the rejection is based on a combination of references. *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) ("Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references."). However, we reverse the Examiner's rejection of claims 19 and 20 because the rejection lacks a sufficient rationale for combining Akazawa and Yanagi. We newly reject claims 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Akazawa, Yanagi, and Jung, simply modifying the Examiner's rationale for combining Akazawa and Yanagi in light of the additional teachings and suggestions in paragraph 70 of Akazawa, which were discussed above with respect to claim 1.

Rejection of Claims 23 and 24

The Examiner finds the combination of Akazawa and Yanagi fails to teach "image stabilization apparatus" and that "movements of the body indicative of jiggling do not trigger the automatic zoom-out or zoom-in functions," as recited in claims 23 and 24, and cites Miyasako for those teachings. Non-Final Act. 14–15. Specifically, the Examiner finds Miyasako discloses "the ability to differentiate motion vectors of a subject from motion vectors attributable to camera shake" and "the ability to correct for the camera shake." *Id.* at 14 (citing Miyasako ¶¶ 62, 69, 185). The Examiner states it would have been obvious to modify the Akazawa-Yanagi

system to include Miyasako's known method differentiating between camera shake and movement of the subject and to correct for camera shake so the auto-zoom function does not miscalculate movement of the subject. *Id.*; Ans. 17–18. The Examiner notes the rationale used is that the suggested combination is merely a simple substitution of one known element for another, which yields predictable results. Ans. 18 (citing *KSR*, 550 U.S. 398; Manual of Patent Examining Procedure § 2143(I)(B)).

Appellants argue the purpose of Miyasako is to compensate for camera jiggling and the Examiner's rationale "does not provide adequate support of the proposed combination." App. Br. 8. Appellants further assert that the Examiner's rationale of "stabiliz[ing] an image signal in the camera of Akazawa" is inapplicable because "Akazawa does not zoom-out or zoom-in the subject matter in a viewfinder, but instead presents a zoom frame." *Id.* at 8–9.

Appellants have not persuaded us of error that Miyasako teaches both differentiating between camera shake and movement of a subject and adjusting for camera shake. Moreover, Appellants have not sufficiently demonstrated a flaw in the Examiner's rationale that the proposed combination is the mere application of one known technique (distinguishing camera shake from object movement) to a known method (the Akazawa-Yanagi system), yielding predictable results (tracking a subject without miscalculating due to camera shake). *See KSR*, 550 U.S. at 401, 417. However, we reverse the Examiner's rejection of claims 23 and 24 because the rejection lacks a sufficient rationale for combining Akazawa and Yanagi. We newly reject claims 23 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Akazawa, Yanagi, and Miyasako, simply modifying the

Examiner's rationale for combining Akazawa and Yanagi in light of the additional teachings and suggestions in paragraph 70 of Akazawa, which were discussed above with respect to claim 1.

Conclusion

We have reviewed Appellants' arguments in the Appeal and Reply Briefs, the Examiner's rejection in the Non-Final Action, and the Examiner's response to Appellants' arguments in the Answer. We find Appellants' arguments that the Examiner erred persuasive and reverse the Examiner's rejections of claims 1–26. We enter a new ground of rejection of claims 1–26, modifying the Examiner's rejections in the Non-Final Action only to the extent this decision changes the rationale for combining the cited teachings of Akazawa and Yanagi.

DECISION

For the above reasons, the Examiner's decision to reject claims 1–26 under 35 U.S.C. § 103(a) is reversed.

We newly reject claims 1–26 under 35 U.S.C. § 103(a).

This Decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides that "[a] new ground of rejection . . . shall not be considered final for judicial review."

Section 41.50(b) also provides that Appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

> (1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered

> by the examiner, in which event the proceeding will be remanded to the examiner. . . .
>
> (2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same Record.

37 C.F.R. § 41.50(b).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1). *See* 37 C.F.R. §§ 41.50(f), 41.52(b).

REVERSED
37 C.F.R. § 41.50(b)