



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/696,893	01/29/2010	Juan Manuel Cruz-Hernandez	IMM357 (51851-383714)	1874
34300	7590	12/12/2016	EXAMINER	
Kilpatrick Townsend and Stockton, LLP 1001 W Fourth Street Winston-Salem, NC 27101			MEHMOOD, JENNIFER	
			ART UNIT	PAPER NUMBER
			2627	
			NOTIFICATION DATE	DELIVERY MODE
			12/12/2016	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

eofficeaction@appcoll.com
kts_imm_docketing@kilpatricktownsend.com
ipefiling@kilpatricktownsend.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JUAN MANUEL CRUZ-HERNANDEZ and DANNY A. GRANT

Appeal 2015-000474
Application 12/696,893
Technology Center 2600

Before CAROLYN D. THOMAS, JEFFREY S. SMITH, and
JASON V. MORGAN, *Administrative Patent Judges*.

THOMAS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants seek our review under 35 U.S.C. § 134(a) of the Examiner's Final Rejection of claims 1, 3–12, and 14–24, all the pending claims in the present application. Claims 2 and 13 are canceled. *See* Claim Appendix. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We AFFIRM.

The present invention relates generally to a touch-enabled device that can simulate one or more features in a touch area. *See* Abstract.

Claim 1 is illustrative:

1. A system comprising:
 - a display comprising a plurality of pixels;
 - a sensor configured to detect a touch in a touch area when an object contacts a touch surface;
 - an actuator coupled to the touch surface, the actuator configured to receive a haptic signal and output a haptic effect;
 - and
 - a processor in communication with the actuator and sensor, the processor configured to:
 - determine a position of the touch based on data from the sensor,
 - select a haptic effect to generate based at least in part on the position and a color value associated with one or more of the plurality of pixels associated with the position, the haptic effect selected to simulate the presence of a feature in the touch surface at or near the determined position, wherein selecting the haptic effect comprises determining a haptic effect configured to vary the coefficient of friction of the touch surface, and
 - transmit a haptic signal to generate the identified haptic effect using the actuator.

Appellants appeal the following rejection:

Claim 1, 3–12, and 14–24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Colgate (US 2007/0236450 A1, Oct. 11, 2007) and Tecu (US 6,703,924 B2, Mar. 9, 2004).

RELATED DECISIONS

Appeal No. 2014-000203 (Application No. 12/696,900), mailed January 29, 2016 (Examiner Affirmed).

Appeal No. 2014-000206 (Application No. 12/696,908), mailed January 29, 2016 (Examiner Affirmed).

Appeal No. 2014-000209 (Application No. 12/697,010), mailed

Appeal 2015-000474
Application 12/696,893

January 29, 2016 (Examiner Affirmed).

Appeal No. 2014-000210 (Application No. 12/697,037), mailed
January 29, 2016 (Examiner Affirmed).

Appeal No. 2014-000211 (Application No. 12/697,042), mailed
January 29, 2016 (Examiner Affirmed).

ANALYSIS

Claims 1, 3–12, and 14–21

Issue 1: Did the Examiner err in finding that Colgate and Tecu collectively teach or suggest determining a haptic effect configured to vary the coefficient of friction of the touch surface, as set forth in claim 1?

Appellants contend “Tecu has no disclosure whatsoever of selecting a haptic effect related to friction . . . the word ‘friction’ does not appear in the entirety of Tecu” (App. Br. 15).

The Examiner finds that Colgate, not Tecu, teaches a haptic effect configured to vary the coefficient of friction (*see* Final Act. 4; *see also* Ans. 11). For example, Colgate discloses “[t]he haptic device of the invention is advantageous to create shear force patterns on the touch surface . . . the sheer forces can be modulated as a result of varying friction underneath a relatively moving finger” (¶ 80). Therefore, Appellants’ aforementioned contention about Tecu is non-responsive to the Examiner’s specific findings regarding Colgate, and thus unavailing.

Appellants further contend that “[t]he system disclosed by Tecu, which requires tactile output elements that can be raised or lowered, could not be implemented on the static, glass, surface disclosed by Colgate. . . . the

‘proposed modification would render [Colgate and Tecu] unsatisfactory for [their] intended purpose’” (App. Br. 17).

The Examiner finds that “such a modification of the invention disclosed by Colgate is not a physical modification of the haptic elements . . . such a modification is merely an inclusion of an additional set of logic instructions” (Ans. 13–14). We agree with the Examiner.

An argument that the system is rendered “inoperable for its intended purpose” is a “teach away” argument. *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). The Federal Circuit has held “[a] reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Kahn*, 441 F.3d 977, 990 (Fed. Cir. 2006) (quoting *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994)). Here, Appellants have not shown that one of ordinary skill in the art would be discouraged from combining Tecu’s teaching of a haptic effect associated with a color value with Colgate’s method. Therefore, we find unavailing Appellants’ contention that the proposed modification would render Colgate and Tecu unsatisfactory for their intended purposes.

Accordingly, we sustain the Examiner’s rejection of claim 1. Appellants’ arguments regarding the Examiner’s rejection of independent claims 12 and 21 rely on the same arguments as for claim 1, and Appellants do not argue separate patentability for the dependent claims, except as noted below (*see* App. Br. 12–18). We, therefore, also sustain the Examiner’s rejection of claims 3–12 and 14–21.

Claims 22–24

Issue 2: Did the Examiner err in finding that Colgate teaches or suggest increasing the coefficient of friction, as set forth in claim 22?

Appellants contend that “Colgate teaches away from” increasing the coefficient of friction because “Colgate specifically states that its actuator cannot increase the coefficient of friction . . . only reduces and does not increase friction” (App. Br. 18, *citing* Colgate ¶ 73).

The Examiner finds that “one of the states disclosed by Colgate corresponds to an increase in the coefficient of friction while another of the states disclosed by Colgate corresponds to a decrease in the coefficient of friction” (Ans. 16). The Examiner further finds that “the piezoelectric actuator disclosed by Colgate receives a signal to cause the piezoelectric actuator to stop movement of the surface which thereby provides maximum friction” (Ans. 17), and “toggling generates a departure from the current amount of friction” (*id.* at 18). We agree with the Examiner.

Although Colgate discloses that “the haptic device only reduces and does not increase friction” (*see* Colgate ¶ 73), the Examiner has shown that the friction can be increased by other means, i.e., by toggling the haptic device “On” and “Off” (*see* Colgate ¶ 101). For example, Colgate discloses that “[t]he haptic device may be used to replace binary controls . . . The ‘On’ state may be represented with a high spatial frequency/rough texture . . . while the ‘Off’ state may be represented by no virtual texture at all” (*id.*). The Examiner finds, and we agree, that this is consistent with Appellants’ Specification which states “[i]f a maximum friction is desired, a ‘zero’ signal may be sent to the piezoelectric actuator to stop movement of the

Appeal 2015-000474
Application 12/696,893

surface” (*see* Spec. ¶ 53). Thus, Colgate, like Appellants’ Specification, discloses an “Off” or stop state that illustrates a maximum friction.

Therefore, we agree with the Examiner that Colgate’s toggling from “On” to “Off” represent an increase in the coefficient of friction of the touch surface.

Accordingly, we sustain the Examiner’s rejection of claim 22.

Appellants’ arguments regarding the Examiner’s rejection of dependent claims 23 and 24 rely on the same arguments as for claim 22. We, therefore, also sustain the Examiner’s rejection of claims 23 and 24.

DECISION

We affirm the Examiner’s 35 U.S.C. § 103(a) rejection of claims 1, 3–12, and 14–24.

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