2023-1622, -1623, -1669, -1670

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

GOOGLE LLC

Appellant

v.

MINDBASEHQ, LLC

Cross-Appellant

Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board, in nos. IPR2021-01251 and IPR2021-01252

COMBINED PETITION OF CROSS-APPELLANT FOR PANEL REHEARING AND REHEARING EN BANC

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September 11, 2025

STATEMENT OF COUNSEL

Based on my professional judgment, I believe the panel decision is contrary to the following decisions of the Supreme Court of the United States or the precedents of this Court: *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318 (2015), *ClearCorrect Operating, LLC v. ITC*, 810 F.3d 1283 (Fed. Cir. 2015); *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372 (Fed. Cir. 2012) (Federal Circuit must review for clear error district court determinations on factual inquiries underlying the obviousness analysis); *Alfred E. Mann Found, for Sci. Research v. Cochlear Corp.*, 841 F.3d 1334, 1341 (Fed. Cir. 2016)' *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996); *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359 (Fed. Cir. 2016), and *Wasica Fin. GmbH v. Cont'l Auto. Sys., Inc.*, 853 F.3d 1272 (Fed. Cir. 2017); *Oatey Co. v. IPS Corp.*, 514 F.3d 1271 (Fed. Cir. 2008).

September 11, 2025 Signature: /s/ James Iaconis

Name: James Iaconis

CERTIFICATE OF INTEREST

I certify that the information below is complete to the best of my knowledge.

September 11, 2025 Signature: /s/ James Iaconis

Name: James Iaconis

1. Represented Entity: MindbaseHQ LLC
2. Real Party in Interest: none
3. Parent Corporations and 10% Stockholders: none
4. Other Legal Representatives: R. Terry Parker, Esq.
5. Related Cases: *MindbaseHQ LLC v. Google LLC*, No. 4:21-cv-03603 (N.D. Cal.), *formerly MindbaseHQ LLC v. Alphabet Inc.*, No. 1:20-cv-24742 (S.D. Fla.)
6. Organizational Victims and Bankruptcy Cases: none

Pursuant to Federal Rule of Appellate Procedure 40(b)(2) and Federal Circuit Rule 40(a)(2), the cross-appellant MindBaseHQ LLC ("Mindbase") respectfully petitions for panel rehearing and rehearing *en banc* of the panel decision dated August 28, 2025.

INTRODUCTION

Mindbase owns the two patents at issue in this consolidated appeal, U.S. Patent No. 6,510,433 B1 ("433 patent") and U.S. Patent No. 6,665,680 B1 ("680 patent") (collectively, the "Challenged Patents"), titled "Database Structure Having Tangible and Intangible Elements and Management System Thereof," with 92 patent claims that were vetted by the United States Patent and Trademark Office and issued in 2003. *See* Appx136-231.

In response to a patent infringement lawsuit from Mindbase, and prior to claim construction in that court case, the appellant Google LLC ("Google") petitioned to invalidate all 92 claims before the Patent Trial and Appeal Board ("Board"). Appx. 2466. Relevant to this petition, Google argued that claims 14-19, 33-40, 43, and 44 of the two patents, were unpatentable because, according to Google, a person skilled in the art would have found these limitations obvious in light of the prior art. *See* Appx 2510. The Board disagreed and ruled that Google failed to prove that claims 14-19, 33-40, and 43-46 of the two patents were

unpatentable. The Board agreed with Google that claims 1-13, 20-32, 41, and 42 were unpatentable. *See* Appx 65.

Google appealed the Board's decision, arguing the Board improperly construed the claim term "a dictionary routine" with respect to claims 14-19 and 33-40. Appx. 2466 & 5547. Those claims contain the phrase "automatically classifying and storing words entered into said database according to said sets and subsets of data elements." The crux of Google's argument is that "automatically classifying and storing" should be interpreted to refer to "*using* a dictionary lookup function, not initially *creating* [the dictionary]." Open. Br. 33. Google also argued that the Board further erred by not considering Google's reply evidence and argument with respect to claims 43-46 of the two patents, which include the term "normalizing." Open. Br. 51.

Mindbase appealed the Board's decision arguing, *inter alia*, that Google's expert declaration proffers conclusory opinions that merely mimic Google's arguments in a hollow attempt to justify its proffered level of ordinary skill in the art and its proffered prior art. *See* Appx2571 ¶ 1. Mindbase pointed to the lack of any substantive evidence or analysis connecting the patents-at-issue with lexicography, linguistics, *or* lexical databases—all of which Google's prior art solely focuses, and none of which are ever even mentioned in the Challenged Patents. *See e.g.* RedBr57-58. Mindbase submitted supplemental legal authority,

Xerox Corp., et al. v. Bytemark, Inc., IPR2022-00624, Director Review Decision (PTAB Feb 10, 2023)(precedential), in which the PTO Director affirmed a PTAB decision denying institution of *inter partes* review based on expert testimony that offered "conclusory assertions without underlying factual support [that] repeated, verbatim, Petitioner's conclusory arguments." *Xerox Corp.*, IPR2022-00624 at 5.

