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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DAVE PEPITONE, EMMANUEL LETSU-DAKE,
DONALD SINGER, and PATRICK MULHALL

Appeal 2015-000413
Application 13/022,000
Technology Center 3600

Before LYNNE H. BROWNE, JILL D. HILL, and PAUL J. KORNICZKY,
Administrative Patent Judges.

KORNICZKY, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF CASE

Appellants, Dave Pepitone et al.,¹ appeal under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1, 2, 6–9, 15, and 17–29.² We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ Appellants identify Honeywell International, Inc. as the real party in interest. Appeal Br. 3.

² Claims 3–5, 10–14, and 16 are cancelled. Final Act. 2.

THE CLAIMED SUBJECT MATTER

The claims are directed to systems and methods for providing in-trail procedures (ITP) clearance information. Claims 1, 9, and 23 are independent. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method comprising:
 - receiving, at a user interface located on a host aircraft, a user selection of a desired altitude;
 - receiving information from one or more proximate target aircraft via a communications system on the host aircraft;
 - receiving host aircraft information from one or more other systems located on the host aircraft; determining, by a processor, if each of an In-Trails Procedure (ITP) transition and a standard (STD) transition to the desired altitude by the host aircraft are possible based on the received information from one or more proximate target aircraft and the host aircraft information; and
 - generating, by the processor, a graphical user interface display for presentation on a display, the graphical user interface display comprising a vertical profile view, wherein the vertical profile view comprises at least one of a valid or invalid indication for each of the ITP transition and the STD transition to the desired altitude.

REFERENCES

In rejecting the claims on appeal, the Examiner relied upon the following prior art:

Schilke	US 2010/0057362 A1	Mar. 4, 2010
Depape	US 2010/0286900 A1	Nov. 11, 2010
Tjorhom	US 2011/0144833 A1	June 16, 2011
Shafaat	US 2011/0270472 A1	Nov. 3, 2011
Reynolds	US 2011/0270473 A1	Nov. 3, 2011

REJECTIONS

The Examiner made the following rejections:

1. Claims 17, 22, and 24 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.
2. Claims 17, 22, and 24 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite
3. Claims 1, 2, 7, 9, 15, 17, 19, 21–26, and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shafaat, Depape, and Reynolds.
4. Claims 6, 18, 20, 27, and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shafaat, Depape, Reynolds, and Tjorhom.
5. Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Shafaat, Depape, Reynolds, and Schilke.

Appellants seek our review of these rejections.

ANALYSIS

The Rejection of Claims 17, 22 and 24

As Failing to Comply With the Written Description Requirement

In the Answer, the Examiner finds that Appellants' argument that "the limitations '[calculating or calculate] when an altitude climb by the host aircraft to the desired altitude via the STD transition will no longer be valid'" is supported by the Specification is persuasive. Ans. 4. However, the Examiner maintains that "the limitation 'second icon indicating a first position where the altitude climb to the desired altitude via the STD transition will no longer be valid' is not supported by Appellants' disclosure." *Id.*

In response, Appellants argue that

[A] person having ordinary skill in the art would understand that Appellant had possession of the claimed second icon indicating a first position where the altitude climb to the desired altitude via the STD transition will no longer be valid. For example, the leading edge and the trailing edge of linking box 166 shown in FIG. 8 of Appellant's disclosure indicate the beginning position and the ending position for where the STD transition is valid. One of ordinary skill in the art would further understand that the end point of the valid STD transition is also the position where the altitude climb to the desired altitude via the STD transition will no longer be valid. Thus, at least FIG. 8 of Appellant's originally filed disclosure illustrates a second icon indicating a first position where the altitude climb to the desired altitude via the STD transition will no longer be valid.

Reply Br. 3. In response to the Examiner's assertion that "icons are not the same as windows or lines or scales or boxes and the terms are not interchangeable" (Ans. 5), Appellants respond that "[o]ne of ordinary skill in the art would understand that the linking box 166 shown in FIG. 8 may be an example of an icon." Reply Br. 3. We agree with Appellants and do not sustain the rejection of claims 17, 22, and 24.

