

**THIS OPINION IS NOT BINDING PRECEDENT OF THE BOARD**

Paper No. 66

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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THOMAS A. GENISE, RONALD K. MARKYVECH  
and JAMES R. McREYNOLDS

Junior Party  
(Application 08/666,164)

v.

THOMAS DESAUTELS, EDWARD M. BACON  
and STEVE M. WEISMAN

Senior Party,  
(Patent No. 5,573,477)

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Patent Interference No. 104,834

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Before LEE, MEDLEY and TIERNEY, Administrative Patent Judges.

LEE, Administrative Patent Judge.

**Decision on Preliminary Motions**

Introduction

On April 17, 2003, we heard oral argument on junior party Genise's preliminary motions 1, 2 and 3, and senior party Desautels' preliminary motion 1. Upon conclusion of that oral argument and just prior to our making of a bench ruling on all motions, counsel for Genise withdrew its preliminary motion 2 which asserted unenforceability of Desautels' involved patent based on "alleged" inequitable conduct. We then proceeded, at oral argument, to rule as follows:

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(1) Genise's preliminary motion 1 was denied; (2) Genise's preliminary motion 3 was denied; and (3) Desautels' preliminary motion 1 was granted. Counsel for the parties were advised that a written opinion in support of the bench ruling would follow within a month or two.

This is our written decision, re-stating the bench ruling, and our opinion in support thereof.

Genise's Preliminary Motion 1 is **denied**.

Genise's Preliminary Motion 3 is **denied**.

Desautels' Preliminary Motion 1 is **granted**.

#### Background

1. This interference was declared on April 26, 2002.
2. Junior party Genise is involved in this interference on the basis of its application 08/666,164.
3. Senior party Desautels is involved in this interference on the basis of its Patent No. 5,573,477.
4. There is a single count in this interference, i.e. Count 1.
5. Count 1 is defined as claim 17 of Desautels or claim 48 of Genise.
6. At the time of declaration of this interference, Genise's claims 48, 49, 50 and 53 were designated as corresponding to the count.
7. At the time of declaration of this interference, Desautels' claims 17-20 were designated as corresponding to the count.

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8. Genise's involved application was filed on June 19, 1996, and was accorded, with respect to the count of the interference, benefit of application 08/649,830, filed April 30, 1996, which issued as Patent No. 5,735,771.

9. Desautels' involved patent is based on application 08/508,155, filed July 27, 1995.

10. The subject matter at issue in this interference concerns a method of operating the transmission of a motor vehicle to set or place an engine parameter at its zero torque value.

11. The significance of the zero torque parameter value is that when the value is achieved, the transmission of the motor vehicle is free to be shifted to neutral without engagement of a clutch.

12. Independent claim 17 of Desautels reads as follows:

17. A method of operating a vehicle drive comprising the steps of:

a. providing an engine, an engine parameter control, a multi-speed transmission driven by an output shaft of said engine, said transmission being provided with several selectively actuated speed ratios, a manual stick shift for change speed ratios in said transmission;

b. predicting a zero torque parameter value for said engine based on system variables;

c. modifying said engine parameter by said engine control to achieve said zero torque value; and

d. manually moving said transmission out of engagement to a neutral position.

13. Dependent claim 19 of Desautels reads as follows:

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19. A method as recited in claim 17, wherein said engine parameter is adjusted above and below said zero torque value as a function of time.

14. The parties have stipulated to the level of ordinary skill in the art, i.e., a person having at least an undergraduate degree in mechanical engineering and between 3-5 years of practical experience with vehicle drive systems. (Exhibit 1007, ¶ 4)

### Discussion

#### A. Genise's Preliminary Motion 1

In this preliminary motion, Genise asserts that claims 17-20 of Desautels are unpatentable over prior art. Specifically, Genise asserts that claims 17, 18 and 20 of Desautels are each anticipated by Patent No. 4,593,580 ("Schulze" Exhibit 2004), and that claim 19 of Desautels is unpatentable for obviousness over the combined teachings of Schulze and Patent No. 4,850,236 ("Braun" Exhibit 2005). Each of claims 18, 19, and 20 depends directly from claim 17 and thus includes all the recited features of claim 17. 35 U.S.C. § 112, fourth paragraph.

Anticipation is established only when a single prior art reference discloses, either expressly or under the principles of inherency, each and every element of the claimed invention. In re Spada, 911 F.2d 705, 707, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990); RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed.Cir. 1984). See also In re King, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986); Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984). Anticipation can be found when a claim feature at issue is inherent or otherwise implicit in the pertinent reference. Standard Havens Products v. Gencor Industries, 953 F.2d 1360, 1369,

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21 USPQ2d 1321, 1328 (Fed. Cir. 1991). The prior art reference must either expressly or inherently describe each and every limitation in a claim. Verdegaal Bros., Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987).