The panel agreed with Google, adopting Google's proposed construction of the claim term "automatically classifying and storing" as referring to merely *using* a dictionary routine as opposed to *creating* a dictionary routine. The panel also found the new evidence and argument submitted in Google's reply should be accepted.

However, the panel's decision conflicts with binding Supreme Court and Federal Circuit precedent by failing to properly defer to the PTAB's factual findings regarding claim construction and the scope of analogous art. Specifically, the panel substituted its own interpretation of the term "dictionary routine" and the scope of "normalizing" without identifying clear error in the Board's factual determinations.

ARGUMENT

I. PETITION FOR PANEL REHEARING

A. The Board's Refusal of Google's Claim Construction Should Have Been Reviewed under the Clear Error Standard.

The Supreme Court has held in *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 332 (2015), that factual findings that underlie claim construction—such as how a person of ordinary skill in the art (POSITA) would understand a term—must be reviewed for clear error. *Id.*; *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372 (Fed. Cir. 2012) (Federal Circuit must review for clear error district court determinations on factual inquiries underlying the obviousness analysis); *Alfred E. Mann Found, for Sci. Research v. Cochlear Corp.*, 841 F.3d 1334, 1341 (Fed. Cir. 2016) (Federal Circuit must review for clear error district court's subsidiary factual findings regarding indefiniteness).

The panel should have employed a clear error standard of review. The Board expressly declined to construe the claim term "a dictionary routine" because, whether these terms are construed in the sense of using a dictionary lookup function, or initially creating the dictionary, Google had not shown by a preponderance of the evidence that the prior art teaches these limitations. *See* Appx. 42. The panel, in the first instance, adopted Google's claim construction and weighed intrinsic evidence in the first instance to conclude that a person skilled in the art would have understood the claim term "a dictionary routine" as meaning "using a dictionary" and not "creating a dictionary." However, Google's proposed construction was based on underlying testimony from Google's expert witness. *See* Appx. 2510-2518. Because Google's proposed claim construction

was based on factual testimony, the panel should have employed the clear-error standard and failed to do so.

B. The Panel Relied on a Cherry-Picked Reading of the Specification and Prior Art

The panel failed to acknowledge that the specifications of the Challenged Patents repeatedly describe the dictionary routine as methods and systems that can actively classify and store data elements, not a preexisting commercial dictionary. Google's proffered prior art relies solely on existing commercial dictionaries such as Merriam and Collins (See, *e.g.*, Appx725-27); the proffered prior art never creates *its own* dictionary. To the contrary, the Challenged Patents never use a commercial dictionary; the Challenged Patents create their own dictionaries for their own proprietary use and for their own proprietary purposes ("Data Element Storage for Multiple Uses The MINDBASE system automatically stores a data element only once in computer memory regardless of how many places the data element is located in a MINDBASE data structure." '433 patent, col. 13:21-25; "All other locations of the single data element are connected to their single storage location...This procedure is applied automatically to all data structures." '433 patent, col. 13:36-40; "MINDBASE will automatically store multiple locations of the same data element at a single location" '433 patent, col. 20:5-7; 25:57-60.

Nor do the Challenged Patents create its own dictionaries in the likeness of commercial dictionaries; the Challenged Patents' "dictionary" links are for the purpose of data element organization in computer storage—not for English language grammatical sentences. See, e.g., RedBr27 ¶ 2. The panel's construction improperly reduced "dictionary routine" to static retrieval, excluding preferred embodiments and violating *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996).

The panel's construction reads out the "automatically classifying" limitation and is contrary to *Oatey Co. v. IPS Corp.*, 514 F.3d 1271 (Fed. Cir. 2008). The prior art does not teach active classification, instead referencing only the prior art's use of commercial dictionaries. As the Board noted, the prior art references Conlon and Miller describe lexical databases and tables, not systems or methods that actively classify and store data elements. RedBr27 ¶ 2.