The Rejection of Claims 17, 22 and 24 As Being Indefinite

In the Answer, the Examiner finds persuasive Appellants' arguments that the word "if" in claims 17 and 22 indicates a positive limitation so that the claims 17, 22, and 24 are not indefinite. Ans. 6; Reply Br. 4. However, the Examiner maintains that the use of the terms "when" and "where" in the claims are indefinite because claims 17, 22, and 24 "fail to link the calculating functions of time to the display of position by the first and

second icons in the wherein clause.” Final Act. 11. According to the Examiner,

Per the terms used in the claim, the Appellants’ invention first calculates a time (when) that an altitude climb by the host aircraft to a desired altitude via the ITP transition and the STD transition will no longer be valid and then at some later point displays a first icon indicating a first position (where) the altitude climb will no longer be valid via the ITP transition and STD transition respectively.

Ans. 8–9. We agree with the Appellants that:

One having ordinary skill in the art would understand that the recitation, “when an altitude climb by the host aircraft to the desired altitude via the ITP transition will no longer be valid” refers to the satisfaction of a particular condition and is not necessarily limited to the calculation of a particular time. For example, Appellant’s disclosure describes that, “the indication presents time or distance information of when the ITP transition or the STD transition to the altitude associated with the received desired altitude will be valid or will cease to be valid.” Thus, at least this sentence indicates that time information or distance information may be used to indicate “when the ITP transition ... will be valid or will cease to be valid.”

Reply Br. 5 (citing to Spec. ¶¶ 9 and 30). Thus, we do not sustain the indefiniteness rejection of claims 17, 22, and 24.

*The Rejection of Claims 1, 2, 7, 9, 15, 17, 19, 21–26, and 29
As Being Unpatentable Over Shafaat, Depape, and Reynolds*

Claims 1, 2, 7, 17, and 19

Appellants argue claims 1, 2, 7, 17, and 19 as a group. Appeal Br. 13–18. We select claim 1 as the representative claim, and claims 2, 7, 17, and 19 stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner finds that Shafaat discloses the limitation reciting “*the vertical profile view comprises at least one of a valid or invalid indication for each of the . . . STD transition,*” and Reynolds discloses the limitation reciting “*the vertical profile view comprises at least one of a valid or invalid indication for [each of the] ITP transition.*” Final Act. 13–16. The Examiner determines that it would have been obvious to modify the distance separation criteria indicator system as disclosed in Shafaat to include (1) “determining altitude change under ITP in order to reduce fuel consumption and emissions, improve flight quality and safety, and increase traffic on the air space” (citing Depape ¶¶ 8–11) and (2) “a vertical [profile] display for the aircrew that shows the host aircraft and adjacent aircraft and indicates whether an ITP is authorized because the display provides increase aircraft safety by providing the pilot enhanced situational awareness” (citing Reynolds ¶¶ 3, 19). Final Act. 15–16.

In response to the Examiner’s findings, Appellants present several different arguments. First, Appellants argue that Shafaat does not disclose a “valid or invalid indication for an STD transition.” Appeal Br. 15. According to Appellants’ definition of STD transition, “an STD transition requires certain minimum separation distances between aircraft.” *Id.* Appellants also state that the “portions of Shafaat cited by the Examiner do not describe any specific measurements or procedures that would lead one of ordinary skill in the art to understand that Shafaat, either explicitly or implicitly, was describing an STD transition.” *Id.* The Examiner states that “during the examination ‘STD transition’ was interpreted to be any transition to a desired altitude based on some authority, custom, general consent, requirements, or rule.” Ans. 12–13.

Contrary to Appellants' arguments, Shafaat's flight system discloses that

pilots may have readily available visual access to real time in-flight traffic information at various flight levels or altitudes around the aircraft. Pertinent flight information is collected from surrounding traffic aircraft and from the aircraft itself, and is analyzed to determine whether climbing or descending through adjacent and consecutive flight levels is possible based on the current traffic conditions in light of the safe minimum separation requirements and procedures mandated by applicable flight regulations. The current traffic environment is displayed along with the results of the climb and descent analysis in a manner that enables the pilots to view the display and at a glance, immediately know whether it is possible to climb or descend to or through a desired flight level.