Genise appears to have the wrong idea as to what constitutes anticipation. On page 15 of its brief, Genise states that “[e]ven if a reference does not explicitly teach every element of a claim, it nonetheless anticipates that claim if it discloses the claimed invention ‘such that a skilled artisan could take its teachings in combination with his own knowledge of the particular art and be in possession of the invention.’” To the extent that Genise adopts some kind of an obvious-to-combine notion for determining anticipation under 35 U.S.C. § 102, that is improper. At issue is what one with ordinary skill in the art would understand as the subject matter disclosed, not what one with ordinary skill in the art may assemble or put-together based on that disclosure. Genise cites to In re Graves, 69 F.3d 1147, 1152, 36 USPQ2d 1697, 1701 (Fed. Cir. 1995), cert. denied, 116 S.Ct. 1362 (1996), indicating that Graves cites, in turn, to In re LeGrice, 301 F.2d 929, 133 USPQ 365 (CCPA 1962) and In re Donohue, 766 F.2d 531, 533, 226 USPQ 619, 621 (Fed. Cir. 1985). But the reliance on LeGrice and Donohue is misplaced. What was being discussed in those cases concerns the principle that a prior art reference cannot anticipate a claimed invention if its disclosure is not “enabling” as to what was being taught, and a judicially imposed requirement that aside from describing what is being claimed, an anticipatory reference must also “enable” one with ordinary skill to possess the invention from the perspective of making and using it. That an anticipatory prior art reference’s disclosure must be enabling as to

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the claimed invention does not dispense with the fundamental requirement that the claimed invention must first be described in the prior art reference.

As for the case In re Graves, *supra*, it appears to support Genise's position by stating as follows:

Even assuming, however, that the dissent's construction of claim 4 is correct, Rockwell nevertheless anticipates claim 4, even if it does not specifically disclose simultaneous monitoring of the output points, if simultaneous or parallel monitoring is within the knowledge of a skilled artisan. [Citations to In re LeGrice and In re Donohue omitted.]

It is evident that the above-quoted portion of In re Graves constitutes only dicta and thus is not controlling. Moreover, to the extent that In re Graves approves the idea of going beyond the four corners of an anticipatory reference as would be understood by one with ordinary skill in the art, that is contrary to a plethora of precedent already identified above. Note also Glaxo, Inc. v. Novopharm, Ltd., 52 F.3d 1043, 1047, 34 USPQ2d 1565, 1567 (Fed. Cir. 1995), which states that a claim is anticipated only when a single prior art reference discloses each and every limitation of the claim and that the disclosure need not be express but may anticipate by inherency where it would be appreciated by one with ordinary skill in the art. In that context, the "appreciation" refers to that which is inherently described in the reference, not something in addition thereto.

In the context of Genise's preliminary motion 1, we focus on this feature of claim 17:

**predicting a zero torque parameter value for said engine based on system variables**

The key term is "predicting." On pages 17-18 of its brief, Genise states:

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Only involved dependent claim 19 recites the torque break routine of the '477 [Desautels] patent in which a zero torque load value is determined, and then the engine is controlled to "dither" above and below the zero torque load value. **The remaining involved '477 [Desautels] patent claims broadly recite "determining a zero torque" value**, and consequently these claims read right on the prior art system described in the background section and on the Schulze patent. [Emphasis added.]

We have carefully examined claims 17, 18 and 20 of Desautels and do not see any one of them as broadly reciting "determining a zero torque" value. As is quoted above, claim 17 recites predicting a zero torque parameter value for said engine based on system variables and claims 18 and 20 each depends from claim 17.

The prior art system described in the background section of Desautels' specification involves achieving a zero torque load by measuring the actual torque. Desautels' specification describes the placement of a torque meter as being costly and prone to frequent repairs and the measurement of actual zero torque as difficult to accomplish. In that regard, Desautels' specification, in column 1, lines 58-67, states:

One prior system proposed achieving a zero torque load by measuring the actual torque, and controlling the engine to attempt to reach a zero torque load. This proposed system would be too complex to be practical. The placement of the torque meter would be costly and lead to frequent repairs. Moreover, an exact measurement of the zero torque value would be difficult to utilize, as it changes with time. Finally, this proposed system does not allow an operator the option of not using the torque-breaking feature and relying upon clutch operation.

On page 18 of its brief, Genise does not cite to any portion of the Schulze patent as describing determining a zero torque value. Even assuming that Schulze discloses determining a zero torque value, however, Genise has not explained why that would be the same as "predicting" a zero torque value as is recited in claim 17 of Desautels.

In the context of Desautels' specification, "predicting" is not used in any non-conventional or extraordinary way. Desautels' specification does not define any special definition for the term. Accordingly, the word's ordinary meaning in the English language applies. The word "predict," according to Merriam-Webster's Collegiate Dictionary, tenth Edition (1999), means "foretell on the basis of observation, experience, or scientific reason." Predictions are not always fulfilled, because they are just predictions made before the event. The actual event may well turn out to be somewhat different. That is precisely how the specification of the Desautels patent makes use of the term "prediction." In column 4, lines 20-27, the Desautels specification describes as inefficient, impractical, and taking a long time, prior art which attempted to measure the torque load actually being applied in order to achieve a zero torque load, and states in contrast to the prior art that the present invention achieves torque elimination by predicting what an actual zero torque engine parameter should be. In column 4, lines 28-33, the Desautels specification states:

The predicted zero torque value is calculated based upon several vehicle operation variables weighted by constants. The determination of the constants can be achieved by real world testing of the particular model that is to incorporate the electronic control unit, and could vary with the engine transmission or other system components.

Note also Figure 2 in Desautels' specification. In Figure 2, the solid horizontal line in the graph depicts the predicted zero load value and the dashed horizontal line depicts the actual zero load. It is evident from the figure that the actual zero load is not necessarily the same as the predicted zero load value. Much depends on the effectiveness of the formula for making the prediction.



It is evident that in the context of the Desautels specification, measuring the actual torque to determine the zero torque value does not constitute predicting the zero torque value. Indeed, it is for overcoming the difficulties in measuring the actual torque that Desautels has proposed instead to “predict” the zero torque value by calculations based on system parameters instead of actually measuring the zero torque value. In that regard, note the discussion of prior art contained in column 1, lines 58-64.

