

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SIEMENS MOBILITY, INC., GROUND TRANSPORTATION SYSTEMS USA,
INC., and PIPER NETWORKS, INC.

Petitioners,

v.

METROM RAIL, LLC
Patent Owner.

Case No. IPR2024-00947
Patent No. 9,731,738

PETITIONERS' REQUEST FOR DIRECTOR REVIEW

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Petitioners respectfully request that the Director reverse the Board's denial of institution of *inter partes* review under 35 U.S.C. § 325(d). Paper 12 (the "ID").

I. INTRODUCTION

The Board's discretionary denial of institution under Section 325(d) should be reversed for two reasons. First, this case presents an important issue of law and policy; namely, whether the mere inclusion of a patent number in an examiner's search history, with no other mention of the patent in the entire prosecution history, is sufficient to classify the patent as "previously presented art" under the first prong of *Advanced Bionics*.¹ The Board's decision may affect IPR practice well beyond this case and, as such, the Board's erroneous analytical framework should be corrected. Specifically, the Board's finding that Kane—the primary reference for each obviousness ground asserted in the Petition—was previously presented erroneously expands the scope of art made "of record" and considered by the Examiner, effectively sweeping in every reference included in an Examiner's search string regardless of whether the Examiner considered them. This is akin to arguing that any reference in a particular class/subclass was considered by the examiner simply because that class/subclass was searched. Common sense says otherwise.

¹ *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6, 7 (Feb. 13, 2020) (precedential).

Second, the denial of institution reflects an abuse of the Board's discretion due to its clearly erroneous factual finding that Petitioner's asserted Kane/Heddebaut combination is substantially the same as the Knott/Soderi combination overcome during prosecution. In fact, as the Petition explains, Kane (like Heddebaut) expressly discloses the sole limitation the Examiner concluded was missing from Knott and Soderi. The Board appears to have been misled by Metrom's inaccurate chart comparing the Petition's prior art and arguments to those made during prosecution. Metrom's misleading chart omitted Petitioner's position that Kane disclosed the "missing" limitation of claim 1. It is undisputed that Kane was not discussed at all during prosecution. Petitioners sought leave to file a Reply to clarify the record before the Institution Decision was rendered, but the Board summarily denied that request.

II. BACKGROUND

A. Procedural History

The Petition requests *inter partes* review of claims 1–18 of U.S. Patent No. 9,731,738 (EX1001, "the '738 Patent"). Each ground has U.S. Patent No. 6,957,131 ("Kane") as the primary reference, combined with U.S. Patent Publication No. 2006/0151672 ("Heddebaut"). Paper 4 at 2. The Petition explains that Kane "was not cited during prosecution of the '738 Patent." *Id.* at 7, 72-73.

Metrom's Patent Owner Preliminary Response ("POPR") urged the Board to deny institution under Section 325(d). Metrom argued that "Heddebaut *and arguably*

Kane, were considered by the Office during the prosecution of the 738 Patent.” Paper 8 at 7 (emphasis added). But *Kane* was not discussed in any office action or applicant response, nor was it listed as a reference considered by the Examiner or as one submitted in an IDS. Rather, *Kane*’s patent number only appeared as part of a long query in the Examiner’s computer search. *Id.* at 6-7. These facts are undisputed.

Metrom also argued that *Kane* and *Heddebaut* are “substantially the same art” as the *Knott* and *Soderi* references distinguished during prosecution, and that the arguments regarding the respective pairs of references are substantially the same. *Id.* at 10-18. In support, Metrom presented a chart purportedly comparing the “Examiner-Cited Prior Art” (*Knott/Soderi*) to the “IPR-Asserted Prior Art” (*Kane/Heddebaut*). *Id.* at 11-15. However, Metrom’s chart omitted Petitioner’s reliance on *Kane* for element 1H—the only limitation the Examiner determined was not disclosed by *Knott* or *Soderi*. *Id.* For element 1H (*id.* at 14-15), Metrom only quoted Petitioners’ citation of paragraph [0049] of *Heddebaut* and omitted Petitioners’ references to *Kane* concerning claim element 1H. *Heddebaut* was cited in an IDS, but *Kane* was not. Metrom merely cited “Pet. at 24,” ignoring the discussion of *Kane* at page 23 of the Petition. And a review of Petition pages 23-24 related to element 1H reveals the extensive discussion of *Kane* that Metrom failed to acknowledge. Metrom’s chart also misleadingly omitted Petitioners’ citations to *Kane* for elements 1F and 1G. *Id.* at 14.