Shafaat ¶ 15. Shafaat also discloses that

criteria indicators **118** may include horizontal lines or other symbols that indicate to a pilot whether or not a climb or descent to a desired flight level is possible in light of separation minimums. A "separation minimum" as used throughout this disclosure is a minimum longitudinal distance between aircraft as required by regulatory agencies, airline operating procedures, or any other applicable procedures or guidelines.

Id. at ¶ 22. Thus, Shafaat discloses certain minimum separation distances are required between aircraft, based upon certain regulations or procedures. Under Appellants' and the Examiner's proposed claim construction, one skilled in the art would understand that Shafaat discloses a "valid or invalid indication for. . . [an] STD transition," as recited in claim 1.

The Examiner also correctly notes that Appellants do not explain why "the display in the Shafaat reference which includes a vertical axis that indicates whether or not an altitude climb or descent to the desired altitude is possible based on separation minimums does not read on the limitation

“valid or invalid indication for each of the ... STD transition to the desired altitude.” Ans. 13. Shafaat’s use of different terminology for the STD transition, however, does not persuade us of error in the Examiner’s finding that Shafaat discloses the STD transition. *In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990) (The element must be arranged as required by the claim, but this is not an *ipsisimis verbis* test.). Thus, Appellants do not identify error by the Examiner.

Second, to the extent that Appellants are arguing that Shafaat does not disclose “specific measurements or procedures” for the STD transition (Appeal Br. 15), neither Appellants’ Specification nor the claims disclose any measurement or procedures for the STD transition. Thus, Appellants’ argument is not commensurate with the scope of the claims.

Third, Appellants argue that the Examiner relies on an “improper assertion of inherent[] disclosure [of the recited STD transition] in Shafaat.” Appeal Br. 15. As discussed above, Shafaat explicitly discloses the recited STD transition and, thus, Appellants’ argument is not persuasive.

Fourth, Appellants argue that the combination of Shafaat and Depape do not disclose a “vertical profile view compris[ing] at least one of a valid or invalid indication for each of an ITP transition and an STD transition to a desired altitude,” as recited in claim 1. Appeal Br. 16 (emphasis added). The Examiner correctly notes that the rejection relies on Reynolds, not Depape, in combination with Shafaat for disclosure of the recited limitation. Ans. 18–19; *see* Final Act. 15–16. Thus, Appellants’ argument does not address the rejection as articulated by the Examiner and does not identify Examiner error.

Fifth, Appellants argue that the Examiner's reason to modify Shafaat in view of the teachings of Depape and Reynolds is improper because the "Examiner did not cite to any part of the applied art evidence that establishes that a vertical profile view that comprises at least one of a valid or invalid indication for both the ITP transition and the STD transition would have been required to provide the asserted 'enhanced situational awareness,'"³ or that the ITP and STD transitions are displayed on a "common" vertical profile view, instead of "separate" vertical views. Appeal Br. 17. However, this argument is foreclosed by *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), in which the Supreme Court rejected the rigid requirement of a teaching or suggestion or motivation to combine known elements in order to show obviousness. *KSR*, 550 U.S. at 415. The Court noted that an obviousness analysis "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." *Id.* at 418.

In addition, the key to supporting any rejection under 35 U.S.C. § 103 is a clear "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR*, 550 U.S. at 418. Here, the Examiner determines that it would have been obvious to modify the distance

³ To the extent that Appellants are attempting to show non-obviousness by attacking the references individually, the relevant inquiry is whether the claimed subject matter would have been obvious to those of ordinary skill in the art in light of the combined teachings of Shafaat, Depape, and Reynolds. See *In re Merck & Co.*, 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.").

separation criteria indicator system as disclosed in Shafaat to include (1) “determining altitude change under ITP in order to reduce fuel consumption and emissions, improve flight quality and safety, and increase traffic on the air space” as disclosed in Depape (Final Act. 15 (citing Depape ¶¶ 8–11)), and (2) “a vertical display for the aircrew that shows the host aircraft and adjacent aircraft and indicates whether an ITP is authorized because the display provides increase aircraft safety by providing the pilot enhanced situational awareness” as disclosed in Reynolds (Final Act. 16 (citing Reynolds ¶¶ 3, 19)). *See also* Ans. 17–18. Appellants do not address the Examiner’s first rationale and, thus, do not show Examiner error.