With regard to the claim feature of “predicting” a zero torque parameter value for said engine based on system variables, Genise states on page 20 of its brief, in lines 11-13:

In response to the operator input in the Schulze system, as detected by sensor 32, the engine control predicts a zero torque value to achieve zero torque load between the engine and transmission base[d] on several system variables. [EX 2004, col. 2, lines 44-48].

We have reviewed the cited portion of Schulze and do not find any teaching therein about “predicting” the zero torque in the sense of anticipating what it is ahead of time or in advance. The entirety of that portion of Schulze cited by Genise to meet the claim feature of predicting a zero torque parameter value, i.e., column 2, lines 44-48 of Schulze, is included within the paragraph reproduced below from lines 40-52 of column 2 of Schulze (the text cited by Genise is printed in italics and in bold):

The regulating device 1 is designed in such a manner that on commencement of the shifting process, i.e., when the operator contacts the shift lever of the variable-speed transmission as detected by a sensor 32, the *power control element is first adjusted through the control motor 2 in a manner whereby the actual driving torque of the engine  $Md_{actual}$  becomes zero, so that neither a positive (tractive) or negative (braking) torque of the engine is present. In this condition, since the* desired speed still coincides with the actual speed of

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the engine, the engaged gear of the multiple gear ratio transmission can be disengaged smoothly and noiselessly.

The description cited by Genise specifies that the power control element is adjusted in a manner whereby the actual driving torque of the engine  $Md_{\text{Actual}}$  becomes zero. But just how the adjustment takes place is not explained in the above-quoted text. Nor has that matter been explained, much less demonstrated, by Genise in its preliminary motion 1. Is the adjustment made by first “predicting” a zero torque value which may or may not turn out to be the actual zero torque value, or is it not? Is there just a series of randomly generated parameter values without meaningful ties to the actual zero torque parameter value, or is there not? Is the engine control adjusted continuously until, perhaps by luck, zero torque parameter value is achieved, or is it not? Genise assumes much from the four lines of generic disclosure quoted above. Genise does not cite to any other portion of the specification of Schulze to indicate how the adjustment to actual zero torque is accomplished. Genise offers no explanation on why it could not be done in the manner described in the background portion of Desautels’ involved patent as follows (column 1, lines 58-60):

One prior system proposed achieving a zero torque load by measuring the actual torque, and controlling the engine to attempt to reach a zero torque load.

Genise must establish, by offering proof, that Schulze describes a system that “predicts” the zero torque parameter value, and not just assume that it does. Even if the theory is based on inherent disclosure, inherency must be established and explained, not assumed. Also, inherency may not be established by probabilities or possibilities, and the mere fact that a certain thing “may” result from a given set of circumstances is not sufficient to show inherent disclosure.

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Continental Can Co. v. Monsanto Co., 948 F.2d 1264, 1268-69, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991); In re Oelrich, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981).

Furthermore, in light of the indication in the specification of Desautels' involved patent that zero torque can be reached by taking real measurements of the actual torque, with respect to which process predicting the zero torque represents an improvement, it is even more important that Genise explain its position that Schulze discloses predicting a zero torque parameter value. Note also that the several lines of Schulze cited by Genise refers to measuring the actual torque, something Desautels in its specification appears to look upon with disfavor and an eye for improvement by way of Desautels' disclosed invention. We cannot read the mind of party Genise. Neither can party Desautels. Whatever is the reasoning behind Genise's view that Schulze discloses predicting a zero torque parameter value, it has not been revealed by Genise's preliminary motion 1 in a meaningful manner.

Furthermore, claim 17 recites "modifying said engine parameter by said engine control to achieve said zero torque value." The term "said zero torque value" refers back to the above-noted "predicted" zero torque parameter value. Because Genise fails to establish that the Schulze patent describes predicting a zero torque parameter value, it also fails to establish that Schulze describes modifying the engine parameter to achieve the predicted zero torque.

The problem with Genise's motion is lack of persuasion. We do not rule out the possibility that the Schulze reference, if adequately explained, might be read as describing predicting a zero torque parameter value and modifying the engine parameter to achieve the predicted zero torque value. Genise simply has not satisfied its burden of proof. If Genise has a

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meaningful explanation of its position, and explained that rationale in its motion, perhaps Desautels has a complete answer and perhaps not. During oral argument, we gave counsel for Genise two specific opportunities to point out where in Genise's motion is there an explanation of how the Schulze reference meets the predicting feature, aside from the four lines Genise has identified in its motion. Each time, counsel for Genise identified some reference in its motion to party Desautels' specification rather than any discussion of the Schulze reference.

We have read the affidavit of Dr. Edward M. Caulfield (Exhibit 2007), and recognize that ¶ 33 thereof states that all the features in claim 17 of Desautels' involved patent are described "in the Abstract, and col. 2, lines 22-52, and col. 4, lines 19-24 of Schulze." However, Genise's motion does not cite to any part of the affidavit of Dr. Caulfield (Exhibit 2007) in connection with claim 17 of Desautels, and does not at any time cite to ¶ 33 of Dr. Caulfield's affidavit (Exhibit 2007) for any purpose. We decline to consider such evidence to which Genise has not directed our attention and with respect to which Desautels has not had proper notice of its significance in Genise's motion. Genise alone must take responsibility, through discussion in its motion, for presenting evidence in its favor. In any event, even if the testimony in ¶ 33 of Dr. Caulfield's affidavit (Exhibit 2007) is considered, we would not regard that testimony with any creditable level of persuasion, because the testimony is conclusory and lacks any meaningful explanation.

