

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ALEKSANDER BOGUSLAW HAC

Appeal No. 2000-0950
Application No. 08/925,247

ON BRIEF

Before COHEN, ABRAMS, and NASE, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 3. Claims 4 and 5, the only other claims pending in this application, have been allowed.

We REVERSE.

BACKGROUND

The appellant's invention relates to a brake system control (specification, p. 1).

Claim 1, the sole independent claim under appeal, reads as follows:

A brake system control method, comprising the steps of:
measuring a set of vehicle parameters including steering wheel angle, vehicle speed, lateral acceleration and vehicle yaw rate;
responsive to the measured parameters using an observer to estimate lateral velocity of the vehicle, wherein the observer contains (a) an open loop nonlinear dynamic model of the vehicle responsive to the measured vehicle speed and the measured yaw rate; (b) a closed loop term responsive to a first error between the measured yaw rate and a predicted yaw rate, a second error between a previously estimated derivative of lateral velocity and a predicted derivative of lateral velocity and a third error between the measured lateral acceleration and a predicted lateral acceleration;
estimating a vehicle slip angle responsive to the estimate of lateral velocity;
determining a control command responsive to the vehicle slip angle; and
controlling an actuator responsive to the control command.

In the final rejection (Paper No. 7, mailed August 17, 1999) the examiner (1) rejected claim 1 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,742,918 to Ashrafi et al. (Ashrafi); and (2) rejected claims 2 and 3 under 35 U.S.C. § 103 as being unpatentable over Ashrafi in view of U.S. Patent No. 5,641,212 to Sakai. In the rejection of claim 1, the examiner determined that the claimed "second error between a previously estimated derivative of lateral velocity and a predicted derivative of lateral velocity" was disclosed by Ashrafi at column 7, lines 50-67, and column 8, lines 1-17. In the rejection of claim 1, the examiner never set forth where in Ashrafi the

claimed step of "estimating a vehicle slip angle responsive to the estimate of lateral velocity" could be found.

In the brief (Paper No. 9, filed December 17, 1999), the appellant argued that the claimed "second error between a previously estimated derivative of lateral velocity and a predicted derivative of lateral velocity" is not disclosed by Ashrafi at column 7, lines 50-67, and column 8, lines 1-17.

In the response to argument section of the answer (Paper No. 10, mailed January 18, 2000), the examiner stated that the claimed "second error between a previously estimated derivative of lateral velocity and a predicted derivative of lateral velocity" is disclosed by Ashrafi at column 8, lines 5-17 and lines 53-61.

In the reply brief (Paper No. 11, filed March 20, 2000), the appellant provided his argument as to why the claimed "second error between a previously estimated derivative of lateral velocity and a predicted derivative of lateral velocity" is not disclosed by Ashrafi at column 8, lines 5-17 and lines 53-61. In addition, the appellant noted that the examiner had not compared the rejected claim feature by feature with Ashrafi as required by MPEP § 1208 (Seventh Edition, Rev. 1, Feb. 2000). The

examiner entered this reply brief (see Paper No. 12, mailed April 17, 2000) without comment.

On July 17, 2001, we remanded the application to the examiner to consider and to respond to the argument raised in the reply brief (Paper No. 13). In the remand we stated that if the examiner decides a supplemental examiner's answer is appropriate, the examiner should compare claim 1 feature by feature with Ashrafi as required by MPEP § 1208. In doing so, we requested that the examiner clearly detail how the following five limitations of claim 1 are met by specifically referenced portions of Ashrafi: (1) a second error between a previously estimated derivative of lateral velocity and a predicted derivative of lateral velocity; (2) a third error between the measured lateral acceleration and a predicted lateral acceleration; (3) estimating a vehicle slip angle responsive to the estimate of lateral velocity; (4) determining a control command responsive to the vehicle slip angle (i.e., the vehicle slip angle estimated in limitation (3) above); and (5) controlling an actuator responsive to the control command (i.e., the control command determined in limitation (4) above based upon the vehicle slip angle estimated in limitation (3) above).

In response to the remand, a supplemental examiner's answer was mailed on September 24, 2001 (Paper No. 14). The appellant did not file a supplemental reply brief to respond to the position of the examiner as set forth in the supplemental answer.

On April 22, 2002, pursuant to 37 CFR § 1.196(d), we ordered the appellant to clarify the record by addressing the rejection of claim 1 under 35 U.S.C. § 102(b) as set forth in the supplemental examiner's answer (Paper No. 16). Specifically, we ordered the appellant to provide an argument specifying the error(s) in the rejection, or other reasons which cause the rejection to be in error.

In response to the order, a supplemental reply brief was filed on June 4, 2002 (Paper No. 17). This supplemental reply brief specified the errors in the rejection of claim 1 and the reasons which cause that rejection to be in error.

On July 29, 2002, we remanded this application to the examiner (Paper No. 18), pursuant to 37 CFR § 1.196(a) and Manual of Patent Examining Procedure (MPEP) § 1211, for consideration of the supplemental reply brief filed on June 4, 2002.

On September 3, 2002, the examiner entered and considered this supplemental reply brief (Paper No. 19).

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we find ourselves in full agreement with the position of the appellant as set forth in the brief, reply brief and the supplemental reply brief that the subject matter of claim 1 is not anticipated by the patent to Ashrafi and that the subject matter of claims 2 and 3 is not obvious from the combined teachings of Ashrafi and Sakai. Accordingly, we will not sustain either the rejection of claim 1 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,742,918 to Ashrafi or the rejection of dependent claims 2 and 3 under 35 U.S.C. § 103 as being unpatentable over Ashrafi in view of Sakai.

In our view, the subject matter of claim 1 is not anticipated by Ashrafi since Ashrafi lacks a brake system control method having an observer to estimate lateral velocity of the vehicle, wherein the observer contains (a) an open loop nonlinear dynamic model of the vehicle responsive to the measured vehicle speed and the

measured yaw rate; and (b) a closed loop term responsive to a first error between the measured yaw rate and a predicted yaw rate, a second error between a previously estimated derivative of lateral velocity and a predicted derivative of lateral velocity and a third error between the measured lateral acceleration and a predicted lateral acceleration. Specifically, Ashrafi lacks an observer containing a closed loop term responsive to "a second error between a previously estimated derivative of lateral velocity and a predicted derivative of lateral velocity."

In our view, the examiner's position as to how this limitation is met by Ashrafi is in error for the reasons set forth by the appellant in the reply brief and the supplemental reply brief, which reasons we incorporate as our own.

Since the subject matter of claim 1 is not met by Ashrafi for the reasons set forth above, the decision of the examiner to reject claim 1 under 35 U.S.C. § 102(e) is reversed.

The decision of the examiner to reject dependent claims 2 and 3 under 35 U.S.C. § 103 is also reversed since the examiner has not established that the above-noted limitation of parent claim 1 not taught by Ashrafi would have been obvious

at the time the invention was made to a person of ordinary skill in the art from the combined teachings of Ashrafi and Sakai.

CONCLUSION

To summarize, the decision of the examiner to reject claim 1 under 35 U.S.C. § 102(e) is reversed and the decision of the examiner to reject claims 2 and 3 under 35 U.S.C. § 103 is reversed.

REVERSED

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
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JEFFREY V. NASE)	
Administrative Patent Judge)	

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