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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte JOHN WOKURKA, TIM STUMPF,
ELIZABETH MARIE BIDDLE, and CLIFFORD B. SOWADSKI

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Appeal 2019-002499
Application 14/599,766
Technology Center 3700

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Before BENJAMIN D. M. WOOD, MICHAEL J. FITZPATRICK, and
ARTHUR M. PESLAK, *Administrative Patent Judges.*

WOOD, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the
Examiner's July 2, 2018 Non-Final Action rejecting claims 1–20. *See* Non-
Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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[1] "Appellant" refers to the applicant as defined by 37 C.F.R. § 1.42.
Appellant identifies the real party in interest as The Boeing Company.
Appeal Br. 2.

CLAIMED SUBJECT MATTER

The claims are directed to an instructional assessment system for a vehicle. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. An apparatus that comprises:
    a display system, in a vehicle, configured to provide a guidance for a group of input controls;
    a processor that comprises:
        an assessment system, removably attached to the vehicle, such that the assessment system comprises code specially programmed to:
            communicate with the display system;
            receive, from sensors in a hardware system in the vehicle, a directional control command and real-time information of a performance of the vehicle during an operation of the vehicle, such that the hardware system comprises at least one of: an environmental control system, a collision avoidance system, and a biometric sensor system for a vehicle operator;
            determine, based upon an assessment definition, the real-time information and the directional control command, a performance of the operation; and
            generate, based upon an event generation based upon a rule in an assessment definition, that looks for the real-time information, in an event generator, a corrective action to improve the performance of the operation of the vehicle during the operation;
    a feedback generator configured to transform the corrective action for at least one of: a speed, a heading, a position, an attitude, an altitude, an engine control setting, a communication systems setting, a setting for the hardware system, of the vehicle, to the guidance for the vehicle to perform the corrective action, such that the guidance forms a graphical image; and
    a platform variable mapping configured to format the graphical image as a graphical indicium overlaid on a display, of the real-time information of the performance of the vehicle during the operation of the vehicle, on the display system, such

that the display simultaneously presents the attitude, the speed, and the altitude of the vehicle.

(Claim App. 26, 27).

REFERENCES

Name	Reference	Date
Riley	US 2003/0206119 A1	Nov. 6, 2003
Batcheller	US 2011/0171611 A1	July 14, 2011
Shaw	US 2015/0269860 A1	Sep. 24, 2015

REJECTION

Claims Rejected	35 U.S.C. §	Reference(s)/Basis
1–20	103	Shaw, Batcheller, Riley

OPINION

The Examiner finds, *inter alia*, that Shaw teaches the limitations in independent claim 1 (and the "substantially similar limitations in claim 11") drawn to a "graphical image" that is formatted as a "graphical indicium" of a "guidance," i.e., a "corrective action" to improve the performance of a vehicle operation, the graphical indicium being "overlaid on a display" that "simultaneously presents the attitude, the speed, and the altitude of the vehicle." Non-Final Act. 3, 6–7 (citing Shaw ¶¶ 73, 91, Figs. 1, 2); Ans. 20–21 (citing Shaw ¶ 91, Fig. 3).[2]

Paragraph 91 describes an example use of Shaw's system in which a novice pilot is approaching and landing a high-performance aircraft on an aircraft carrier. *Id.* "During the later stages of this maneuver, the pilot

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[2] Appellant does not appear to dispute that claim 11 is "substantially similar" (Non-Final Act. 3) to claim 1. Appeal Br. 7. Therefore, our discussion of claim 1 applies with equal force to claim 11.

begins pulling back the throttle input controller to slow the aircraft in preparation for a landing while also controlling the heading, altitude and attitude of the aircraft to keep it aloft and aligned with the carrier deck." *Id.* The pilot's real-time throttle position is compared with a "preferred" throttle position, based on flights flown by more experienced pilots; the deviation between actual and preferred throttle positions is tracked over time and displayed to the pilot as a graph. *Id.* ¶ 91, Fig. 3. The pilot also receives a display of a numerical value 210 "corresponding to the deviation," and an upwardly or downwardly directed arrow 216, 218 "to provide a quickly observable visual indicator to the pilot as to the direction the input controller, in this case the throttle position controller, should be moved to reduce the deviation." *Id.* ¶ 73, Fig. 2.

Appellant responds that Shaw does not teach "a machine that determines a corrective action," and that Shaw's "teaching that the pilot must generate 'the direction the input controller should be moved' actually teaches away from 'a feedback generator configured to transform the corrective action . . . such that the guidance forms a graphical image.'" Appeal Br. 12–13.

We disagree. Shaw teaches determining a corrective action because it teaches comparing actual input controller position with a preferred input controller position to determine a "deviation" between the two, which the pilot acts to reduce. Shaw ¶¶ 73, 91. Shaw also teaches transforming the corrective action to form a graphic image/graphical indicia because the deviation determined by Shaw is displayed as: (1) graphs of actual controller position versus preferred controller position over time; (2) a numerical value corresponding to the determined deviation; and (3)

upwardly or downwardly directed arrows that "provide a quickly observable visual indicator to the pilot as to the direction the input controller . . . should be moved." Shaw ¶¶ 73, 91, Figs. 2, 3.

Appellant also disputes that Shaw teaches that the graphical indicium is "overlaid on a display" that "simultaneously presents the attitude, the speed and the altitude of the vehicle," as recited in claim 1. Appeal Br. 15–17; *see also* Appeal Br. 29 (Claim 11 reciting "overlays the corrective action onto a display" and "simultaneously presents the attitude, the speed and the altitude of the vehicle"). For these limitations, the Examiner relies on Shaw's teaching that, in the example of the novice pilot attempting a carrier landing, the pilot adjusts the throttle controller to reduce the deviation between actual and preferred throttle positions "while also controlling the heading, altitude and attitude of the aircraft to keep it aloft and aligned." Non-Final Act. 6–7 (citing Shaw ¶ 91, Figs. 1, 2); *see also* Ans. 20–21 ("'*the attitude, the speed, and the altitude of the vehicle*' are obviously being monitored 'for preparation for landing' in addition to providing a comparison of throttle control (which is used for '*the attitude, the speed, and the altitude of the vehicle*') between a trainee to a highly skilled pilot").

Appellant responds, *inter alia*, that "Shaw does not teach simultaneous displays of corrective action guidance being displayed for and/or with presentation of 'the attitude, the speed, and the altitude of the vehicle.'" Appeal Br. 16. According to Appellant, "[w]hile Shaw's Figure 3 image displays a magnitude of deviation from a desired thrust setting, Shaw does not provide a single unified guidance with corrective action required to achieve a desire outcome for the attitude, the speed, and the altitude of the vehicle." Reply Br. 6.

We agree with Appellant that the Examiner has not shown that Shaw's corrective-action graphical indicium is overlaid on a display that simultaneously presents the vehicle's attitude, speed, and altitude. As Appellant notes, none of Shaw's Figures depicts a simultaneous display of these three parameters along with Shaw's corrective action graphical indicia. Although the Examiner reasonably infers that the pilot has access to a display of the vehicle's speed, attitude, and altitude from Shaw's teaching that the pilot controls these parameters, it does not necessarily follow that Shaw's corrective-action graphical indicium is simultaneously displayed with—much less "overlaid" on—a display of these parameters. Accordingly, we determine not to sustain the rejection of independent claims 1 and 11, and claims 2–10 and 12–20, which depend therefrom.

CONCLUSION

The Examiner's rejection is reversed.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–20	103	Shaw, Batcheller, Riley		1–20

REVERSED