

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(2) is not binding precedent of the Board.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. 38

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte THEODORE W. NYE, ALLEN J. BRONOWICKI,  
RICHARD E. WYSE, GEORGE R. DVORSKY,  
NICHOLAS R. STEFFEN and CLAUDE I. KANSAKU

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Appeal No. 1997-3670  
Application No. 08/541,799

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ON BRIEF

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Before HAIRSTON, KRASS and FLEMING, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from claims 1-38, all of the claims pending in the  
application.

The invention is directed to a system and method for controlling strain in a foundation member using a pre-formed modular control patch assembly having sensor and actuator piezoelectric elements. A programmed digital compensator stabilizes operation of the assembly and the foundation member to which it is applied.

Representative independent claim 1 is reproduced as follows:

1. A control unit for controlling strain in a foundation member, the control unit comprising an assembly being a pre-formed patch containing a base, a piezoelectric sensor and a piezoelectric actuator located in operative relative relationship, means for placing the assembly in operative relationship with the foundation member whereby the sensor detects a strain in the foundation member and whereby the actuator imparts a strain-inducing force to the foundation member, means for connecting control electronics in operative relationship with the assembly, and the control electronics including a programmable digital compensator, the compensator having means for periodically storing and updating an input list of most recent input values and an output list of most recent output values, and means for determining a new output value as a weighted algebraic sum of selected ones of the input and output values of the input and output lists.

The examiner relies on the following references:

Lazarus et al. (Lazarus)	5,374,011	Dec. 20, 1994 (filed Nov. 13, 1991)
Mendenhall et al. (Mendenhall)	5,424,596	Jun. 13, 1995 (filed Oct. 05, 1992)
Barrett	5,440,193	Aug. 08, 1995 (filed Apr. 07, 1993) <sup>1</sup>

Claims 1-38 stand rejected under 35 U.S.C. § 112, first paragraph as relying on a

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<sup>1</sup> The filing date may go back as far as Feb. 27, 1990, depending on the new matter introduced by its continuation-in-part parent application but there is no argument or issue as to the availability of Barrett as a prior art reference.

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specification which “as originally filed, does not provide support for the invention as is now claimed.” (answer, page 3) In other words, the rejection under 35 U.S.C. § 112, first paragraph, is based on the written description portion of 35 U.S.C. § 112.

Claims 1-37 stand rejected under 35 U.S.C. § 102 as anticipated by any one of Mendenhall, Barrett or Lazarus.

Reference is made to the briefs and answers for the respective positions of appellants and the examiner.

#### OPINION

Turning first to the rejection under 35 U.S.C. § 112, it is the examiner’s position that the original disclosure has no support for the now claimed “means for periodically storing...and means for determining...the input and output lists” and “digitally programming a compensator...for implementing a difference equation whereby sequential outputs...to permit control of the foundation member.” [answer, page 3].

In order to determine compliance with the written description requirement of 35 U.S.C. § 112, first paragraph, the inquiry to be made pertains to whether the disclosure (specification, drawings, claims) as originally filed reasonably conveys to the

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journeyman practitioner in the art that the inventor had possession at that time of that which he now claims. In re Wertheim, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976). Literal support in the disclosure for the terms of the claims challenged by the examiner is not necessary in order to show such possession. In re Wright, 866 F.2d 422, 425, 9 USPQ2d 1649, 1651 (Fed. Cir. 1989); In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983); In re Herschler, 591 F.2d 693, 700-701, 200 USPQ 711, 717 (CCPA 1979); In re Lukach, 442 F.2d 967, 969, 169 USPQ 795, 796 (CCPA 1971).

While we sympathize with the examiner's position since the clarity of the disclosure leaves a bit to be desired in terms of a disclosure of "means for periodically storing...and means for determining...the input and output lists," our review of pages 23-24 of the original specification finds us in agreement with appellants that there is adequate support for the cited claimed limitations, although, in our view, just barely.

