UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT B. WOOD, KENNETH A. ZIMMERMAN
AND CARLO L. TIANA

Appeal No. 2006-0801
Application No. 10/198,541

ON BRIEF

Before GROSS, LEVY and NAPPI, **Administrative Patent Judges**.

NAPPI, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 of the final rejection of claims 1 through 10 and 12 through 21. For the reasons stated *infra* we reverse the examiner's rejection of these claims.

Invention

The invention relates to a system for providing positional awareness to a pilot landing an aircraft. The system makes use of two independent sources of data to determine the position of the aircraft. The pilot is then alerted to a difference in the positions determined by the two sources of data. See page 4 of appellants' specification.

Claim 1 is representative of the invention and is reproduced below:

1. A method of increasing positional awareness of a pilot of an aircraft during a landing approach of the aircraft, comprising:
receiving first data, said first data being data from a navigational aid;
analyzing the first data to determine a first position of the aircraft at a predetermined time;
obtaining second data, said second data being independent of the first data;
analyzing the second data to determine a second position of the aircraft at the predetermined time;
comparing the first position of the aircraft to the second position of the aircraft;
alerting the pilot to a difference between the first position of the aircraft and the second position of the aircraft.

Reference

The reference relied upon by the examiner is:

Tarleton, Jr. et al. (Tarleton) 6,157,876 December 5, 2000

Rejection at Issue

Claims 1 through 10 and 12 through 21 stand rejected under 35 U.S.C. § 102 as being anticipated by Tarleton.

Opinion

We have carefully considered the subject matter on appeal, the rejection advanced by the examiner and the evidence of anticipation relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, appellants' arguments set forth in the brief along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

With full consideration being given to the subject matter on appeal, the examiner's rejection and the arguments of appellants and the examiner, and for the reasons stated *infra* we will not sustain the examiner's rejection of claims 1 through 10 and 12 through 21 under 35 U.S.C. § 102.

Appellants argue on page 5 of the brief:

> Tarleton determines horizontal and vertical deviation of an aircraft relative to the runway (col. 3, lines 56-62), and sending such deviation to an output device 125. In contrast, applicants' claim 1 recites comparing two positions of the aircraft determined through independent data sources, and alerting a pilot to a difference between the two positions of the aircraft.

In response the examiner states on pages 10 and 11 of the answer:

> At block 220 [of Tarleton figure 2], the position from the image data, detected edge coordinates 305, and the position from the NAV data, predicted coordinates 340 are compared (col. 4, lines 34-36; col. 4, lines 64 to col. 7, lines 1-4). At block 122, a pilot is alerted through output or display 125 of a difference between the first position and the second position (lateral deviation, col. 3, lines 58-62; col. 4, lines 64 to col. 7, lines 1-4). Therefore, the prior art anticipates all the limitations of the claims including the limitation "alerting the pilot to a difference (step 122, i.e. deviation from runway; fig. 1) between the first position of the aircraft and the second position of the aircraft."

Further, on page 12 of the answer, the examiner asserts that the output of Tarleton's display is show in Tarleton figure 3A.

We disagree with the examiner's findings. Claim 1 includes the limitation "alerting the pilot to the difference between the first position of the aircraft and the second position of the aircraft." Independent claims 10 and 17 contain similar limitations. We consider the scope of this limitation to require that some indication of the difference between the two position values be presented to the pilot of the aircraft. We do not find that Tarleton provides the pilot with an indication that the there is a difference between the two positions.

Tarleton teaches a system for navigation of an aircraft which makes use of NAV data which comes from traditional sources such as satellites, ground based devices. See column 1, lines 30 through 42. Further, Tarleton uses an image sensor which captures multiple images over time. See column 3, lines 18 through 22. The system processes both the NAV data and the image data to determine the runway coordinates. See column 3, lines 43 through 45. The runway coordinates can be used by an output device as either navigational information or to determine the lateral and vertical deviation of the aircraft relative to the runway. See column 3, lines 55 through 63. The output device can be either to a processor and display or a flight control system. See column 3, lines 39 through 41. While we consider it implicit that the display provides information to the pilot, we do not find that the providing the runway coordinates to the pilot meets the claimed step of alerting the pilot to the difference between two positions which are determined from independent inputs as claimed. Rather

Tarleton teaches the display of coordinates which are derived from data obtained by two independent sensors. Further, contrary to the examiner's assertion we do not find that figure 3a, or figures 3b and 3c depict displays of the output device. Figures 3a through 3c are figures to illustrate how the image data from the image sensor is manipulated to determine the runway coordinates, and we find no disclosure in Tarleton that the image data is displayed. Accordingly, we do not find that Tarleton discusses all of the features of independent claims 1, 10 and 17 and we do not sustain the examiner's rejection of claims 1 through 10 and 12 through 21.

Conclusion

In summary, we will not sustain the examiner's rejections of claims 1 through 10 and 12 through 21 under 35 U.S.C. § 102. The decision of the examiner is reversed.

REVERSED

ANITA PELLMAN GROSS Administrative Patent Judge	)	
STUART S. LEVY Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
ROBERT E. NAPPI Administrative Patent Judge	)	

REN/gjh

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