UNITED STATES PATENT AND TRADEMARK OFFICE

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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 XIN FENG
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Appeal 2018-009011
Application 13/919,492
Technology Center 2600
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Before CAROLYN D. THOMAS, JEREMY J. CURCURI, and
BARBARA A. BENOIT, *Administrative Patent Judges*.

CURCURI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant[1] appeals under 35 U.S.C. § 134(a) from the Examiner's
rejection of claims 1, 3–10, and 12–19. Final Act. 1. We have jurisdiction
under 35 U.S.C. § 6(b).

Claims 1, 4, 5, 7–10, 13, 14, and 16–19 are rejected under 35 U.S.C.
§ 103 as obvious over Nakanishi (US 2010/0238129 A1; Sept. 23, 2010) and
Burrough (US 2010/0156818 A1; June 24, 2010). Final Act. 3–14.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37
C.F.R. § 1.42. Appellant identifies Lenovo (Singapore) PTE. LTD. as the
real party in interest. App. Br. 3.

Claims 3, 6, 12, and 15 are rejected under 35 U.S.C. § 103 as obvious over Nakanishi, Burrough, and Shahoian (US 2008/0062145 A1; Mar. 13, 2008). Final Act. 14–18.

We reverse.

STATEMENT OF THE CASE

Appellant's invention relates to "dynamic tactile feedback that assists users in operating complex touch surfaces (e.g., those including virtual buttons and/or icons and/or lacking distinct physical borders) without encumbering the user with unnecessary tactile feedback such as a fixed landmark." Spec. ¶ 23. Claim 1 is illustrative and reproduced below, with the key limitations emphasized:

1.	An information handling device, comprising:

a touch sensitive surface;

one or more processors;

a memory device storing instructions accessible to the one or more processors, the instructions being executable by the one or more processors to:

detect one or more non-operational touch inputs to a border area dividing two touch sensitive sub-areas within the touch sensitive surface;

map the one or more non-operational touch inputs to a predetermined haptic effect, wherein the predetermined haptic effect is based upon a context determined from an input type of the one or more non-operational touch inputs; and

provide the predetermined haptic effect via a haptic layer of the touch sensitive surface.

PRINCIPLES OF LAW

We review the appealed rejections for error based upon the issues identified by Appellant, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential).

ANALYSIS

THE OBVIOUSNESS REJECTION OF CLAIMS 1, 4, 5, 7–10, 13, 14, AND 16–19
OVER NAKANISHI AND BURROUGH

Contentions

The Examiner finds Nakanishi and Burrough teach all limitations of claim 1. Final Act. 3–5.

In particular, the Examiner finds Nakanishi teaches most limitations of claim 1 including "detect one or more non-operational touch inputs . . . to the touch sensitive surface" as recited in claim 1. Final Act. 4 (citing Nakanishi Figure 9, ¶ 131; Figure 2, Element 262, ¶ 42).

In particular, the Examiner finds Burrough teaches "non-operational touch inputs to a border area dividing two touch sensitive sub-areas within the touch sensitive surface," as recited in claim 1. Final Act. 4 (citing Burrough Figures 6–8B, ¶¶ 74–76).

In particular, the Examiner finds Burrough teaches "wherein the predetermined haptic effect is based upon a context determined from an input type of the one or more non-operational touch inputs," as recited in claim 1. Final Act. 4–5 (citing Burrough Figures 6–9, ¶¶ 74–77). Regarding this finding, the Examiner explains

> Burrough et al. discloses that the haptic elements can include a first type of active button icon 602, haptic active slider icon 604 having mobile slider elements 606, keypad 608 formed of a

number of second type haptic active buttons 610. The examiner
notes that Figures 7 - 8B are based on a first and second type
haptic button icon, where Figures 9A and 9B show a haptic
response for a "slide type" input type that will include a different
haptic profile (See Figures 8B and 9B).

Final Act. 4–5.

The Examiner reasons

it would have been obvious to a person of ordinary skill in the art
to modify the haptic feedback device of Nakanishi et al. with the
haptic profile of Burrough et al. The motivation to modify the
teachings of Nakanishi et al. with the teachings of Burrough et
al. is to help "lead" a user to a predefined area, as taught by
Burrough et al. (Paragraph 76).

Final Act. 5.

Among other arguments, Appellant presents the following principal

arguments:

i.

[Appellant] respectfully submits that the fact that Burrough
teaches that essentially no haptic effect is provided to a boundary
area does not explain why one skilled in the art would combine
such a teaching with the device of Nakanishi which allegedly
teaches that non-operational touch inputs are mapped to a
predetermined haptic effect.

App. Br. 17–18; *see also* App. Br. 19 ("Burrough and Nakanishi are directed

to completely separate problems and therefore are directed to completely

separate solutions."); Reply Br. 19–21.

ii.   "Nakanishi teaches a singular haptic feedback to indicate to the

user (e.g., automobile driver) that the user is outside of a functional zone."

