Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte SCOTT MORELL and
CHARLES R. COOK, JR.

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Appeal No. 2003-1334
Application 09/651,714

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ON BRIEF

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Before HAIRSTON, KRASS, and MacDONALD, Administrative Patent Judges.

HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 through 12.

The disclosed invention relates to a method and system for determining weight information in a vehicle weight classification

system. At least one sensor generates a signal indicative of weight, and that weight signal is used to determine timing information. Thereafter, weight information is determined from the timing information.

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A method of determining weight information in a vehicle weight classification system having at least one sensor that generates a signal indicative of weight and a controller that communicates with the sensor, comprising the steps of:

(A) generating a signal indicative of weight;

(B) determining timing information from the signal of step (A); and

(C) determining the weight information from the timing information of step (B), using the controller.

The references relied on by the examiner are:

Coia	3,824,584	July 16, 1974
O'Neill	4,144,525	Mar. 13, 1979
Wilkinson	4,257,034	Mar. 17, 1981
Gagnon	5,810,392	Sept. 22, 1998

Claims 1 through 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gagnon in view of Coia, O'Neill and Wilkinson.

Reference is made to the briefs (paper numbers 19 and 22) and the answer (paper number 21) for the respective positions of the appellants and the examiner.

OPINION

We have carefully considered the entire record before us, and we will reverse the obviousness rejection of claims 1 through 12.

Gagnon uses a plurality of strain gauge sensors 20 to determine the weight of someone sitting in an automobile seat (Figures 8 through 10; column 5, lines 44 through 53). A signal from each sensor is passed through an amplifier to a microprocessor that determines the weight placed on the seat (Figure 11; column 6, lines 56 through 63; column 7, lines 5 through 9).

We agree with the examiner (answer, page 4) that "it is self-evident to the ordinary practioner [sic, practitioner] that Gagnon would inherently need some way to convert the analog strain gage sensor signal into a digital form that the digital controller can use in order for the system disclosed in Figure 11 of Gagnon to be operative." We additionally agree with the examiner (answer, page 5) that "a commonly used technique in the A/D converter art to change an analog signal into a digital one was to compare the unknown analog signal with a ramp reference signal to produce a pulse-width modulated square wave output; Examples of these types of A/D converters are shown by the

examples of Coia, O'Neill, and Wilkinson (which shows this type of A/D conversion technique being used in a digital controller on board an automobile)."

Based upon the teachings of the references, the examiner concludes (answer, page 5) that "[s]ince the device of Gagnon needs an A/D converter to even be operative, it would have been obvious to one of ordinary skill in the art to use a commonly used A/D converter circuit design, such as the type show [sic, shown] by Wilkinson, in the system of Gagnon motivated by the circuit's known suitability for its intended use."

As indicated supra, we agree with the examiner that Gagnon needs an A/D converter for proper operation. We do not, however, agree with the examiner that Gagnon needs an A/D converter configured as in either one of Coia, O'Neill or Wilkinson. We find that the output from the primary reference to Gagnon is a weight value whereas the outputs from all of the secondary references are not weight values. The examiner's proffered reasoning of "the circuit's known suitability for its intended use" does not satisfactorily explain why the skilled artisan would modify Gagnon's weight value input to the microprocessor with a time impulse signal in Coia (Abstract; column 1, lines 6 through 9), a digital signal and a remainder signal in O'Neill

(Abstract; column 1, lines 45 through 55) or a digital word in Wilkinson (Figure 3H; Abstract). The only satisfactory explanation is that the examiner used the appellants' disclosed and claimed invention as a guide to secondary references that compare a ramp signal with an analog signal.

In summary, the obviousness rejection of claims 1 through 12 is reversed because we agree with the appellants' argument (brief, page 9; reply brief, page 2) that the examiner has resorted to impermissible hindsight to formulate an obviousness rejection.

DECISION

The decision of the examiner rejecting claims 1 through 12 under 35 U.S.C. § 103(a) is reversed.

REVERSED

KENNETH W. HAIRSTON Administrative Patent Judge	)	
ERROL A. KRASS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
ALLEN R. MACDONALD Administrative Patent Judge	)	

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