As the moving party, Genise bears the burden of proof by a preponderance of the evidence. 37 CFR § 1.637; see also Kubota v. Shibuya, 999 F.2d 517, 521, 27 USPQ2d 1418, 1421 (Fed. Cir. 1993). Genise may not rely on the opponent Desautels or the board to make its

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case. Without setting forth an explanation or a rationale for its position, Genise deprives Desautels a meaningful opportunity to refute the position taken and leaves the board hanging and very much unpersuaded that Genise is entitled to the relief sought. It is not the role of Desautels as the opposing party or the board as the deciding tribunal to see how the collection of evidence in the record can be mustered or otherwise put together in some way to help party Genise prevail. Genise must direct us to the evidence and explain how the evidence helps to establish its position. In summary, on this record Genise has failed to make out a prima facie case that any of Desautels' claims 17, 18 and 20 is anticipated by Schulze under 35 U.S.C. § 102. It is not necessary to consider either the opposition of Desautels or the reply of Genise.

With regard to claim 19 of Desautels which depends from claim 17, Genise asserts that it is unpatentable for obviousness over the combined teachings of the Schulze patent and Patent No. 4,850,236 ("the "Braun patent"). The Braun patent is relied on by Genise to meet the further claim feature expressly recited in dependent claim 19, i.e., "wherein said engine parameter is adjusted above and below said zero torque value as a function of time." The deficiencies of Schulze with regard to the claim features of (1) "predicting" a zero torque parameter value, and (2) modifying the engine parameter to achieve the predicted zero torque parameter value, are not cured by Genise's reliance on the disclosure of the Braun patent. Accordingly, the combined teachings of the two references still do not result in the subject matter of Desautels' claim 19.

For the foregoing reasons, Genise's preliminary motion 1 is **denied**.<sup>1</sup>

B. Genise's Preliminary Motion 3

By this preliminary motion filed under 37 CFR § 1.633(c)(2), Genise seeks to add a new claim, proposed application claim 144 in its involved application to correspond to the existing count. According to 37 CFR § 1.637(c)(2)(ii), a motion adding a claim to be designated as corresponding to the count must demonstrate that the claim proposed to be added defines the same patentable invention as the count. The definition of what constitutes the same patentable invention is set forth in 37 CFR § 1.601(n):

Invention "A" is the **same patentable invention** as an Invention "B" when Invention "A" is the same as (35 U.S.C. 102) or obvious (35 U.S.C. 103) in view of Invention "B" assuming Invention "B" is prior art with respect to the Invention "A". (Emphasis in original.)

The count in this interference is claim 48 of Genise or claim 17 of Desautels. Thus, the analysis Genise must perform is that given either claim 48 of Genise or claim 17 of Desautels as prior art, proposed new claim 144 would have been at least obvious over, if not anticipated by, that prior art. However, Genise has not performed the proper analysis.

Instead, Genise performs an analysis incorrectly based on the collective or combined teachings of claims 49, 50 and 53 of Genise, and the collective or combined teachings of claims 18, 19 and 20 of Desautels. On page 5 of its brief, Genise states:

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<sup>1</sup> Under 37 CFR § 1.637(a), the prior art asserted by Genise against Desautels would be deemed applicable to Genise's own claims unless Genise in its motion explains why it does not. Genise provided no such explanation. However, because the motion against Desautels' claims is denied, we will not regard as unpatentable Genise's own claims.

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The Count includes claims 49, 50 and 53 of Genise '164 and claims 18-20 of Desautels, which teach:

- predicted value is based at least in part on engine speed (claims 49 / 18);
- engine parameter is adjusted above and below said zero torque value as a function of time (claims 50 / 19);
- predicted value based upon the acceleration of the transmission output speed.

It is based on the above-quoted features of claims 49, 50, and 53 of Genise and claims 18-20 of Desautels that Genise argues that proposed new claim 144 defines the same patentable invention as the count. In lines 16-21 on page 5 of its brief, Genise refers to the above-quoted features of Genise's claims 49, 50, and 53, and Desautels' claims 18-20 and states:

The foregoing teachings of the Count show that the prediction value can be based on a variety of parameters, and provide evidence that the artisan of ordinary skill would have found it obvious to base the predicted value on a change of a predetermined magnitude in shaft speed because this is closely related to engine speed. Furthermore, the artisan of ordinary skill would have been encouraged by the teaching of varying a parameter "as a function of time" to base the predicted value on a change over a predetermined period of time.

The sole count in this interference is claim 48 of Genise or claim 17 of Desautels. The count does not include claims 49, 50 and 53 of Genise or claims 18-20 of Desautels, as alternatives. While the scope of Genise's claim 48 is broad enough to encompass the subject matter of Genise's claims 49, 50 and 53, and the scope of Desautels' claim 17 is broad enough to encompass the subject matter of Desautels' claims 18-20, that does not mean Genise's claims 49, 50 and 53, and Desautels' claims 18-20 can themselves be taken as an alternative of the count. The features in those claims are neither recited in nor required by claim 48 of Genise or claim 17

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of Desautels, which are the two alternatives of the count in this interference. According to 37 CFR § 1.637(c)(2)(ii), Genise must demonstrate that the claim proposed to be added defines the same patentable invention as the count, not that the claim proposed to be added defines the same patentable invention as some combination of claims all of which fall within the scope of the count. There is a very big difference, when regarding the count as prior art to make an anticipation or obviousness analysis, between using Genise's claim 48 or Desautels' claim 17 as prior art, and using anything that falls within the scope of Genise's claim 48 or Desautels' claim 17 as prior art. Furthermore, Genise has gone even a step further in distorting the subject matter of the count as prior art. Specifically, Genise makes a combination of several items within the scope of the count. The end result is that Genise uses the wrong subject matter as the count when making the anticipation and obviousness analysis with respect to the count.