For the reasons discussed above, we sustain the rejection of claim 1, and claims 2, 7, 17, and 19 fall with claim 1.

Claims 9, 15, 21, and 22

Appellants argue claims 9, 15, 21, and 22 as a group. Appeal Br. 18–19. We select claim 9 as the representative claim, and claims 15, 21, and 22 stand or fall with claim 9. 37 C.F.R. § 41.37(c)(1)(iv).

Appellants argue that the rejection of claim 9 is in error for the same reasons that the rejection of claim 1 is in error. As we find no error in the rejection of claim 1, Appellants’ argument is unconvincing. We sustain the rejection of claim 9. Claims 15, 21, and 22 fall with claim 9.

Claims 23–26 and 29

Appellants argue claims 23–26 and 29 as a group. Appeal Br. 19–20. We select claim 23 as the representative claim, and claims 24–26 and 29 stand or fall with claim 23. 37 C.F.R. § 41.37(c)(1)(iv).

Appellants argue that the rejection of claim 23 is in error for the same reasons that the rejection of claim 1 is in error. As we find no error in the rejection of claim 1, Appellants' argument is unconvincing. We sustain the rejection of claim 23, and claims 24–26 and 29 fall with claim 23.

*The Rejection of Claims 6, 18, 20, 27, and 28
As Being Unpatentable Over Shafaat, Depape, Reynolds, and Tjorhom*

Appellants argue claims 6, 18, 20, 27, and 28 as a group. Appeal Br. 20. We select claim 6 as the representative claim, and claims 18, 20, 27, and 28 stand or fall with claim 6. 37 C.F.R. § 41.37(c)(1)(iv).

Claims 6, 18, 20, 27, and 28 depend from independent claims 1, 9, or 23. Appellants argue that “for at least the reasons discussed with respect to the independent claims [1, 9, or 23], Shafaat in view of Depape, in view of Reynolds, and in further view of Tjorhom fails to disclose or suggest the features of Appellant’s claims 6, 18, 20, 27, and 28.” Appeal Br. 20. Appellants also argue that “at the time of Appellant's invention, there would have been no apparent reason for one having ordinary skill in the art to modify the display system disclosed by Shafaat in view of the three other references applied by the Examiner, namely, Depape, Reynolds and Tjorhom, in the manner proposed by the Examiner.” *Id.* Because the rejections of claims 1, 9, and 23 are sustained and Appellants do not allege any other patentable distinctions for claims 6, 18, 20, 27, and 28, we likewise sustain the Examiner’s rejections of these claims under 35 U.S.C. §103(a).

*The Rejection of Claim 8 As Being
Unpatentable Over Shafaat, Depape, Reynolds, and Schilke*

Claim 8 depends from independent claim 1. Appellants argue that “for at least the reasons discussed with respect to the independent claim 1 (Group 1), Shafaat in view of Depape, further in view of Reynolds, and in further view of Schilke fails to disclose or suggest the features of Appellant's claim 8.” Appeal Br. 21. Appellants also argue that “at the time of Appellant's invention, there would have been no apparent reason for one having ordinary skill in the art to modify the display system disclosed by Shafaat in view of Depape, and then further in view of Reynolds, and yet further [in] view of Schilke in the manner proposed by the Examiner.” *Id.* Because the rejection of claim 1 is sustained and Appellants do not allege any other patentable distinctions for claim 8, we likewise sustain the Examiner’s rejection of claim 8 under 35 U.S.C. §103(a).

DECISION

For the above reasons, the Examiner’s rejections of claims 17, 22, and 24 under 35 U.S.C. § 112 are REVERSED.

The Examiner’s rejections of claims 1, 2, 6–9, 15, and 17–29 under 35 U.S.C. § 103(a) are AFFIRMED.

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)(iv).

AFFIRMED