UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte KEVIN A. O'DEA

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Appeal No. 2006-2012
Application No. 10/408,875
Technology Center 3600

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ON BRIEF

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Before OWENS, BAHR and FETTING, *Administrative Patent Judges*.
OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from a rejection of claims 1-7, 9-17 and 19-25, which are all of the pending claims.

THE INVENTION

The appellant claims a method, computer readable medium and system for controlling a motor vehicle's braking system when a "coefficient condition", i.e., a split coefficient surface condition, exists.[1] Claim 1 is illustrative:

A method of controlling a brake system of a vehicle,

[1] The appellant's specification states that "[a] split coefficient road surface is one where the coefficient of friction on one side of the vehicle is significantly different than that on the other side. A road with ice or snow partially covering its surface is an example of a split coefficient road surface" (page 1, lines 13-15).

the method comprising:

determining a coefficient condition;

determining vehicle yaw;

determining a driver's corrective action;

determining a brake pressure control response based on the coefficient condition, vehicle yaw, and the driver's corrective action.

THE REFERENCE

Hartmann et al. (Hartmann) 5,388,896 Feb. 14, 1995

THE REJECTION

Claims 1-7, 9-17 and 19-25 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hartmann.

OPINION

We affirm the aforementioned rejection.

The appellant states that the claims stand or fall together (brief, page 4). We therefore limit our discussion to one claim, i.e., claim 1. *See* 37 CFR § 41.37(c)(1)(vii)(2004).

Hartmann discloses a method for braking motor vehicle wheels on a split coefficient road surface where a yawing moment tends to turn the motor vehicle in the direction of the higher coefficient of friction (col. 1, lines 11-21). Hartmann determines a maximum permissible rate of yaw with the aid of the steering angle and the vehicle speed, compares that maximum

permissible rate of yaw to the actual rate of yaw, and uses the calculated deviation to determine wheel-brake slippages and braking pressures (col. 4, line 60 – col. 5, line 2).

The appellant argues that Hartmann does not determine the driver's corrective action but, rather, uses steering angle as a continuous input into the brake regulation system (brief, page 5; reply brief, page 3). Hartmann does not disclose that the steering angle is a continuous input to the brake regulation system. What Hartmann discloses is that the maximum permissible rate of yaw is calculated with the aid of the steering angle (col. 4, lines 64-66). Regardless, whether or not Hartmann's steering angle is a continuous input, the steering angle is the driver's corrective action to the split coefficient condition. Thus, its determination meets the appellant's claim 1 requirement of "determining a driver's corrective action".

The appellant argues, without providing any support, that "corrective action", as that term is used by those skilled in the art, is limited to response to a split coefficient road surface and excludes merely driving around a corner or a curve (reply brief, page 2). The appellant's argument is not persuasive even if it is correct, because Hartmann's method does not pertain to merely driving around a corner or a curve but, instead, deals with correcting for a split coefficient road surface condition

(col. 1, lines 15-19; col. 2, lines 23-25). Hence, Hartmann's corrective action is the type of action which, according to the appellant's argument, falls within the meaning of "corrective action" to those of ordinary skill in the art.

The appellant argues, in reliance upon Hartmann's column 5, lines 3-7, that "*Hartmann* continuously regulates brake pressure, before and after any µ-split braking condition, and independent of whether the driver takes corrective action" (brief, page 6). The portion of Hartmann relied upon by the appellant does not state that the brake pressure is regulated continuously, before and after any µ-split braking condition, or independently of whether the driver takes corrective action. Instead, that portion states that a signal is generated when a µ-split-braking situation is recognized. That is what the appellant's method does; if and only if a µ-split condition is detected is the driver's corrective action and corresponding brake pressure control response determined (specification, page 4, lines 7-14).

The appellant argues that "determining a driver's corrective action is not the same as calculating a maximum permissible rate of yaw, although both may use steering angle as input" (brief, page 5). The relevant issue is whether Hartmann determines a driver's corrective action, not whether determining a driver's corrective action is the same as calculating a maximum

permissible rate of yaw. Like the appellant (specification, page 4, lines 11-13), Hartmann indicates the driver's corrective action by the steering angle (as discussed above).

The appellant argues, in reliance upon Hartmann's column 1, lines 24-26 and column 2, lines 25-27, that Hartmann slows the build-up of yawing moment enough to require relatively light countersteering at the beginning of the braking operation, thereby giving the driver time to countersteer, whereas the appellant's method takes advantage of the driver's corrective action to decrease stopping distance when the driver is correcting (brief, pages 5-6). Thus, the appellant argues, Hartmann facilitates countersteering, whereas the appellant's method takes advantage of countersteering (brief, page 5). In the appellant's method, if the driver does not correct or stops correcting, brake pressure is controlled to reduce yaw (specification, page 4, lines 17-19). As in Hartmann's method (col. 2, lines 4-9), that yaw reduction gives the driver time to countersteer. Only if the driver countersteers is the appellant's brake pressure allowed to increase such that the motor vehicle stops more quickly (specification, page 4, lines 14-17). Hartmann likewise takes the steering angle into account in determining the pressures applied to the brakes (col. 4, line 62 – col. 5, line 2). Hence, the argued

distinction between the methods of the appellant and Hartmann does not exist.

For the above reasons we find the appellant's claimed invention to be anticipated by Hartmann.

DECISION

The rejection of claims 1-7, 9-17 and 19-25 under 35 U.S.C. § 102(b) over Hartmann is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

TERRY J. OWENS Administrative Patent Judge	)	
JENNIFER D. BAHR Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
ANTON W. FETTING Administrative Patent Judge	)	

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