Because Genise has not performed the proper analysis between the proposed new claim 144 and the count which is either claim 48 of Genise or claim 17 of Desautels, Genise's preliminary motion 3 seeking to add proposed new claim 144 to its application to correspond to the count is without merit.

Alternatively, Genise's preliminary motion 3 is also without merit because Genise has failed to demonstrate that its proposed new claim 144 is patentable to Genise, as Genise is required to show by 37 CFR § 1.637(c)(2)(iii). Specifically, Genise has not shown that its proposed new claim 144 has written description in the specification under 35 U.S.C. § 112, first paragraph. To satisfy the written description requirement under 35 U.S.C. § 112, first paragraph, the specification must convey with reasonable clarity to those skilled in the art that, as of the



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filing date of the application, the inventor was in possession of the invention now claimed. See, e.g., Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117, (Fed. Cir. 1991); In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983); In re Smythe, 480 F.2d 1376, 1382, 178 USPQ 279, 284 (CCPA 1973); In re Anderson, 471 F.2d 1237, 1240, 176 USPQ 331, 333 (CCPA 1973). The issue is whether the specification reasonably conveys to the artisan that the inventor had possession at the earlier time of the later claimed subject matter. Ralston Purina Co. v. Far-Mar-Co., 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985).

As compared to claim 48 of Genise or claim 17 of Desautels, proposed new claim 144 adds the following wherein clause: “wherein said predicted value is based on a decrease in input shaft speed of at least a predetermined magnitude over a predetermined period of time.” The entirety of Genise’s submission (Br. at 7) regarding support in the specification for this wherein clause is reproduced below:

Genise now applies the remaining terms (the “wherein” clause) of claim 144 to the disclosure of the application.

The only difference between claim 144 and the Count is the requirement for:

wherein said predicted value is based on **a decrease in input shaft speed of at least a predetermined magnitude over a predetermined period of time.**

The **Steeby** patent is incorporated by reference in the Genise ‘164 application, as stated at page 2, line 22. This requirement is supported verbatim in the disclosure of Steeby at column 6, lines 48-50:

It has been found that **a decrease in engine/input shaft speed of at least a predetermined magnitude over a predetermined period of time** is indicative that the . . .

The “wherein” clause of claim 144, like the requirements (a)-(d) of the claim, is fully in compliance with all requirements of 35 U.S.C. § 112. (Emphasis in original).

Genise’s argument is unconvincing for two reasons. First, while the wherein clause of proposed new claim 144 specifies that it is the predicted value, i.e., the predicted zero torque parameter value, which is based on a decrease in input shaft speed of at least a predetermined magnitude over a predetermined period of time, Genise only shows that there is some disclosure in the Steeby patent, purportedly incorporated by reference, which refers to a decrease in engine/input shaft speed of at least a predetermined magnitude over a predetermined period of time. The link or relationship to the predicted zero torque parameter value as is expressly recited in proposed new claim 144 has not been addressed. We have not been directed to any disclosure, either in the specification of Genise’s involved application or in the Steeby patent, which describes that a decrease in input shaft speed of at least a predetermined magnitude over a predetermined period of time forms or constitutes the basis for predicting the zero torque parameter value. Genise may not disregard that important aspect of proposed new claim 144.

Genise failed to point out in its preliminary motion what, in the context of the Steeby patent, is associated with or indicated by a decrease in engine/input shaft speed of at least a predetermined magnitude over a predetermined period of time, or why that associated or indicated item constitutes prediction of a zero torque parameter value. It is too late for Genise to

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offer an explanation in the reply. The preliminary motion itself must be sufficient to make out a prima facie basis for relief. Here, it does not.

Alternatively, while it is true that the specification of Genise states that the disclosure of the Steeby patent is incorporated by reference, it was only done in a very general sense. The Genise specification (Exhibit 1003) on page 2, lines 19-23, states as follows:

At least partially automated systems wherein engine fuel control, such as engine dither, is utilized to cause non-torque-lock conditions for shifting into neutral without requiring master clutch manipulation are known in the prior art and are disclosed in U.S. Pats. No. 4,850,236 and 5,105,357 [the Steeby patent], the disclosures of which are incorporated herein by reference.

As indicated in the above-quoted text, the Steeby patent's disclosure is incorporated by reference because it discloses dithering the engine to cause non-torque-lock conditions for shifting into neutral without requiring master clutch manipulation. Nothing more specific than that is referenced in the above-quoted text. On such general manner of incorporation, we cannot assume that Genise's inventors recognized and appreciated every single detail that happens to be contained in the disclosure of U.S. Patent Nos. 4,850,236 and 5,105,357. In that regard, note Advanced Display Systems v. Kent State University, 212 F.3d 1272, 1282, 54 USPQ2d 1673, 1679 (Fed. Cir. 2000), in which the Court of Appeals for the Federal Circuit stated:

Incorporation by reference provides a method for integrating material from various documents into a host document – a patent or printed publication in an anticipation determination – by citing such material in a manner that makes clear that the material is effectively part of the host document as if it were explicitly contained therein. [Citation omitted.] **To incorporate material by reference, the host document must identify with detailed particularity what specific material it incorporates and clearly indicate where that material is found in the various documents.** [Citations omitted.] [Emphasis added.]

