

# United States Court of Appeals for the Federal Circuit

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IN RE EDWARD K. Y. JUNG and LOWELL L.  
WOOD, JR.

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2010-1019

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Appeal from the United States Patent and Trademark Office, Board of Patent Appeals and Interferences in application Serial No. 10/770,072.

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Decided: March 28, 2011

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ROBERT G. STERNE, Sterne, Kessler, Goldstein & Fox, PLLC, of Washington, DC, argued for appellants. With him on the brief were JON E. WRIGHT and BYRON L. PICKARD. Of counsel on the brief were CLARENCE T. TEGREENE, S. CRAIG ROCHESTER, and ROY P. DIAZ, Intellectual Ventures, Management, LLC, of Bellevue, Washington.

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Before GAJARSA, LINN, and DYK, *Circuit Judges*.

LINN, *Circuit Judge*.

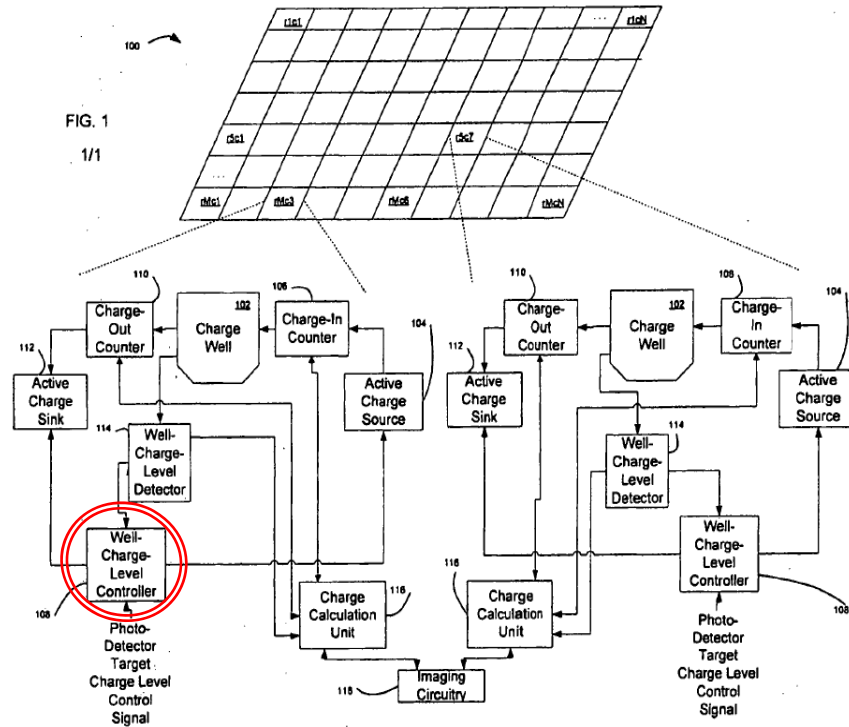
Edward K.Y. Jung and Lowell L. Wood, Jr. (collectively, “Jung”) appeal the decision of the Board of Patent Appeals and Interferences (“Board”) sustaining the invalidity of all but five claims of U.S. Patent Application No. 10/770,072 (“’072 application”) for anticipation or obviousness. *Ex parte Jung*, No. 2008-3711 (B.P.A.I. Nov. 21, 2008) (“*Decision*”), *reconsideration denied*, *Ex parte Jung*, No. 2008-3711 (B.P.A.I. July 7, 2009) (“*Reconsideration*”). Because the examiner properly established a prima facie case of invalidity, and because the Board did not act improperly as a “super-examiner,” this court *affirms*.

#### BACKGROUND

On January 20, 2004, Jung filed the ’072 application directed to a photo-detector array system for transforming light inputs into electrical signals. The relevant claims are as follows:

1. A system comprising:
  - a photo-detector array having a first charge well;
  - a first charge pump operably coupled with the first charge well; and
  - a first charge counter operably coupled with said first charge pump.
4. The system of Claim 1, further comprising:
  - a first well-charge-level controller operably coupled with said first charge pump.
5. The system of Claim 4, wherein said first well-charge-level controller operably coupled with said first charge pump further comprises:
  - a processor configured to control said first charge pump utilizing at least one of a proportional, integral, and derivative control.

'072 application at 12. The '072 application also included Figure 1, showing a photo-detector array, 100, and its components:



*Id.* Fig. 1 (graphic emphasis added). The dispute centers around the well-charge-level controller, designated 108 and circled in Figure 1 above. The application describes the functioning of the well-charge-level controller as follows:

Well-charge-level controller 108 typically gains knowledge of the detected accumulated charge level of charge well 102 from an output of well-charge-level detector 114. Well-charge-level detector 114 relatively continuously senses the level of charge in charge well 102 and generates the output indicative of that charge in a

form appropriate to well-charge-level controller 108.