App. Br. 19.

Burrough teaches that haptic effect is quiescent in the space
between controls, Burrough at FIG. 8A, and moreover teaches
use of haptic effect to denote the controls, not the border there-

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between. Thus, Burrough, like Nakanishi, at best teaches that little or no haptic effect is provided between the buttons.

App. Br. 20; *see also* Reply Br. 21–22.

In response, the Examiner explains "the haptic profile of Burrough et al., not just the quiescent state between buttons, is modifying the haptic feedback device of Nakanishi et al." Ans. 18. "[T]he advantage of modifying the haptic feedback device of Nakanishi et al. with the **haptic profile** of Burrough et al. would provide the advantage of helping 'lead' a user to a predefined area." Ans. 19; *see also* Ans. 19–20 ("the evidentiary support for modifying the haptic feedback device of Nakanishi et al. with the **haptic profile** of Burrough et al. is taken straight from Burrough et al.").

The Examiner further explains

> it is clear to see from Figure 6 - 9 and the above disclosure that Burrough et al. intends to have several haptic elements (context determined from the input type) on the same device that will each have their own haptic profile (predetermined haptic effect determined from the input type).

Ans. 21.

Our Review

The key limitations require "detect[ing] one or more non-operational touch inputs to a border area dividing two touch sensitive sub-areas." Further, the key limitations require "map[ping] the one or more non-operational touch inputs to a predetermined haptic effect . . . based upon a context determined from an input type." Thus, the key limitations require a non-operational input to a border area dividing two touch sensitive sub-areas to cause a predetermined haptic effect based upon the context.

The Examiner finds Nakanishi does not teach "detect[ing] one or more non-operational touch inputs to a border area dividing two touch sensitive sub-areas" as recited in claim 1. *See* Final Act. 4; *see also* Nakanishi ¶ 131 ("[T]he vibration control part 207 may vibrate the vibration part 272 with the vibration pattern to notify the operator of the error when the operator presses the point outside of the domain 910."). Thus, Nakanashi does not teach a non-operational input to a border area dividing two touch sensitive sub-areas to cause a predetermined haptic effect based upon the context as required by the key limitations.

Burrough, in Figure 8B, depicts a haptic response as being in its quiescent state when a touch input is in an area dividing two touch sensitive sub-areas. According to Burrough, "in the region between button elements 602, the user's finger would be moving across a portion of surface 126 associated with a quiescent haptic response. By quiescent it is meant that the user would feel little or no haptic effects." Burrough ¶ 76.

Even if Burrough teaches a non-operational touch input to a border area dividing two touch sensitive sub-areas, Burrough does not teach a non-operational input to a border area dividing two touch sensitive sub-areas to cause a predetermined haptic effect based upon the context as required by the key limitations. Thus, we are persuaded by Appellant's argument (ii) that in both Nakanishi and Burrough, no haptic effect is provided between the buttons as required by the key limitations.

Further, regarding the collective teachings of the references, on the record before us, we do not see sufficient reasoning with a rational underpinning as to why the collective teachings of the references would have suggested a non-operational input to a border area dividing two touch

sensitive sub-areas to cause a predetermined haptic effect based upon the context as required by the key limitations.

The Examiner reasons that, when modified based on Burrough, Nakanishi would "help 'lead' a user to a predefined area." Final Act. 5; *see also* Ans. 19–20. This reasoning does not sufficiently explain why a skilled artisan would have provided a non-operational input to a border area dividing two touch sensitive sub-areas to cause a predetermined haptic effect based upon the context as required by the key limitations. Put another way, the combination has the same deficiency as the individual references—we see no explanation on the record as to why a non-operational input to a border area dividing two sub-areas would have provided a haptic response. We only see Burrough's quiescent response to such an input. Thus, we are also persuaded by Appellant's argument (i).

We, therefore, do not sustain the Examiner's rejection of claim 1. We also do not sustain the Examiner's rejection of claims 4, 5 and 7–9, which depend from claim 1.

Independent claim 10 recites the same key limitations. We, therefore, do not sustain the Examiner's rejection of claim 10. We also do not sustain the Examiner's rejection of claims 13, 14, and 16–18, which depend from claim 10.

Independent claim 19 recites the same key limitations. We, therefore, do not sustain the Examiner's rejection of claim 19.

THE OBVIOUSNESS REJECTION OF CLAIMS 3, 6, 12, AND 15 OVER NAKANISHI,

BURROUGH, AND SHAHOIAN

Claims 3 and 6 depend from claim 1. Claims 12 and 15 depend from claim 10. The Examiner's further findings do not cure the deficiency discussed above with respect to claims 1 and 10. *See* Final Act. 14–18.

We, therefore, do not sustain the Examiner's rejection of claims 3, 6, 12, and 15.

ORDER

The Examiner's decision rejecting claims 1, 3–10, and 12–19 is reversed.

REVERSED