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It seems abundantly clear that Genise's general manner of incorporation by reference is non-particular and non-specific. As such, the general incorporation by reference is incapable of justifying reliance on the specific disclosures contained within Patent No. 5,105,357 necessary to constitute a written description for the subject matter recited in proposed new claim 144, i.e., the predicted value being based on a decrease in engine/input shaft speed of at least a predetermined magnitude over a predetermined period of time. The manner of incorporation should be specific and particular enough to indicate that the inventors possessed the subject matter subsequently relied on to establish written description support. Here, it is not.

We further agree with Desautels that Genise's preliminary motion 3 is inconsistent with its preliminary motion 1. If the claim corresponding exactly to the count is anticipated by the prior art, as is urged by Genise in its preliminary motion 1, and further if proposed new claim 144 defines the same patentable invention as the count in the sense that claim 144 is unpatentable over the count, as is urged by Genise in its preliminary motion 3, then it would follow that claim 144 is unpatentable over that prior art which anticipates the claim constituting the count. Moreover, since the Steeby patent is relied upon by Genise to supply written description for the feature added by proposed new claim 144, Genise's preliminary motion 3 should at least address patentability over a combination of the prior art asserted by Genise against Desautels and the Steeby patent. However, all of this is inconsequential because we have already denied Genise's preliminary motion 1.

For reasons discussed above, Genise's preliminary motion 3 is **denied**.

C. Desautels' Preliminary Motion 1

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By this motion, senior party Desautels attacks the benefit already accorded junior party Genise to the April 30, 1996, filing date of application 08/649,830 (“the ‘830 application”). To be entitled to benefit of the filing date of an earlier application for purposes of a priority determination under 35 U.S.C. § 102(g), the specification of the earlier filed application must satisfy the requirements of 35 U.S.C. § 112, first paragraph, with respect to at least one embodiment within the scope of the count. Weil v. Fritz, 572 F.2d 856, 865-66 n.17, 196 USPQ 600, 608 n.17 (CCPA 1978); Hunt v. Treppschuh, 523 F.2d 1386, 1389, 187 USPQ 426, 429 (CCPA 1975). Here, because Desautels is attacking the benefit already accorded Genise, the burden is on Desautels to demonstrate that the ‘830 application’s specification does not satisfy one or more requirements of 35 U.S.C. § 112, first paragraph, with respect to an embodiment falling within the scope of the count.

The count in this interference is claim 17 of Desautels or claim 48 of Genise. The two claims read the same and both recite the following steps:

- b. predicting a zero torque parameter value for said engine based on system variables;
- c. modifying said engine parameter by said engine control to achieve said zero torque value.

According to Desautels, the specification of the ‘830 application does not provide an enabling disclosure, and also does not provide a written description, for the two steps identified above.

Desautels acknowledges that the question of enabling disclosure involves a determination of whether the specification would have enabled one of ordinary skill in the art, at the time the application was filed, to make and use the claimed invention without undue experimentation,

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citing Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986). A number of relevant factors for determining whether undue experimentation is required is identified in In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). Desautels' motion, however, fails to set forth and discuss how much experimentation would have been required for one with ordinary skill in the art, after reading the disclosure of the '830 application, to make and use an invention falling within the scope of the count and why that level of experimentation should be deemed undue. The need for some experimentation is not the point. The issue is whether an "undue" amount of experimentation would have been required. In that regard, the substance of Desautels' motion is lacking.

Note that even if a specification does not have written description for a claimed invention, it does not necessarily follow that an undue amount of experimentation would have been required for one with ordinary skill in the art to make and use the claimed invention. It is possible that that which is not described may be easily figured out by one with ordinary skill in the art, without undue experimentation. Without any meaningful analysis in that regard, Desautels has not made out a prima facie case that the specification of the '830 application fails to enable even one embodiment of the invention within the scope of the count.

As for Desautels' attack based on alleged lack of written description, the standard for determining the question of written description under 35 U.S.C. § 112, first paragraph, is whether the specification would convey to one with ordinary skill in the art that the inventors were, at the time of filing of the application, in possession of the subject matter at issue. Vas-Cath, Inc., 935 F.2d at 1563-64, 19 USPQ2d at 1117.

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Desautels states (Motion at 11) that “the Genise ‘830 Application [Exhibit 1003] fails to even toss out the mere germ of an idea with respect to the prediction of a zero torque parameter.”

Desautels also states (Motion at 11):

Instead of describing a technique for predicting a zero torque parameter value for the engine based on system variables and then modifying the parameter to control torque, **Genise merely incorporated by reference, the prior art “forced torque reversal” technique of the Braun ‘236 patent [Exhibit 1004] and the Steeby ‘357 patent [Exhibit 1005]. [Emphasis added.]**

Note lines 22-30 of page 13 of the specification of Genise’s ‘830 application (Exhibit 1003):

Upon receiving the intent-to-shift signal (ITS), the controller 146 will issue commands to the engine controller 112 to relieve torque lock by fuel manipulations and to auxiliary section actuator 116 to preselect the required splitter shift. This will allow easy shifting from the engaged ratio (fourth) into neutral without operator throttle manipulation or clutch disengagement, as well as providing a rapid splitter shift. Engine manipulations to relieve torque lock without requiring clutch disengagement is described in greater detail in aforementioned U.S. Pats. No. 4,850,236 [Braun patent] and 5,105,357 [Steeby patent].