C. The Panel's Holding Literally Conflicts with Claims 39 and 40

The panel stated, "[W]e now hold [that] the 'dictionary routine' claims can be practiced by *use* of an already-created dictionary, and do not also require the automatic *creation* of a dictionary." (emphasis in original) The panel uses this holding to vacate the Board's decision regarding claims 39 and 40. However, claims 39 and 40 each recite "further comprising the step of generating a dictionary." This express generation of proprietary dictionaries, particularly in the

light of the prior art's total reliance on mere usage of commercial dictionaries and semi-automatic at best, illustrates the error in the panel's holding as it pertains to claims 39 and 40. Mindbase notes that claims 39 and 40 each recite unique limitations after the text of "generating a dictionary;" and this additional description suggests that the independent claim from which 39 and 40 depend already includes "the step of generating a dictionary," but with different, or no, limitations.

D. The Panel Decision Conflicts with Precedent on Reply Evidence and Board Procedure

The panel held that the Board "abused its discretion" by excluding Google's reply arguments and supplemental expert testimony, reasoning they were "not new." This conflicts with *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359 (Fed. Cir. 2016), and *Wasica Fin. GmbH v. Cont'l Auto. Sys., Inc.*, 853 F.3d 1272 (Fed. Cir. 2017), which make clear that petitioners must set forth their grounds "with particularity" in the petition itself. Accordingly, the Board found that Google's reply ventured "in a new direction" with arguments that could have been presented in the petition. That fact-bound determination is entitled to deference. By second-guessing the Board's procedural ruling, the panel undermines the efficiency and fairness goals of IPR proceedings. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348 (2018).

II. PETITION FOR REHEARING EN BANC

Mindbase respectfully requests rehearing *en banc* for the issues of (A) consistency between PTAB boards, and (B) a material term construction by the PTAB without opportunity of the parties to submit evidence. Mindbase submits that the amount of expert witness testimony on which the Board relied to make its decision regarding the Challenged Patents was ruled insufficient by a different board in an analogous decision. Mindbase further submits that, as a matter of law, a PTAB board cannot construe a material term for the first time at oral hearing.

A. Different PTAB Boards Weighed Conclusory Evidence Differently

Mindbase has argued consistently since the Patent Owner Preliminary Response that Google's expert testimony regarding the level of ordinary skill in the art ("POSITA") is fatally lacking any substance. Of course, all analyses of patent validity pertaining to prior art assessments are wholly reliant on the POSITA level. Although the Board disagreed with Mindbase regarding a minimum level of substance required in an expert opinion, a different patent board agreed that an expert witness's "conclusory assertions without underlying factual support" were insufficient for a patent board to rely on. *Xerox Corp., et al. v. Bytemark, Inc.*, IPR2022-00624, Director Review Decision (PTAB Feb 10, 2023)(precedential). The *Xerox Corp.* board rendered its decision after the Challenged Patents had

already been ruled on by the Board, thus precluding Mindbase from raising this issue before the Board.

In Google's Petition for IPR, its expert report contained an entire section dedicated to establishing Google's POSITA level. This section was titled "Knowledge of a POSITA in 1997" and spanned 25 pages and 55 paragraphs of expert testimony. However, in all this length, the testimony did not cite any specific language from the Challenged Patents, and did not provide any analysis of text from the Challenged Patents. RedBr57-60 Without any citations from the Challenged Patents, the expert's testimony regarding the POSITA level was necessarily conclusory. Neither the Board nor this panel could point to any substantive analysis by the expert regarding POSITA level.

These 25 pages of expert opinion on POSITA level must include *some* patent citations in order to analogize prior art. And not only are the terms "lexical database," "computational linguistics," and "computational lexicography" completely absent from the Challenged Patents, both literally and substantively, Google's expert report proffered to analogize these terms is also totally void of *any* substantive citations. Appx262-86 Expert testimony devoid of citations to the Challenged Patents cannot substantively analogize or equate those Patents using terminology found only in the prior art references. It is telling that neither the

Board nor the panel are able to identify a single substantive citation in the expert's POSITA opinion from Google's IPR Petition.

B. The PTAB *Sua Sponte* Construed a Material Term at the Oral Hearing.

The term 'lexical database' does not exist in the Challenged Patents. Also, the concept of a lexical database does not exist in the Challenged Patents. The term 'lexical database' is defined only in the Conlon prior art reference. And while the term 'lexical database' is used throughout the Board's decision, the context the Board used is unclear. It is unclear because the Board defined the term to mean a database of "words [or] related to words." Appx16-17 This is not how Conlon defines that term. Rather, Conlon—the only reference to define the term—defines 'lexical database' as information stored in a database management system, not the database management system itself. RedBr56-57 "3. Lexical Databases"

And neither Mindbase nor Google suggested construing this term, let alone construing it to mean "a database of words." The Board simply construed it *sua sponte* in rendering its decision. Therefore, the Board construed a term—a material term, because of the frequency and weight with which the Board relied on the construction—in the absence of either party's request or acceptance. Mindbase contested this construction as soon as it was revealed at oral hearing (Appx5529 (Trans. 39:4-18)), and Mindbase has continued to contest its meaning, its usage,

and its appropriateness. It was clear error for the Board to construe a material term that neither party contested in the first place, and to construe it for the first time at oral hearing giving neither party the opportunity to submit evidence either way.