Metrom’s chart falsely implied that Petitioners were relying primarily on

Heddebaut regarding element 1H, even though Kane is the primary reference in every asserted combination. Paper 4 at 2. But Kane was not considered during prosecution, and its significant disclosures for multiple elements of claim 1 show how different Petitioners' obviousness arguments in the IPR are compared to the arguments made by the Examiner during prosecution.

Given Metrom's unexpected mischaracterization of the prosecution history and Petitioners' arguments, the Petition did not preemptively refute Metrom's misplaced argument that "Petitioner merely swaps in similar references and repeats the same arguments already overcome in prosecution." Paper 8 at 17. Indeed, Petitioners could not have known or reasonably foreseen that Metrom would argue that Kane—which the Examiner never identified as having been considered—was previously presented to the Office, or that it is no more pertinent than the references the Examiner *did* consider. *See* Paper 4 at 6 (quoting Notice of Allowance stating that Soderi did not disclose element 1H), 7 (correctly noting that Kane "was not cited during prosecution of the '738 Patent"), 23 (explaining that Kane satisfies element 1H). Metrom's argument is simply wrong.

In response to Metrom's unexpected—and inaccurate—argument, Petitioners emailed the Board on September 16 requesting leave to file a Reply "to address arguments raised by Patent Owner that the Board should deny institution under 35 U.S.C. § 325(d)." Petitioner's email did not include merits arguments, which are not

permitted in such a communication. *E.g., Kingston Tech. Co. v. CATR Co., Ltd.*, IPR2015-00149, Paper 22, 2 (PTAB June 5, 2015). The Board denied the request, stating: “Both parties have addressed 35 USC 325 in their papers. As such, we do not see a need for additional briefing on this issue.”

On November 19, the Board issued the ID. Without the benefit of any responsive arguments from Petitioners, the Board found that “Heddebaut and Kane were considered during prosecution and the arguments presented regarding Kane and Heddebaut are substantially similar to those adduced during prosecution regarding Knott and Soderi,” and further found that Petitioners had not established material error by the Examiner. Paper 12 at 12-19. Based on those erroneous findings, seemingly based on Metrom’s misleading chart, the Board denied institution. *Id.* at 19.

B. Prior Art Distinguished During Prosecution

During prosecution, the Examiner discussed several prior art references in office actions. Kane, however—which only appeared (via its patent number) as part of a query in an Examiner’s computer search—was never cited or otherwise discussed by the Examiner or Applicant. EX1002 at 186. Heddebaut was cited in an IDS but was never discussed by the Examiner. *Id.* at 108.

Several application claims were rejected as anticipated by U.S. Patent Publication No. 2010/0063656 (“Knott”). *Id.* at 169-78. In response to the rejection, Metrom amended the sole independent claim to require UWB components, and that related

UWB communications include data comprising at least one of a unique ID associated with one of the components, a signal indication, a track number, a track direction, speed, direction of travel, and ***positioning related information***. *Id.* at 224 (emphasis added). The Examiner then rejected the amended claim as obvious in view of Knott and U.S. Patent Publication No. 2013/0138276 (“Soderi”). *Id.* at 245-54.

In response, Metrom further amended the claim “to omit the recitation of ‘positioning related information’ as one of the types of information for the data carried in the communicated signals.” *Id.* at 267-68. The “positioning related information” was the only requirement in the claimed list that the Examiner had found that Soderi disclosed. *See id.* at 246.

The Examiner thereafter issued a Notice of Allowance, stating:

The Examiner agrees with the Applicant’s arguments filed 1/31/2017, in that, Soderi et al. (US 2013/0138276) cannot be said to “communicate UWB signals carrying data pertinent to evaluating vehicle operation compliance, the data comprising at least one of: a unique ID associated with the vehicle mounted control system, a signal indication, a track number, a track direction, speed, and direction of travel,” as recited in claim 16. Soderi’s UWB signals are used to determine the vehicle position, but the signals do not carry one of the above listed data types.