In a different part of the ‘830 application disclosure, i.e., page 2, lines 19-23, the disclosure of U.S. Patent Nos. 4,850,236 and 5,105,357 are incorporated by reference as follows:

At least partially automated systems wherein engine fuel control, such as engine dither, is utilized to cause non-torque-lock conditions for shifting into neutral without requiring master clutch manipulation are known in the prior art and are disclosed in U.S. Pats. No. 4,850,236 and 5,105,357, the disclosures of which are incorporated herein by reference.

Where the disclosure of Genise’s ‘830 application refers to the Braun patent 4,850,236, or to the Steeby patent 5,105,357, the referring language evidently does not mention anything about “predicting” a zero torque parameter value or subsequently modifying the engine parameter to achieve “said” predicted zero-torque parameter value. Rather, the referring language talks only

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about (1) engine manipulations to relieve torque lock without requiring clutch disengagement, and (2) partially automated engine dithering to cause non-torque-lock conditions for shifting into neutral without requiring master clutch manipulation, neither of which necessarily involves predicting the zero torque parameter value ahead of time, in advance, and then modifying the engine control to achieve that predicted value.

For instance, one could manipulate the engine controls or dither the engine parameter over a wide range of values, without focus or target. That cannot reasonably be regarded as predicting what the zero torque parameter value might be. Also, the count requires predicting the zero torque parameter value and then modifying the engine parameter to achieve said value. Even if dithering in general is itself regarded as some kind of prediction, there still would have to be a subsequent modifying step to move toward and achieve the predicted value. Further assuming that the predicting step and the modifying step are both described in the Braun 4,850,236 patent and/or the Steeby 5,105,357 patent, the language employed in Genise's '830 application to incorporate by reference those two patents is not sufficiently specific to bring that particular description into the disclosure of Genise's '830 application for purposes of analyzing the written description requirement under 35 U.S.C. § 112, first paragraph. In a proper incorporation by reference which is relied on for satisfying the written description requirement, the host document must identify with detailed particularity what specific material it incorporates and clearly indicate where that material is found in the incorporated documents. See Advanced Display Systems, Inc. v. Kent State University, 212 F.3d at 1282, 54 USPQ2d at 1679. Here, there is no such identification with detailed particularity. What exists in the host document, i.e.,



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the specification of Genise's '830 application, is only a general reference to engine manipulation and a general reference to engine dithering to cause non-torque-lock conditions. Any detail beyond that has not been referenced.

In any event, neither the Braun 4,850,236 patent nor the Steeby 5,105,357 patent describes predicting a zero torque parameter value or modifying the engine parameter to achieve "said" zero torque value which is, of course, the predicted zero torque value. As is pointed out in Desautels' motion on pages 6-7:

13. The Braun '236 Patent [**Exhibit 1004**] teaches that:

"The controller causes the engine fuel supply to be increased and decreased, possibly repeatedly, while actuators urge the existing engaged ratio jaw clutch assembly toward disengagement, to create a torque break sufficient for disengagement.["] [**Exhibit 1004, Col. 3, lines 5-9**].

"During the forced torque reversal, there will be, for at least an instant, a break in torque transfer across clutch 82-88 allowing disengagement of same. This is sensed at step 5 where a decision is made to proceed with the control sequence only once this disengagement occurs." [**Exhibit 1004, Col. 7, lines 33-38**]. [Emphasis in original.]

We have no reason to conclude that generally increasing and decreasing the engine fuel supply, possibly repeatedly, constitutes a "prediction" of the zero torque parameter value sufficient to meet the predicting step within the count, even if the zero torque parameter value is in fact reached at some time during the repetitive variations. The range can be so large that it is expected to encompass the zero torque value wherever it may be. That, however, cannot reasonably be regarded as a meaningful "prediction" of the value of the zero torque.

With regard to the Steeby 5,105,357 patent, Desautels' motion on page 7 states:

14. The Steeby '357 Patent [**Exhibit 1005**] teaches that:

“According to the present invention, to implement a selected shift, upon sensing conditions indicative of non-jaw clutch torque lock, the manifold 112 is preselected to cause actuator 70 to be biased to shift main transmission section 12 into neutral. This is accomplished by the operator causing a torque break by manually momentarily decreasing and/or increasing the supply of fuel to the engine and/or manually disengaging the master clutch C. [**Exhibit 1005, Col. 6, lines 9-13**].

Again, as is the case with the Braun 4,850,236 patent, we have no reason to conclude that momentarily decreasing and/or increasing the engine fuel supply over a range that is sufficiently large to encompass the precise point of zero torque parameter value constitutes a “prediction” of that value.

With respect to the Braun patent, Genise argues (Motion at 9):

The dithering taught by Braun necessarily includes a prediction of a zero torque parameter (i.e., the fuel supply level around which the fuel supply is varied), and explicitly modifies fuel supply to repeatedly attempt to achieve the zero torque value. Caufield Affidavit No. 2 ¶¶ 9-12.

The argument is rejected. Genise does not point us to any description in the Braun patent of a specific fuel level around which or centered about which the fuel supply is varied. Genise also does not point us to any description in the Braun patent of a specific fuel level which is thought of or otherwise considered as an approximation of the actual zero torque value. Note also that Desautels has, in the context of Genise’s preliminary motion 1, denied that the Braun patent dithers in the vicinity of zero torque. Genise simply has not proven its case.

