

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte LEIGHTON I. DAVIS, JR., THOMAS F. SIEJA,  
GERHARD A. DAGE and ROBERT W. MATTESON

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Appeal No. 97-0777  
Application 08/083,587<sup>1</sup>

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ON BRIEF

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Before COHEN, McQUADE and FLEMING, Administrative Patent Judges.

McQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Leighton I. Davis, Jr. et al. appeal from the final rejection of claims 1 through 14, all of the claims pending in the application. We reverse.

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<sup>1</sup> Application for patent filed June 30, 1993.

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The invention relates to "methods and systems for predicting air discharge temperature in a control system which controls an automotive HVAC system" (specification, page 1). Claims 1 through 7 are drawn to a method and claims 8 through 14 are drawn to a system. Copies of these claims appear in the appendix to the appellants' main brief (Paper No. 8).

Claims 1 through 14 stand rejected:

a) under 35 U.S.C. § 112, first paragraph, as being based on a specification which fails to comply with the enablement requirement of this section of the statute; and

b) under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Reference is made to the appellants' main and reply briefs (Paper Nos. 8 and 10) and to the examiner's final rejection (Paper No. 6), main and supplemental answers (Paper Nos. 9 and 11) and response to remand (Paper No. 13) for the respective positions of the appellants and the examiner with regard to the merits of these rejections.

Turning first to the enablement rejection, the dispositive issue is whether the appellants' disclosure,

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considering the level of ordinary skill in the art as of the date of the application, would have enabled a person of such skill to make and use the invention without undue experimentation. In re Strahilevitz, 668 F.2d 1229, 1232, 212 USPQ 561, 563-64 (CCPA 1982). In calling into question the enablement of the appellant's disclosure, the examiner has the initial burden of advancing acceptable reasoning inconsistent with enablement. Id.

According to the examiner, the appellants' disclosure is non-enabling because it fails to adequately describe the manner in which the discharge air temperature calculation referred to in the claims is performed. The examiner's position here rests solely on an alleged lack of detail in the appellants' description of the mathematical operations involved (see pages 11 and 12 in the main answer and pages 2 through 5 in the supplemental answer).<sup>2</sup>

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<sup>2</sup> This reasoning represents a shift from the rationale set forth in the final rejection. There, the examiner considered the disclosure to be non-enabling due to an alleged failure to explain how the calculated air discharge temperature could be used to control an automotive HVAC system. The examiner now concedes that this concern was unwarranted (see page 11 in the main answer and page 2 in the supplemental answer).

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The portion of the disclosure directly relating to the calculation of the air discharge temperature, specification pages 10 through 12 and Figures 16 and 17, is relatively straightforward in setting forth the model upon which the calculation is based. It is not apparent, nor has the examiner cogently explained, why such disclosure, while admittedly lacking in mathematical detail, would not have enabled a person of ordinary skill in the art to derive and use a method and system for performing the calculation without undue experimentation. Thus, the examiner has failed to meet his initial burden of advancing acceptable reasoning inconsistent with enablement.

Accordingly, we shall not sustain the standing 35 U.S.C. § 112, first paragraph, rejection of claims 1 through 14.

The standing 35 U.S.C. § 101 rejection of claims 1 through 14 rests on the examiner's determination that these claims are directed to a non-statutory mathematical algorithm (see pages 3 and 4 in the final rejection).

Congress intended statutory subject matter under § 101 to include anything under the sun that is made by man. Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980). Nonetheless, there

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are limits to § 101 and every discovery is not embraced within the statutory terms. Excluded from such patent protection are laws of nature, physical phenomena and abstract ideas.

Diamond v. Diehr, 450 U.S. 175, 185 (1981). Certain types of mathematical subject matter, standing alone, represent nothing more than abstract ideas until reduced to some type of practical application, i.e., a useful, concrete and tangible result. State St. Bank & Trust Co. v. Signature Fin. Group Inc., 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1600-01 (Fed. Cir. 1998); In re Alappat, 33 F.3d 1526, 1542-1543, 31 USPQ2d 1545, 1556-57 (Fed. Cir. 1994). The proper inquiry when dealing with mathematical subject matter is to see whether the claimed subject matter as a whole is a disembodied mathematical concept, which in essence represents nothing more than a law of nature, natural phenomenon or abstract idea. Id.

Claims 1 through 14 are directed to a method and system for predicting air discharge temperature in a control system which, in turn, controls a heating, ventilation and air conditioning (HVAC) system of a vehicle which discharges a parcel of air to a passenger cabin. These claims respectively recite steps and means for sensing or determining various HVAC

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parameters which are to be factored into the calculation. According to the appellants' disclosure, and as conceded by the examiner (see note 2, supra), the predicted or calculated air discharge temperature may be used to control the HVAC system. Thus, the subject matter recited in the claims has a practical application, i.e., a useful, concrete and tangible result, and is not merely a disembodied mathematical concept which in essence represents nothing more than a law of nature, natural phenomenon or abstract idea. Accordingly, the examiner's determination that the appellants' claims are drawn to non-statutory subject matter is unsound.

Therefore, we shall not sustain the standing 35 U.S.C. § 101 rejection of claims 1 through 14.

In summary and for the above reasons, the decision of the examiner to reject claims 1 through 14 under 35 U.S.C. § 112, first paragraph, and under 35 U.S.C. § 101 is reversed.

REVERSED

IRWIN CHARLES COHEN )  
Administrative Patent Judge )  
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JOHN P. McQUADE	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
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MICHAEL R. FLEMING	)	
Administrative Patent Judge	)	

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David R. Syrowik  
Brooks & Kushman  
1000 Town Center, 22nd Floor  
Southfield, MI 48075

JPM/ki