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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* WEIJIA CUI, GARY K. LOWE, and DANIEL H. BLACK

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Appeal 2011-000157  
Application 11/422,903  
Technology Center 3600

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*Before* JAMES P. CALVE, WILLIAM A. CAPP and  
NEIL T. POWELL, *Administrative Patent Judges*.

CAPP, *Administrative Patent Judge*.

DECISION ON APPEAL

## STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134 of the final rejection of claims 1-15 as unpatentable under 35 U.S.C. § 103(a) over Dourra (US 6,022,293 iss. Feb. 8, 2000). We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

## THE INVENTION

Appellants' invention relates to controlling line pressure of hydraulic fluid in an automatic transmission. Spec. 1, para [0001]. Claim 1, reproduced below, is illustrative of the subject matter on appeal.

1. A method of carrying out variable line pressure control of hydraulic fluid in an automatic transmission, the method comprising the steps of:

using a solenoid valve to adjust variable line pressure;

updating an open-loop duty cycle table with temperature dependent duty cycle values when the transmission is under closed-loop line pressure control; and

applying the updated open-loop duty cycle table to drive the solenoid valve when the transmission is under open-loop line pressure control.

## OPINION

Appellants argue claims 1-15 under a single heading. App. Br. 6. We select claim 1 as representative of the group. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2011). Claims 2-15 stand or fall with claim 1.<sup>1</sup>

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<sup>1</sup> With respect to references to claims other than claim 1 in Appellants' Brief, statements that merely point out what a claim recites are not considered to present an argument for separate patentability of the claim. 37 C.F.R. § 41.37(c)(1)(vii); *see also In re Lovin*, 652 F.3d 1349 (Fed. Cir. 2011) (Rule 41.37 requires more than recitation of the claim elements and a naked assertion that the elements are not found in the prior art).

The Examiner finds, and Appellants do not dispute, that Dourra controls hydraulic line pressure based on actual operating conditions and provides a control system that can be continuously corrected as a function of target pressure and operating pressure. Ans. 4, citing Dourra, fig. 2, col. 3, ll. 3-12, and col. 7 (chart). The Examiner further finds that, when closed-loop control fails, Dourra reverts to open-loop control. *Id.*

The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to update Dourra with an adaptive open-loop control (like Appellants') in case the closed-loop system encounters a fault. Ans. 4-5. According to the Examiner, the person of ordinary skill in the art would be motivated to so modify Dourra because of the desirable expected results achieved with an adaptively updated open-loop duty cycle table for use when one of the line pressure controls fails in the closed-loop control system. *Id.*

Appellants distinguish Dourra by stating that Dourra relies on static mapped test data to operate its line pressure control valve during open-loop control. App. Br. 7, citing Dourra, col. 10, ll. 17-25. Appellants argue that Dourra expressly teaches away by rejecting the use of values that have been adapted during the system's closed-loop operation. App. Br. 8. Appellants contend that Dourra deliberately selects open-loop values that differ from closed-loop adaptive values, thereby teaching away from the claimed invention. *Id.*

Appellants further contend that Dourra divergently teaches an additive battery voltage compensation term when calculating its open-loop duty cycle. *Id.*, citing Dourra, col. 10, ll. 38-59. Appellants assert that Dourra expressly diverges away from updating open-loop duty cycle values as a function of battery voltage as recited in claims 2 and 13. *Id.*

The Examiner responds by stating that since Dourra already teaches both open-loop and closed-loop control as well as a duty cycle table referenced by both fluid temperature and battery voltage, it would have been obvious to one of ordinary skill in automatic transmission control systems to make use of data derived from closed-loop control to update the look-up table for open-loop control with the expected beneficial result of better control of an automatic transmission. Ans. 8.

Appellants' arguments are not persuasive. Essentially, Appellants merely identify an alleged difference between Dourra and the claimed invention and then conclude that such difference amounts to a teaching away from the claimed invention.<sup>2</sup> However, not every difference between the prior art and the claimed invention amounts to a "teaching away." The obviousness statute, 35 U.S.C. § 103, in pertinent part, expressly contemplates that a patent claim may be unpatentable notwithstanding that there are differences between the prior art and the claimed invention.

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

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<sup>2</sup> Appellants also contend that Dourra's use of static values in its open-loop lookup table teaches away from the duty-cycle averaging steps recited in dependent claims 6, 7, 10, 11 and 14 because interpolating to obtain an intermediate value from a pair of static mapped values is neither the same as, nor renders obvious, averaging two values between the commanding and observing steps obtained at successive points in time as engine speed falls below a predetermined threshold. App. Br. 8-9.

35 U.S.C. § 103(a). In bridging the gap between prior art references and a conclusion of obviousness, the fact finder may rely on the prior art references themselves, the knowledge of those of ordinary skill in the art, the nature of the problem to be solved, market forces, design incentives, the interrelated teachings of multiple patents, any need or problem known in the field of endeavor at the time of invention and addressed by the patent, or the background knowledge, creativity, and common sense of the person of ordinary skill. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418-421 (2007).

Appellants' "teaching away" arguments fail. A reference does not teach away if it merely discloses an alternative design, but does not criticize, discredit, or otherwise discourage investigation into the claimed invention. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed.Cir. 2004). Appellants have not apprised us of any language in Dourra that actually criticizes, discredits, or discourages investigation into the claimed invention. Dourra relies on one set of stored data to facilitate open-loop control, while Appellants' open-loop control uses data derived or obtained from another source. Appellants have failed to apprise us of any error in the Examiner's conclusion that it would have been obvious to one of ordinary skill in automatic transmission control systems to use Appellants' alternative source of data during open-loop control operation of an automatic transmission.

Accordingly, we sustain the Examiner's rejection of claims 1-15.<sup>3</sup>

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<sup>3</sup> To the extent Appellants contend that they separately argued claims other than claim 1, our rationale for and our decision to affirm the rejection of claim 1 applies with equal force to claims 2, 6, 7, 10, 11, 13 and 14.

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Application 11/422,903

DECISION

The decision of the Examiner to reject claims 1-15 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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