*Id.* at 5. Jung noted that “[t]hose having ordinary skill in the art will appreciate that the specific devices and processes described herein are intended as merely illustrative of their more general counterparts.” *Id.* at 3.

On September 14, 2005, the examiner issued a first office action, rejecting all claims of the '072 application for anticipation or single-reference obviousness over U.S. Patent No. 6,380,571 (“Kalnitsky”). The examiner’s rejections as to claims 1, 4, and 5 are set out below:

Regarding Claim 1, Kalnitsky et al. teach (see Fig. 2, 3, 6) a system comprising a photo-detector array (array of pixel cells (200)-see Col. 2, lines 55-61) having a first charge well (214) (see Col. 5, lines 5-15), a first charge pump (320) (see Col. 5, lines 28-33, 37-39) operably coupled with the first charge well, and a first charge counter (330) (see Col. 6, lines 56-67) operably coupled with said first charge pump (through controller (340)) (see Col. 5, lines 28-33, 37-39 and Col. 6, lines 38-44, 64-66). . . .

Regarding Claim 4, Kalnitsky et al. teach a first well-charge-well [*sic*] controller (340) operably coupled with said first charge pump (see Col. 5, lines 37-39 and Col. 6, lines 38-44, 64-66).

Regarding Claim 5, Kalnitsky et al. teach said first well-charge-level controller operably coupled with said first charge pump further comprises a processor (340) (since the controller 340 performs “determina-

tion” and/or “look-up”, it is a processor- see Col. 6, lines 38-40 and Col. 7, lines 8-9) configured to control said first charge pump utilizing at least one of a proportional, integral, and derivative control (charge pump control is proportional to the read out current- see Col. 6, lines 56-66).

Office Action of Sept. 14, 2005, at 2-3 (“*Initial Office Action*”).

Jung responded on January 17, 2006, amending claims 1 and 5 to incorporate the first well-charge-level controller limitation from original claim 4 and cancelling original claim 4. In his remarks, Jung block-cited Kalnitsky and concluded that the “**well-charge-level controller**’ recitations of [amended] Claim 1 are **different from** the ‘**controller 340**’ recitations of [Kalnitsky], and thus **controller 340** of [Kalnitsky] does not match the ‘**well-charge-level controller**’ of herein-amended Independent Claim 1.” Reply to Office Action of Sept. 14, 2005, at 11-13 (“*Initial Response*”) (emphases in original).

The examiner finally rejected all the pending claims. The examiner noted Jung’s argument that Kalnitsky does not teach the first well-charge-level controller, but found it unpersuasive. The examiner again equated the well-charge-level controller of Claim 1 with Kalnitsky’s “controller 340.” Office Action of Apr. 18, 2006, at 10-12 (“*Final Office Action*”).

Jung appealed to the Board. For the first time, he explained that the well-charge-level controller must “more or less continuously adjust[] the control signal inputs of active charge source 104 and/or active charge sink 112,” as disclosed “in one exemplary embodiment.” He argued that Kalnitsky disclosed only a reset controller, which did

not “more or less continuously adjust the control signal inputs,” and therefore did not anticipate.

The Board rejected Jung’s argument, noting that “[t]here is no dispute that Kalnitsky describes a system including a reset controller[,] . . . the question is whether the claim language encompasses those structures.” *Decision* at 6. Kalnitsky’s reset controller reads the amount of light in the charge well by directing the oscillator “to output a series of positive electrical pulses to lower the potential on the p-well 214 (charge well), monitor[] the potential level, and stop[] the pulses when the potential reaches the level required” for a new charge to build in the well from the light input. *Id.* at 8. In other words, the process by which the amount of charge in the charge well is read also resets the charge. The Board, consistent with the examiner, construed the element “well-charge-level controller” as “any component that controls the charge level of a well,” and noted that Jung “had the opportunity to amend the claims to achieve more precise claim coverage, i.e., to limit the claim to the ‘exemplary process’ disclosed in the Specification, but did not do so.” *Id.* at 9. Because the specification explicitly noted that the examples were merely exemplary and were made only to show how the invention “typically” worked, the Board determined that the claim language could not be limited to those embodiments. Therefore, the Board concluded that Kalnitsky’s reset controller met the claim language and thus anticipated claim 1.

