

# United States Court of Appeals for the Federal Circuit

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IN RE: MAN MACHINE INTERFACE  
TECHNOLOGIES LLC,  
*Appellant*

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2015-1562

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Appeal from the United States Patent and Trademark  
Office, Patent Trial and Appeal Board in No. 90/012,469.

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Decided: April 19, 2016

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KELLY W. CUNNINGHAM, Cislo & Thomas LLP, Los  
Angeles, CA, argued for appellant. Also represented by  
DANIEL M. CISLO.

JEREMIAH HELM, Office of the Solicitor, United States  
Patent and Trademark Office, Alexandria, VA, argued for  
appellee Michelle K. Lee. Also represented by THOMAS W.  
KRAUSE, FARHEENA YASMEEN RASHEED.

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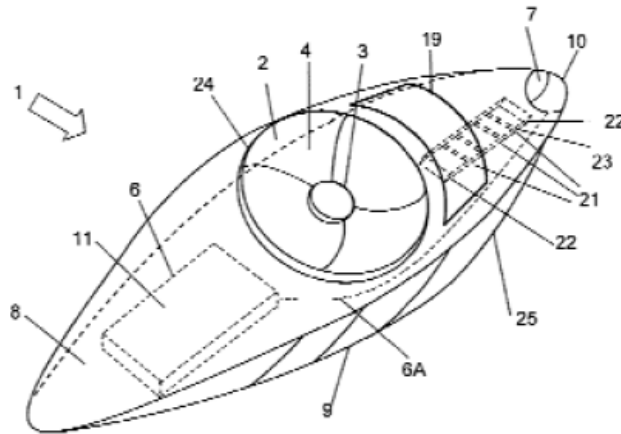
Before LOURIE, O'MALLEY, and STOLL, *Circuit Judges*.  
STOLL, *Circuit Judge*.

Man Machine Interface Technologies (“Man Machine”) appeals the decision of the Patent Trial and Appeal Board (“Board”) affirming the examiner’s rejection of claims 1, 4, 7–10, and 17 of Man Machine’s U.S. Patent No. 6,069,614

(“ ’614 patent”). For the reasons below, we affirm-in-part, reverse-in-part, vacate-in-part, and remand.

### BACKGROUND

Man Machine’s ’614 patent, titled “Man Machine Interface via Display Peripheral” is directed to a remote control device for making selections on television or computer screens. Claim 1 requires that the body of the device be “adapted to be held by the human hand.” Claim 1 also requires a multi-function “thumb switch being adapted for activation by a human thumb.” The thumb switch, which controls cursor movement and object selection on the screen, includes an annular switch (4) including four switches that surround a center switch (3), as shown below in Figure 2A.



’614 patent Fig. 2A.

Claim 1, which is representative of the challenged claims, reads as follows:

1. A remote control device adapted for use by a human to control and select from a screen, the screen including a plurality of choices and a cursor, the remote control device comprising:

*a body adapted to be held by the human hand, the body having a top side and a bottom side;*

*a thumb switch positioned on the top side of the body, the thumb switch being adapted for activation by a human thumb, the thumb switch being adapted to perform multiple functions;*

wherein the thumb switch includes a center switch, an annular switch, and a cover plate, the annular switch including only four switches and the cover plate covers the four switches, wherein the annular switch surrounds the center switch, the annular switch being adapted to operate independently from the center switch;

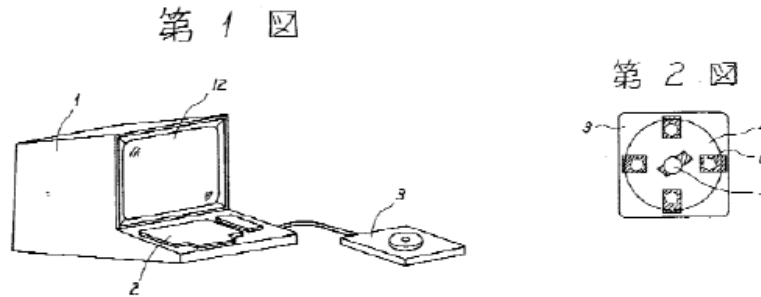
wherein the annular switch is adapted to effect movement of the cursor between the plurality of choices and the center switch is adapted to effect selection of one of the choices identified by the cursor;

electronic means adapted to generate a signal upon activation of one of the switches; and

transmitting means for transmitting the signal from the electronic means.