Id. at 279. The ’738 Patent thus was allowed because the references considered by the Examiner did not disclose certain claimed data types being carried by UWB signals.

See Paper 4 at 5-6 (discussing prosecution history).

C. Prior Art Asserted in IPR Petition

The Petition asserts that the sole independent claim of the '738 Patent was obvious in view of Kane and Heddebaut. Paper 4 at 2. The Petition shows that all the limitations of claim 1 are disclosed by Kane and Heddebaut, including that Kane teaches element 1H that requires “UWB signals carrying data pertinent to evaluating vehicle operation compliance, the data comprising at least one of: a unique ID associated with the vehicle-mounted subsystem, a signal indication, a track number, a track direction, speed, and direction of travel.” *Id.* at 12-24. For example, Kane discloses a “medium approach medium” signal: “travel at medium speed through turnouts, crossovers sidings and over power operated switches, then proceed, approaching the next signal at a speed not exceeding the medium speed”). EX1005, 3:29-56.

III. LEGAL STANDARD

In *Advanced Bionics*, the Board established a two-prong framework for analyzing whether discretionary denial of institution is appropriate under Section 325(d):

(1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of [the] first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics at 8.

Director review of an institution decision is limited to decisions presenting (a) important issues of law or policy, or (b) an abuse of discretion. 37 C.F.R. § 42.71(c), (d); *see also Ericsson Inc. v. Intell. Ventures I LLC*, 901 F.3d 1374, 1379 (Fed. Cir. 2018) (stating that the Board abuses its discretion when its decision “is based on an erroneous conclusion of law” or “rests on clearly erroneous fact finding”). Both bases are present here.

IV. THE DIRECTOR SHOULD REVERSE THE BOARD’S DENIAL OF INSTITUTION

A. The Board’s Incorrect Reasoning and Conclusion That Kane Was “Previously Presented Art” Raises an Important Issue of Law and Policy,² and Reflects an Abuse of Discretion

The Board found that the first prong of the *Advanced Bionics* analysis was satisfied because “Heddebaut and Kane were considered during prosecution.” Paper 12 at 17. This finding presents an important issue of law and policy with implications beyond this case because the Board is equating “considering” a patent with including its number in a search box (along with many other reference numbers). In the subject case, the sole mention of Kane in the prosecution history was the inclusion of its patent

² Important issues of law or policy, particularly issues involving discretionary denial under Section 325(d), would benefit from input from the public, so Petitioners request that the Director authorize amicus briefing under 37 C.F.R. § 42.75(g).

number as part of a lengthy search query, tucked in an Examiner's computer search printout along with at least twenty-seven other searches:

S9	24	"20040006413" "20040182970" "20050110628" "20060015224" "20060080009" "4196412" "5437422" "5452870" "6112142" "6609049" "6688561" "6824110" "6845953" "6853888" "6863246" "6865454" "6903658" "6957131" "6996461"	US- PGPUB; USPAT; USOCR	AND	OFF	2015/12/11 12:33
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EASTSearchHistory.14809950_AccessibleVersion.htm[12/11/2015 7:54:39 PM]

EX1002 at 186-88 (S9). The Board's classification of Kane as "previously presented art" conflicts with Board precedent, and thus constitutes an erroneous legal conclusion. Director review should be granted to resolve this conflict and confirm that merely including a reference number in a search query is not tantamount to "previously presented art" and, as such, Kane was *not* "previously presented art." Under the Board's logic, adding the search code "URPN" (to search references that the listed patent cited)³ also means that all the references cited in a patent were also considered. This is not a theoretical question since a URPN code was also used during prosecution.

EAST Search History

"7036774" "7089093" "7236860").PN. OR ("8478463").URPN

Applying the Board's approach would reduce patent quality by preventing consideration of broad swathes of prior art.

³ See <https://www.uspto.gov/sites/default/files/documents/Advanced-search-overview-QRG-Patent-Public-Search.pdf>.