The Board, however, reversed the examiner’s rejection of claim 5, which included the further limitation that the well-charge-level controller include “a processor configured to control said first charge pump utilizing at least one of a proportional, integral, or derivative control,” because “[t]he examiner has not sufficiently explained how [Kalnitsky’s disclosure] amounts to proportional control, as that term is used in the control art.” *Id.* at 13.

Jung filed a request for rehearing on November 21, 2008, asserting that the Board erred in failing to address whether the examiner had set forth a prima facie rejection.

The Board rejected Jung's argument, noting that the prima facie case requirement is merely a procedural mechanism of allocating the burden at different stages of the prosecution, and that the ultimate disposition on anticipation was properly addressed by the Board's initial decision. Jung timely appealed to this court, which has jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

#### DISCUSSION

Because Jung's arguments on appeal are directed only to the "well-charge-level controller" limitation of independent claim 1 (as amended), this court's discussion is limited to that issue.

Jung argues on appeal that (1) the examiner failed to make a prima facie case of anticipation, and (2) the Board acted as a "super-examiner" by performing independent fact-finding and applying an improperly deferential standard of review to the examiner's rejections. For the reasons set forth below, this court rejects both arguments and affirms the Board's decision, holding claims 1-3, 7-11, 13-21, and 24-29 invalid for anticipation. This court does not address the Board's rejection of claim 12 for obviousness because Jung has not presented that issue for appeal.

#### I. Examiner's Prima Facie Case

Jung frames this appeal much as he framed the appeal to the Board, as a challenge only to the existence of a prima facie case of invalidity, as distinct from the ultimate conclusion of invalidity. Jung admitted at oral argument that if this court finds that the examiner



properly made out a prima facie case, then the decision of the Board should be affirmed. Oral Arg. at 3:02-3:25, *available* at [http://oralarguments.cafc.uscourts.gov/Audio/mp3/2010-1019\\_1142010.MP3](http://oralarguments.cafc.uscourts.gov/Audio/mp3/2010-1019_1142010.MP3). In other words, Jung does not challenge the *substance* of the prima facie rejection, but only the *procedure*.

As this court has repeatedly noted, “the prima facie case is merely a procedural device that enables an appropriate shift of the burden of production.” *Hyatt v. Dudas*, 492 F.3d 1365, 1369 (Fed. Cir. 2007) (citing *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). *See also In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984). The Patent and Trademark Office (“PTO”) satisfies its initial burden of production by “adequately explain[ing] the shortcomings it perceives so that the applicant is properly notified and able to respond.” *Hyatt*, 492 F.3d at 1370. In other words, the PTO carries its procedural burden of establishing a prima facie case when its rejection satisfies 35 U.S.C. § 132, in “notify[ing] the applicant . . . [by] stating the reasons for [its] rejection, or objection or requirement, together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application.” 35 U.S.C. § 132. That section “is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection.” *Chester v. Miller*, 906 F.2d 1574, 1578 (Fed. Cir. 1990).

Jung appears to argue that the prima facie case requirement is procedurally flawed unless the examiner provides an

[o]n-the-record showing of a reasonable, broadest reasonable claim construction and . . . a record showing that there is evidence bridging the facial differences between that reasonable claim construction

and the purported anticipatory reference  
which here was this Kalnitsky controller.

Oral Arg. at 8:15-8:50.

This court disagrees. Both the initial and final office actions specifically put Jung on notice that the examiner considered Jung's "first well-charge-level controller" to read on Kalnitsky's "controller 340," citing the specific columns and lines in Kalnitsky that explained the functionality of "controller 340." See *Initial Office Action*, at 3 ("Kalnitsky et al. teach said first well-charge-well [*sic*] controller (340) operably coupled with said first charge pump (see Col. 5, lines 37-39 and Col. 6, lines 38-44, 64-66)."); *Final Office Action*, at 10-11 ("Regarding Applicant's arguments on Claim 1, Applicant argues that Kalnitsky et al. do not teach the first well-charge-level controller as recited in the claim language. Examiner asserts that Kalintsky [*sic*] et al. teach a well-charge-level controller 340 as recited in the claim language, as the controller 340 controls the well-charge-level of the charge well" (citing relevant parts of Kalnitsky)). The examiner clearly conveyed his understanding that Jung's well-charge-level controller was broad enough to encompass Kalnitsky's "controller 340," and the specific column and line cites to the prior art reference would have put any reasonable applicant on notice of the examiner's rejection.