'614 patent (reexamination certificate) col. 1 ll. 26–45 (emphases added).

A third party requested ex parte reexamination of the '614 patent, which the PTO granted. The examiner rejected the claims as anticipated and obvious, relying primarily on Japanese Patent No. 58-219634 ("JP '634"), which, as depicted in Figures 1 and 2, discloses a desk-bound mouse. JP '634 further discloses a "cursor locking key" surrounded by four "cursor moving keys" operable by a user's finger to control cursor movement on a screen.



JP '634 Figs. 1, 2.

The examiner construed the claim term “adapted to be held by the human hand” in the '614 patent broadly to include various “forms of grasp or grasping by a user’s hand,” such as the grasping of the mouse disclosed in JP '634. Joint Appendix (“J.A.”) 2426. The examiner similarly interpreted the claim term “thumb switch” broadly, as “merely requir[ing] that a switch . . . be capable of being enabled/activated by a thumb but . . . not preclud[ing] another digit, i.e. index finger.” J.A. 2428. Based on this broad claim interpretation, the examiner rejected claim 1 as anticipated under 35 U.S.C. § 102(b) over JP '634 and claims 1, 4, 7–10, and 17 as obvious under 35 U.S.C. § 103 by JP '634 in combination with one or more secondary references.<sup>1</sup> Man Machine appealed to the Board, which affirmed the examiner’s rejections. The Board held that (1) the claim term “adapted to be held by the human hand” did not exclude various forms of grasp by the human hand, including grasping of a desk-bound mouse; and (2) the claim term “thumb switch” did not exclude switch activation by another digit or item such as

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<sup>1</sup> Given the effective filing date of the claims of the '614 patent, the versions of 35 U.S.C. §§ 102 and 103 that apply here are those in force preceding the changes made by the America Invents Act. *See Leahy–Smith America Invents Act*, Pub. L. No. 112–29, 125 Stat. 284, 293 (2011).

a pen “so long as the switch of the device is capable of being enabled by a user’s thumb.” J.A. 10. In so holding, the Board emphasized that “Appellant has not cited to a definition of ‘a body adapted to be held by the human hand’ or ‘thumb switch’ in the Specification that would preclude the Examiner’s broader reading.” J.A. 11. This appeal followed, and we have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

## DISCUSSION

### A. Claim Construction

“[W]e review the Board’s ultimate claim constructions de novo and its underlying factual determinations involving extrinsic evidence for substantial evidence.” *Prolitec, Inc. v. Scentair Techs., Inc.*, 807 F.3d 1353, 1358 (Fed. Cir. 2015) (citing *Teva Pharm. U.S.A., Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841–42 (2015)). In this case, “because the intrinsic record fully determines the proper construction, we review the Board’s claim constructions de novo.” *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1297 (Fed. Cir. 2015). In reexamination, claims are given their broadest reasonable interpretation (“BRI”) consistent with the specification. *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir. 1984). “While the Board must give the terms their broadest reasonable construction, the construction cannot be divorced from the specification and the record evidence.” *In re NTP, Inc.*, 654 F.3d 1279, 1288 (Fed. Cir. 2011).

We have noted that the phrase “adapted to” generally means “made to,” “designed to,” or “configured to,” though it can also be used more broadly to mean “capable of” or “suitable for.” *In re Giannelli*, 739 F.3d 1375, 1379 (Fed. Cir. 2014) (quoting *Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1349 (Fed. Cir. 2012) (referencing dictionaries)). Here, “adapted to,” as used in the ’614 claims and specification, has the narrower meaning, *viz.*, that the claimed remote control device is made or designed to be held in the human hand and the thumb

switch is made or designed for activation by a human thumb.