The Petition cites *Bowtech, Inc. v. MCP IP, LLC* to show that the Board has “consistently held that a reference that ‘was neither applied against the claims nor discussed by the Examiner’ does not weigh in favor of exercising discretionary denial under § 325(d).” Paper 4 at 72 (citing *Bowtech, Inc. v. MCP IP, LLC*, IPR2019-00382, Paper 12, 12 (PTAB Aug. 6, 2019)). In the ID, the Board discounts *Bowtech* because it predated the precedential decision in *Advanced Bionics*. Paper 12 at 13. However, post-*Advanced Bionics*, the Board has repeatedly relied on *Bowtech* to find that the first prong of the *Advanced Bionics* analysis is not satisfied when an asserted reference “was neither applied against the claims nor discussed by the Examiner.” *Cisco Sys., Inc. v. NetSocket, Inc.*, IPR2023-00607, Paper 11, 22 (PTAB Sept. 26, 2023); *see also Juniper Networks, Inc. v. Monarch Networking Solutions LLC*, IPR2024-00175, Paper 12, 29 n.9 (PTAB May 8, 2024).

Advanced Bionics does not support the Board’s finding that a reference merely listed in an Examiner’s search printout, with no other discussion of the reference anywhere in the prosecution history, satisfies the first prong of the *Advanced Bionics* analysis. The first prong is satisfied if a petition presents the same prior art previously presented to the Office. *Advanced Bionics* at 7. “Previously presented art includes art made of record by the Examiner” *Id.* at 7-8. The MPEP, however, confirms that an Examiner merely listing a reference in a search string does not make that reference “of record.” To the contrary, the Office has a specific procedure for identifying

references that were considered during prosecution:

All references which have been cited by the examiner during the prosecution, including those appearing in Patent Trial and Appeal Board decisions or listed in the reissue oath, must be listed on either a form PTO-892 or on an Information Disclosure Statement (PTO/SB/08) and initialed. All such reference citations will be printed in the patent.”

MPEP § 1302.12 (9th ed. Rev. 07.2015 Oct. 2015); *see also* MPEP § 707.05 (9th ed. Rev. 07.2015 Oct. 2015) (“Allowed applications should generally contain a citation of pertinent prior art for printing in the patent . . .”). For a reference to satisfy the first prong of the *Advanced Bionics* analysis, that reference should at least appear in the Section 1302.12 Listing of References. Here, the Kane reference is not listed on the PTO-892 or any Applicant IDS. And, even if it had been initialed on an IDS (which it was not), that would “not indicate a substantive evaluation of the asserted art”. *Sci. Design Co. v. Shell Oil Co.*, IPR2021-01537, Paper 7, 25 (PTAB Mar. 18, 2022); *Sci. Design Co. v. Shell Oil Co.*, IPR2022-00158, Paper 7, 25 (PTAB Apr. 4, 2022).

The *Advanced Bionics* analysis “reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.” *Advanced Bionics* at 9. An inherent condition for entitlement to such deference, however, is a showing that the Examiner *did* evaluate the evidence at issue—as would be clear from the reference being identified in the Section 1302.12 Listing of References. *See id.* Here, the Board’s treatment of Kane effectively assumes the Examiner afforded due

consideration to the reference based solely on the listing of its patent number in a search string. But that listing shows only that the Examiner performed certain searches. If the Examiner had considered Kane, it should have appeared in the Section 1302.12 Listing of References. More should be required before essentially barring a challenger from presenting demonstrably pertinent prior art via the IPR process, which is counter to the purpose of IPRs.

B. The Board's Clearly Erroneous Finding that Kane and Heddebaut Are Substantially the Same Art as Knott and Soderi Constitutes an Abuse of Discretion

The Board also abused its discretion by erroneously finding that Kane and Heddebaut are substantially the same art as Knott and Soderi and, consequently, that the Petitioners' arguments regarding Kane and Heddebaut are substantially the same as the Examiner's arguments regarding Knott and Soderi, particularly with respect to the last element of claim 1. *See* Paper 12 at 17 (stating that the Board did not find "any material differences between the references cited in the IPR [Kane and Heddebaut], the arguments made in the IPR, and the references [Knott and Soderi] and arguments presented during prosecution as to claim 1 of the '738 patent").