Indeed, Jung's understanding of the examiner's rejection was manifested by his response to the office actions. Jung did not respond by asserting that there was no on-the-record claim construction, or that he did not understand the examiner's rejection. Instead, Jung first responded by arguing simply that his "well-charge-level controller" was "different from the 'controller 340' recitations of [Kalnitsky]." *Initial Response* at 13. Whether Jung's claims read on Kalnitsky is precisely the substan-

tive basis upon which the examiner rejected Jung's claims.

Moreover, Jung has failed to articulate what gaps, in fact, exist between his "well-charge-level controller" and the "controller 340" in Kalnitsky that needed filling by examiner explanation. It is of course true that every element of the claim must be present, either explicitly or inherently, in a single prior art reference for that reference to anticipate. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). But whether there are gaps between the prior art and the rejected claims is a substantive issue, and Jung's assertion that the examiner must "bridg[e] the facial differences" between the claims and the prior art begs the substantive question of whether there are facial differences to be bridged.

Jung contends that establishing a prima facie case requires more than just notice under § 132, and that whatever else may be required is part of the examiner's burden in rejecting any claim. According to Jung, until that burden is met by the examiner, the rejection need not be challenged on the merits by the applicant. This court disagrees and sees no reason to impose a heightened burden on examiners beyond the notice requirement of § 132. Jung, without any basis, would have this court impose additional prima facie procedural requirements and give applicants the right first to procedurally challenge and appeal the prima facie procedural showing before having to substantively respond to the merits of the rejection. Such a process is both manifestly inefficient and entirely unnecessary. Indeed, Jung's arguments as to why the examiner failed to make out a prima facie rejection are the same arguments that would be made on the merits.

There has never been a requirement for an examiner to make an on-the-record claim construction of every term

in every rejected claim and to explain every possible difference between the prior art and the claimed invention in order to make out a prima facie rejection. This court declines to create such a burdensome and unnecessary requirement. “[Section 132] does not mandate that in order to establish prima facie anticipation, the PTO must explicitly preempt every possible response to a section 102 rejection. Section 132 merely ensures that an applicant at least be informed of the broad statutory basis for the rejection of his claims, so that he may determine what the issues are on which he can or should produce evidence.” *Chester*, 906 F.2d at 1578 (internal citation omitted). As discussed above, all that is required of the office to meet its prima facie burden of production is to set forth the statutory basis of the rejection and the reference or references relied upon in a sufficiently articulate and informative manner as to meet the notice requirement of § 132. As the statute itself instructs, the examiner must “notify the applicant,” “stating the reasons for such rejection,” “together with such information and references as may be useful in judging the propriety of continuing prosecution of his application.” 35 U.S.C. § 132. Here, the examiner’s discussion of the theory of invalidity (anticipation), the prior art basis for the rejection (Kalnitsky), and the identification of where each limitation of the rejected claims is shown in the prior art reference by specific column and line number was more than sufficient to meet this burden.

## II. Board Review of Prima Facie Case

Jung also argues that the Board’s review was improper. After accusing the Board of improperly framing the issues before it as questions of claim construction and the reasonableness of the examiner’s decision, Jung himself frames the issue as whether the “examiner failed to reasonably construe the claims and failed to adduce any evidence or syllogistic argument in support of Kalnit-

sky's alleged teachings, as opposed to Kalnitsky's bare disclosure." Br. of Jung, at 33-34. This court is at a loss to identify the distinction between these two framings of the issue. What a reference "teaches" is reflected in its "disclosure," and, as discussed above, the extent to which the examiner fails to provide "syllogistic argument" to fill the gaps between the prior art and the rejected claims is dependent upon a substantive showing that such gaps exist in the first place. Moreover, whether the examiner "reasonably construe[d] the claims"—which this court agrees is the true issue in this case—is without doubt a substantive issue, which the Board properly addressed in its opinion.

In no way do the Board's actions here put applicants in a position in which they are "required to speculate as to the full nature and scope of the rejection and put on a full substantive rebuttal even if the full nature and scope of the rejection remains unformed and unclear." Br. of Jung, at 38-39. Such concerns only arise where the examiner has failed to meet the notice requirement of § 132. Here, as discussed above, Jung was on notice of the full basis for the examiner's rejection.

Jung does not and could not argue that the Board's decision constituted a new ground of rejection such that further prosecution was required. Instead, Jung argues that the Board assumed the position of "super-examiner" in making, among all its findings of facts, the following five findings relevant to the "well-charge-level controller" limitation. These findings of fact are reproduced verbatim below:

4. In describing the "well-charge-level controller," the Specification describes example processes and implementations and how the controller "typically" works (*see, e.g.*, Spec. 5:6-19).