The '614 specification describes how the body of the remote control device is preferably elongated and rounded to be held in the hand. *See* '614 patent col. 2 ll. 29–31, *id.* col. 6 ll. 5–7, *id.* Figs. 1, 2A. It further describes how the hand “with the help of palm and its fingers grips the Remote control device body.” *Id.* col. 7 ll. 34–35. The specification also discusses that “the index finger switch is positioned on the opposite side of the thumb switch, to naturally align with the index finger position when the remote control device is held in the hand.” *Id.* col. 2 ll. 35–38.

Moreover, the specification expressly distinguishes the remote control device from a desk-bound device like the one disclosed in JP '634. The Summary of the Invention touts that “a user would employ a casual and relaxed attitude as the remote control device is not desk [bound] and therefore position bound by where it is placed on the desk.” *Id.* col. 4 ll. 33–36. Rather, it is “conveniently held in user’s left or right hand,” where it is “thus free to be held and moved around.” *Id.* col. 4 ll. 37–39. Continuing, the Summary of the Invention states that the benefits of the invention include “ease of use as the device is not desk bound, while being used or not used, [and] therefore can be kept and held in more user convenient positions and postures.” *Id.* col. 4 ll. 41–43. The broadest reasonable interpretation of a claim term cannot be so broad as to include a configuration expressly disclaimed in the specification.

Based on the language in the specification, we reject the Board’s unreasonably broad construction and construe “adapted to be held by the human hand” to mean “designed or made to be held by the human hand.” The proper understanding of “adapted to be held by the human hand” would not include gripping a desk-bound

device such as, for example, the desk-bound mouse disclosed in JP '634.

Similarly, we reject the Board's overly broad construction of "thumb switch being adapted for activation by the human thumb." Claim 1 expressly requires a *thumb* switch, not a finger switch; the Board's construction ignores the term "thumb" in "thumb switch." And the claim goes on to further require that the thumb switch be "adapted for activation by a human thumb." '614 patent (reexamination certificate) col. 1 ll. 32–33.

The Board also erred by not interpreting "thumb switch" in light of the specification. This court's cases on BRI make clear that the proper BRI construction is not just the broadest construction, but rather the broadest *reasonable* construction *in light of the specification*. *Proxycorr*, 789 F.3d at 1298 ("A construction that is unreasonably broad and which does not reasonably reflect the plain language and disclosure will not pass muster." (internal quotation marks and citations omitted)). Here, the Summary of the Invention states that the thumb switch is a "slightly bigger than thumb size circle or oval that is contoured to the contours of a thumb." '614 patent col. 2 ll. 3–5. The specification repeatedly refers to the multi-function switch as a "thumb switch." *See, e.g., id.* col. 6 ll. 13–17, 29–65. The specification further states that the multi-function thumb switch is sized "such that it enables a human thumb to activate by pushing one or other of the switch's functions without physically separating the thumb from the multi-function switch." *Id.* col. 5 l. 67 – col. 6 l. 4. And the specification repeatedly refers to pressure applied to the thumb switch as "thumb pressure." *See, e.g., id.* col. 2 ll. 8–13, 14–26, *id.* col. 8 ll. 44–49. Activation of the switch by another finger is simply not contemplated by the '614 patent's written description.

The Board's broad construction of "thumb switch being adapted for activation by a human thumb" as being merely capable of activation by a human thumb is unrea-

sonable in view of the specification's clear teaching that the patentee intended a narrower meaning. As we have explained, "[a]bove all, the broadest reasonable interpretation must be *reasonable* in light of the claims and specification." *PPC Broadband, Inc. v. Corning Optical Commc'ns RF, LLC*, No. 2015-1364, 2016 WL 692369, at \*5 (Fed. Cir. Feb. 22, 2016). Thus we reject the Board's unreasonable construction, instead construing "thumb switch being adapted for activation by a human thumb" in view of the specification to mean "thumb switch being made or designed for activation by a human thumb."