Since a difference equation example is given at page 23 and it is explained that the "difference terms contain variables representing previous history..." artisans would have recognized this as a periodic storing and updating of values since it appears reasonable that a knowledge of "previous history" would imply that there is a periodic

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storing and updating of values in order to obtain such a history. Since page 24 indicates that the difference equation represents an output  $Y_n$  for an input  $X$ , it is reasonable to infer that one is keeping track of input and output values, or “lists.” Accordingly, it appears to be a reasonable conclusion that, at the time of filing the present application, appellants had possession of a compensator for periodically storing and updating an input list of most recent input values and an output list of most recent output values. Clearly, based on the equation shown at page 23, and discussed at pages 23-24 of the specification, appellants were in possession at that time of a determination of new output values as a weighted algebraic sum of selected ones of the input and output values of the input and output lists.

With regard to the claimed “digitally programming a compensator...for implementing a difference equation whereby sequential outputs...to permit control of the foundation member,” even the original claims [see original claim 1] recited and disclosed a “programmable digital compensator” included in the “control electronics” recited to be in “operative relationship with the assembly.” Since an original claim is its own support, it is clear that there is adequate support for digitally programming a compensator to permit control of the foundation member. The only question to be

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resolved is whether there is adequate support for the programming of the compensator “for implementing a difference equation..,” as recited in independent claim 23. It is our view that adequate support for this claim limitation is provided by the disclosure at pages 23-24 of the original specification since a typical difference equation is described thereat wherein it is described that the “algorithm itself can be changed” and that a RAM is “programmable to vary the coefficients [of the difference equation] as necessary.” Accordingly, it is clear that the programmable digital compensator is employed for implementing the difference equation.

For the foregoing reasons, we will not sustain the rejection of claims 1-38 under 35 U.S.C. § 112, first paragraph.

We now turn to the rejections under 35 U.S.C. § 102.

We will not sustain any of the rejections under 35 U.S.C. § 102 because the examiner has clearly failed to present a prima facie case of anticipation regarding the claimed subject matter.

Although given ample opportunity to do so and faced with a request in our remand of Nov. 18, 1999 to show specific correspondence of the reference disclosures to the instant claimed elements if the prior art rejections were maintained, the examiner has clearly failed to show how every claimed element is met by the applied references

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and has not even explained at all how the Barrett and Lazarus references are relevant to the claimed subject matter. With regard to Mendenhall, the examiner gives a bare bones “example” of how this reference is applied against instant claim 1 [pages 3-4 of the answer of Jan. 3, 2000] but does not explain how the cited elements and portions of Mendenhall are specifically applied against the claim although the examiner was explicitly requested to do so in our remand. Moreover, the statement of rejection under 35 U.S.C. § 102 never comes to grips with the programmable digital compensator or the “means for determining” limitations of the claims. The examiner’s sole mention of the compensator limitation is in the response section of the latest answer [page 5] and rather than show a correspondence of the claimed elements to anything shown by the applied references, the examiner merely states that a programmable digital compensator “is seen to read on any computer control of these structures. Computer control is taught by each of the references.” This is a far cry from specifically pointing out where the claimed elements are taught by the applied references and even if one assumes, arguendo, that such a computer control is taught, in general, by the references, the examiner has not pointed out how such a computer control is functionally equivalent to the control claimed or how it interrelates to other elements in the manner claimed by appellants.

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Accordingly, we make no determination that none of the applied references may or may not be applicable to the instant claimed subject matter but only that the examiner has not established a prima facie case of anticipation of the claimed subject matter since the examiner has either ignored specific claim limitations or cavalierly brushed the limitations aside by asserting them to “read on any computer control.”

We have reversed the rejection of claims 1-38 under 35 U.S.C. § 112 and we have reversed the rejection of claims 1-37 under 35 U.S.C. § 102.

The examiner’s decision is reversed.

REVERSED

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

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