5. The Specification does not precisely or deliberately define or limit the identity of a “well-charge-level controller.” (Spec. in its entirety.)

6. The controller of Kalnitsky controls the level of charge within a well during a two step process including an image integration step (where light energy is collected and converted to an electrical charge) and a read out/reset step (where the electrical charge is read from the cell and the cell is simultaneously reset for the next integration cycle (Kalnitsky, col. 4, ll. 40-45).

7. During the read out/reset step, the controller 340 directs oscillator 320 to output a series of positive electrical pulses to lower the potential on the p-well 213 (charge well), monitors the potential level, and stops the pulses when the potential reaches the level required for the integration step (Kalnitsky, col. 5, ll.22-39; col. 6, ll. 38-40; col. 6, ll. 64-66).

8. By directing the output of charge pulses, monitoring potential level, and stopping the pulses at a predetermined point, Kalnitsky’s controller 340 controls the charge level within a charge well (p-well 214) (Kalnitsky, col. 5, ll. 22-39; col. 6, ll. 38-40; col. 6, ll.64-66).

*Decision* at 8-9. Two things are immediately apparent from an examination of these findings of fact. First, they are simple factual assertions drawn from either the Kalnitsky reference or the application itself. Second, those assertions sourced from Kalnitsky are substantially

the same, down to the line and column number, as the examiner's objections. The Board merely made explicit in its "findings of fact" the bases for a rejection that would have been apparent to one with even a cursory command of prosecution practice from the examiner's office actions. To assert that the Board's thoroughness in responding to his explanation put it in the position of a "super-examiner" would limit the Board to verbatim repetition of the examiner's office actions, which would ill-serve the Board's purpose as a reviewing body.

It is well-established that the Board is free to affirm an examiner's rejection so long as "appellants have had a fair opportunity to react to the thrust of the rejection." *In re Kronig*, 539 F.2d 1300, 1302-03 (CCPA 1976). *See also In re Kumar*, 418 F.3d 1361, 1368 (Fed. Cir. 2005) ("In calculating the overlapping values, the Board found facts not found by the examiner regarding the differences between the prior art and the claimed invention, which in fairness required an opportunity for response."). Before the examiner, Jung merely argued that the claims differed from Kalnitsky, and chose not to proffer a serious explanation of this difference. The examiner disagreed, and rejected the claims, equating Kalnitsky's controller and the well-charge-level controller in the claims. It was not until he arrived at the Board that Jung explained the difference more thoroughly, implying that his claims should be read as limited to a preferred embodiment wherein the controller "more or less continuously adjust[s] the control signal inputs," in contradistinction to Kalnitsky's reset controller. In response to this argument, the Board further explained the examiner's rejection, noting that nothing in the claims limited the controller to this embodiment. The Board's thoroughness in responding to Jung's delayed explanation did not change the rejection, and Jung had the fair opportunity to respond.

Finally, Jung argues that the Board gave improper deference to the examiner's rejection by requiring Jung to "identif[y] a reversible error" by the examiner, which improperly shifted the burden of proving patentability onto Jung. *Decision* at 11. This is a hollow argument, because, as discussed above, the examiner established a prima facie case of anticipation and the burden was properly shifted to Jung to rebut it. Moreover, even assuming that the examiner had failed to make a prima facie case, the Board would not have erred in framing the issue as one of "reversible error." As recently acknowledged by the Board, it has long been the Board's practice to require an applicant to identify the alleged error in the examiner's rejections, and the Board's actions in this case were entirely consistent with that long-standing practice. *See Ex Parte Frye*, Appeal no. 2009-006013, at 9-10 (B.P.A.I. Feb. 26, 2010) (precedential), *available at* <http://www.uspto.gov/ip/boards/bpai/decisions/prec/fd09006013.pdf> ("The panel then reviews the obviousness rejection for error based upon the issues identified by appellant, and in light of the arguments and evidence produced thereon."). *See also* Oral Arg. at 22:23-24:23, *available at* [http://oralarguments.cafc.uscourts.gov/Audiomp3/2010-1019\\_1142010.MP3](http://oralarguments.cafc.uscourts.gov/Audiomp3/2010-1019_1142010.MP3) (acknowledging that "reversible error" means that the applicant must identify to the Board what the examiner did wrong, but that the Board reviews the examiner de novo, and the examiner retains the burden to show invalidity).

#### CONCLUSION

For the reasons discussed above, this court *affirms* the decision of the Board.

**AFFIRMED.**