If there is a predicted zero torque parameter value in the Braun patent, which predicted parameter value is to be achieved, Genise has not articulated what that value is or where that

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predicted value can be found in the disclosure of the Braun patent. While there certainly is disclosure in the Braun patent of dithering, i.e., modifying a parameter value up and down, Genise has not shown that the dithering is centered or targeted about a specific predicted zero-torque parameter value. The apparent aimlessness of the dithering, i.e., not shown to be focused on a target value, undermines Genise's argument that the Braun patent discloses predicting a zero-torque parameter value. It is true that the count requires only the making of a prediction and does not specify a prediction according to any particular algorithm or a prediction having a particular level of accuracy. However, that still would not qualify apparently aimless dithering as a prediction. Even if such dithering is considered as predicting the zero-torque value, there is no activity left to be regarded as modifying the engine parameter to achieve the predicted zero-torque value.

With respect to the Steeby patent, Genise argues (Motion at 8):

Steeby, at column 6, lines 33-59, describes a method for predicting zero torque values. Caulfield Affidavit No. 2, ¶ 19 [EX 2010]. In this section of Steeby, the predicting algorithm is performed by the ECU 106. Steeby, at line 40. The predicting algorithm of Steeby involves calculations with “**predetermined magnitude of decrease in input shaft speed**” and “**predetermined period of time**” (lines 49-50). The particular Steeby prediction algorithm is stored in the “predetermined logic rules” (column 5, lines 37-42) which control the ECU. The Steeby prediction algorithm predicts a zero torque value which will occur when there is a “decrease in engine/input shaft speed of at least a predetermined magnitude over a predetermined period of time” (column 6, lines 49-50). (Emphasis in original).

As is indicated in the above-quoted text, according to the Steeby patent's disclosure the zero torque parameter value will occur when there is a decrease in engine/input shaft speed of at least a predetermined magnitude over a predetermined period of time. That, however, does not set

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forth any specific predicted zero-torque parameter value, only a particular operating condition under which a zero-torque parameter value exists. As such, it is still at least one step short of predicting the zero-torque parameter value itself as is called for by the count.

In any event, Desautels is correct in noting that the ECU 106 in the Steeby patent only determines or confirms that the condition for the existence of zero-torque parameter value has occurred, and does not increase or decrease the engine fuel supply or otherwise control the speed of the engine. (Fourth Declaration of Dr. Gregory W. Davis, Exhibit 1017, ¶ 12). Genise has not pointed us to any portion of the Steeby patent which indicates any role of the ECU 106 in urging or causing the condition under which the zero-torque parameter value exists to occur. Once the ECU 106 verifies that the condition for the existence of a zero-torque parameter value has occurred, no other step remains to modify the engine parameter toward any “predicted” zero torque parameter value as is required by the count. Upon sensing that a zero-torque condition has occurred, the ECU 106 actuates transmission actuators 70 and 96. (Fourth Declaration of Dr. Gregory W. Davis, Exhibit 1017, ¶ 13).

We have reviewed the testimony of Dr. Edward M. Caulfield in his Affidavit No. 2 (Exhibit 2010) in support of Genise’s opposition to Desautels’ preliminary motion 1 and do not find the testimony persuasive. Dr. Caulfield appears to apply an obviousness standard to the issue of written description, which is erroneous. For instance, in Paragraph Nos. 10-12, Dr. Caulfield states the following with regard to the disclosure of the Braun patent:

10. One of ordinary skill in the art would understand that varying the fuel supply from zero fuel to the maximum possible fuel supply level would not be appropriate, and that a range of fuel variation must be selected.

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11. One of ordinary skill in the art would understand to select a range in which the instance of zero torque, described in the Braun '236 patent, would be expected to occur instead of a range in which no zero torque instance would be expected.

12. One of ordinary skill in the art would understand to select a range based on a set point at which a zero torque instance would be expected to occur.

What one with ordinary skill in the art “would know” to do is a very different issue from what the particular inventors of Genise’s ‘830 application had, through the specification of the ‘830 application, conveyed as being possessed by them at the time of filing of the ‘830 application. That one of ordinary skill in the art would know does not mean these particular inventors had known and conveyed the same idea through the specification of the ‘830 application. Dr. Caulfield does not point out anything in the specification of the ‘830 application which indicates that the inventors of that application possessed, at the time of filing of that application, the idea of anticipating just where a zero torque instance would occur and what that zero torque value would be. Dr. Caulfield does not point out anything in the specification of the ‘830 application which indicates that the inventors of that application possessed, at the time of filing of that application, the idea that the range of variation of the fuel supply would be narrowly tailored to a small sub-range co-extensive with the inventors’ expectation of where the zero-torque value would occur. Furthermore, in Paragraph No. 22 of his Affidavit No. 2 (Exhibit 2010) Dr. Caulfield even relied on combining parts of different systems to make a case for satisfying the written description requirement. Similarly, in Paragraph No. 18 of his Affidavit No. 2 (Exhibit 2010) Dr. Caulfield sought to extend the specific disclosure of the Steeby patent by applying an example to other contexts. For these reasons, we do not find Dr. Caulfield’s opinions on what

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one with ordinary skill in the art would know or understand as informative or on point insofar as the written description issue is concerned. The issue of written description concerns what the specification shows as being possessed by these particular inventors, not what would have been obvious to one with ordinary skill in the art to do in light of that specification.

For all of the foregoing reasons, Desautels' preliminary motion 1 attacking the benefit accorded Genise to the April 30, 1996 filing date of application 08/649,830, is **granted**.

Jameson Lee	)	
Administrative Patent Judge	)	
	)	BOARD OF PATENT
Sally C. Medley	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
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