As discussed above, the Examiner found that Knott and Soderi do not disclose "UWB signals carrying data pertinent to evaluating vehicle operation compliance, the data comprising at least one of: a unique ID associated with the vehicle-mounted subsystem, a signal indication, a track number, a track direction, speed, and direction of

travel.” Paper 4 at 6. The Petition, however, explicitly establishes that “Kane discloses radio-frequency signals carrying data pertinent to evaluating vehicle operation compliance, including at least two of the particular types of content specified in the claim (*i.e.*, a signal indication and a track speed)” and Heddebaut discloses “UWB signals that include data pertinent to evaluating vehicle operation compliance including at least an identifier and a message regarding the identity, speeds, positions, state of the trains and stations.” *Id.* at 23-24. Thus, Kane and Heddebaut are *not* substantially the same art as Knott and Soderi, meaning the arguments regarding these references cannot be the same either.

Additionally, the Board abused its discretion by erroneously finding that the motivations to combine Kane and Heddebaut argued in the Petition are substantially the same art as the motivation to combine Knott and Soderi argued by the Examiner during prosecution. Paper 12 at 16. This error was caused by another misleading chart included in Metrom’s POPR. After arguing that the Kane/Heddebaut disclosures are substantially the same as the Knott/Soderi disclosures for ***claim 1***, Metrom then compared motivations to combine the references in a chart by putting language from an Examiner’s rejection next to a portion of the Petition from the section discussing ***claim 6***. Paper 8 at 17 (citing Pet. at 31). This chart references a motivation to combine Kane and Heddebaut that does not even appear for claim 1 regarding “more accurate positioning information in environments where the GPS positioning disclosed in Kane

may not work, such as in a tunnel,” (*id.* at 17), and omits the detailed motivation to combine arguments for claim 1 that span 4 pages. *See* Paper 4 at 24-27.

The Petition explains how UWB communication performed better underground, that “Kane and Heddebaut both disclose train control systems that would be expected to operate in various environments (including tunnels), and Heddebaut demonstrates that UWB was a known communication technology well-suited for Kane’s ‘radio frequency’ communication between a train and a wayside device.” Paper 4 at 25 (citing Foster J. Peterson’s expert opinion (EX1003, ¶139)). The Petition also explains how UWB had other benefits over other common wireless technologies. *Id.* at 26-27. The claim 6 motivation to combine included in Metrom’s misleading POPR chart addressed UWB positioning instead of UWB communication, and the chart ignores the other motivations to combine for claim 1 involving other benefits of UWB. The arguments regarding motivation to combine Kane and Heddebaut therefore are not substantially the same as the motivation to combine Knott and Soderi argued during prosecution regarding “failsafe, accurate distance measurements.” EX1002 at 172. Director review should be granted to remedy the Board’s erroneous finding to the contrary. *Nokia of Am. Corp. v. Soto*, IPR2023-00680, Paper 18, 7-8 (PTAB Mar. 28, 2024) (finding the Board’s “analysis improperly focuses on the similarity of the claim limitations mapped to the references without also addressing whether the arguments raised in the Petition were substantially similar to the specific arguments previously presented to the

Office”).

C. Alternatively, If Kane *Was* Considered During Prosecution, then the Petition Demonstrated that the Examiner Materially Erred in Concluding that Kane Did Not Disclose Element 1H

Even if Kane is somehow deemed to be “previously presented art,” reversal of the Board’s non-institution decision is still warranted because, contrary to the Board’s finding, the Petition *does* “establish[] error on behalf of the Examiner in a manner material to patentability.” *See* Paper 12 at 19. The Petition shows that claim 1 of the ’738 Patent was allowed only because the Examiner concluded that the prior art of record failed to disclose UWB signals carrying the specific data recited in element 1H (*i.e.*, a unique ID associated with the vehicle-mounted subsystem, a signal indication, a track number, a track direction, speed, and direction of travel). Paper 4 at 6. But the Petition showed beyond reasonable dispute that the combination of Kane and Heddebaut disclosed UWB signals carrying several of the data types required by element 1H (which presumably went unaddressed by the Board due to their reliance on Metrom’s inaccurate chart). *Id.* at 23-24. Thus, if the Director finds that Kane was made “of record,” then the Examiner erred by missing this pertinent disclosure.

V. CONCLUSION

For the reasons discussed above, Petitioners respectfully request that the Director reverse the Board’s denial of institution under Section 325(d) and institute the *inter partes* review.

Dated: December 19, 2024

By: /s/ Joshua H. James

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on December 19, 2024, a true and correct copy of the foregoing Petitioners' Request for Rehearing by the Director was served by electronic mail on the following email address:

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