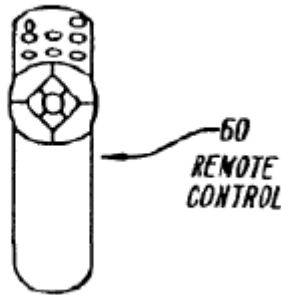
### B. Anticipation

A patent is invalid for anticipation under 35 U.S.C. § 102 if a single prior art reference discloses each and every limitation of the claimed invention. *Schering Corp. v. Geneva Pharm.*, 339 F.3d 1373, 1377 (Fed. Cir. 2003). JP '634, teaching a desk-bound device with a switch activated by a user's palm or finger, does not disclose the properly construed claim limitations "adapted to be held by the human hand" and "thumb switch being adapted for activation by a human thumb." Because the Board's anticipation rejection was based on erroneous claim constructions and the rejection is not supported under the proper constructions, we reverse the Board's finding that JP '634 anticipates claim 1 of Man Machine's '614 patent.

### C. Obviousness

The examiner also rejected the claims as obvious over JP '634 combined with one or more prior art references. The only combination before us on appeal is U.S. Patent No. 5,594,509 ("Florin") in view of JP '634, so we limit our review to that combination. As depicted below in Figure 1, Florin discloses a hand-held remote control device with a thumb switch that is used to select images on a screen.





Florin Fig. 1 (in part).

As the examiner properly found, Florin discloses a remote control body that is held by a human user. Florin also teaches a center button activated by a human thumb. While Florin's thumb switch may not include the claimed "annular switch including only four switches and the cover plate cover[ing] the four switches," JP '634 discloses an annular switch made of four switches covered by a cover plate that controls cursor movement. A1720–21. The examiner relied on evidence from the request for reexamination showing a motivation to combine Florin and JP '634: "In the same field of endeavor of interactive cursor controls, . . . the combination of JP '634 with Florin is no more than a known base system (Florin) combined with a known improvement . . ." J.A. 1721–22. Man Machine, however, did not introduce or rely on objective indicia of nonobviousness. See Oral Argument at 3:53–4:28, available at <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2015-1562.mp3> (conceding that patentee did not rely on objective considerations of nonobviousness).

Obviousness is a question of law based on underlying factual findings that are reviewed for substantial evidence, including what a reference teaches and whether there would have been sufficient motivation to combine the prior art. *In re Baxter Int'l, Inc.*, 678 F.3d 1357, 1361 (Fed. Cir. 2012). Even under the proper, narrower con-

struction of “adapted to be held by the human hand” and “thumb switch adapted for activation by a human thumb,” substantial evidence supports the Board’s factual findings underlying its obviousness determination. Based on these factual findings, we agree that claims 1, 4, 8, and 10 would have been obvious over the combination of Florin and JP ’634. Therefore, we affirm the obviousness rejection made in view of Florin and JP ’634.<sup>2</sup>

#### CONCLUSION

For the reasons above, we reverse the Board’s anticipation rejection based on improper claim constructions. Even as properly construed, however, we affirm the Board’s determination that claims 1, 4, 8, and 10 would have been obvious over Florin in view of JP ’634. We vacate and remand the obviousness rejections of claims 7, 9, and 17 for proceedings consistent with this opinion, and in particular, for determination of whether those claims would have been obvious under the correct claim constructions.

#### **AFFIRMED-IN-PART, REVERSED-IN-PART, VACATED-IN-PART, REMANDED**

#### COSTS

No costs.

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<sup>2</sup> We cannot consider the obviousness rejections of claims 7, 9, and 17 because neither party introduced those arguments on appeal besides challenging the claim constructions on which they are based. Accordingly, we vacate those rejections and remand for the Board to consider the obviousness rejections of claims 7, 9, and 17 in view of the correct claim constructions.