CONCLUSION

Rehearing, either by the panel or *en banc*, should be granted in order to square the panel's opinion with precedent. The Board's determinations that Google failed to prove the dictionary routine and normalization claims unpatentable should thus be affirmed, upholding the patentability of claims 14–19, 33–40, and 43–46 of the Challenged Patents.

CERTIFICATE OF COMPLIANCE

This brief complies with the type-volume limitation of Federal Rule of Appellate Procedure 40(d)(3)(A). The brief contains 2,506 words, excluding the portions exempted by Federal Rule of Appellate Procedure 32(f) and Federal Circuit Rule 32(b)(2).

This brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type-style requirements of Federal Rule of Appellate Perocedure 32(a)(6). The brief has been prepared in a proportionally spaced typeface using word processor software and 14-point Times New Roman type.

Dated 11 September 2025

/s/James Iaconis
James Iaconis

NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

GOOGLE LLC,
Appellant

v.

MINDBASEHQ, LLC,
Cross-Appellant

2023-1622, 2023-1623, 2023-1669, 2023-1670

Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Nos. IPR2021-01251, IPR2021-01252.

Decided: August 28, 2025

NATHAN K. KELLEY, Perkins Coie LLP, Washington, DC, argued for appellant. Also represented by JONATHAN IRVIN TIETZ; DAN L. BAGATELL, Hanover, NH; ANDREW BALUCH, Smith Baluch LLP, Washington, DC.

JAMES IACONIS, Iaconis Law Office, Moundsville, WV, argued for cross-appellant.

Before DYK, REYNA, and STARK, *Circuit Judges*.

STARK, *Circuit Judge*.

Google LLC ("Google") appeals from the final written decisions of the Patent Trial and Appeal Board ("Board") determining that Google failed to prove several claims of patents owned by MindbaseHQ, LLC ("Mindbase") are unpatentable. Because the Board's implicit claim construction was incorrect, and it further erred by not considering Google's reply evidence and arguments, we vacate and remand for further proceedings with respect to these claims. The Board also found that Google succeeded in proving other Mindbase claims were unpatentable and, as to these, Mindbase cross-appeals. We find no error in the Board's conclusion relating to these claims and, therefore, affirm with respect to Mindbase's cross-appeal.

I

Mindbase owns U.S. Patent Nos. 6,510,433 ("'433 patent") and 6,665,680 ("'680 patent") (together, the "Challenged Patents"). The patents share a title, "Database Structure Having Tangible And Intangible Elements And Management System Therefor," and a specification.[1] Generally, they disclose database systems modeled on the human mind and its ability to store "all of the descriptive details and word associations that people usually leave out of their communications." '433 pat. 3:19-25. The disclosed systems accomplish this by classifying data into "tangible" and "intangible" elements. *E.g.*, '433 pat. 2:28-42. The Challenged Patents refer to "tangible" data as "cause" data (i.e., physical data elements with weight), and "intangible" data as either "effect" data (i.e., verbs) or "descriptors" (i.e., adjectives and adverbs). *Id.* For example, in the sentence "The tall man drove the car 50 miles per hour," "man" is tangible while "drove the car," "tall," and "50 miles per hour" are intangible (with "drove the car" being an effect

[1] Like the parties, we cite to the '433 patent.

and "tall" and "50 miles per hour" being descriptors). '433 pat. 7:64-8:5. The Challenged Patents explain that the disclosed classification system is formatted to mirror the human mind and overcomes problems such as "automatically integrating an unlimited number of heterogeneous databases into a single database," and "storing all data elements only once." *E.g.*, '433 pat. 3:47-63.

Two types of claims are at issue in Google's appeal. The first are the "dictionary routine" claims (claims 14-19 and 33-40 of the Challenged Patents). Claim 14 of the '433 patent is representative of the dictionary routine claims:

A database system, comprising:

> [14.1] a database stored in a fixed medium and having a set of tangible data elements representing things which have physical weight and can cause an effect and a set of intangible data elements representing words and concepts which have no physical weight and cannot be weighed;
>
> [14.2] said set of intangible data elements including a first subset of effect data elements representing verbs, standing alone and in combination with other words, which describe actions, objectives, results, missions, procedures and processes, and a second subset of descriptive data elements describing said tangible data elements, said effect data elements and degrees of performance of said tangible data elements; and,
>
> [14.3] a dictionary routine for automatically classifying and storing words entered into said database according to said sets and subsets of data elements.

The second type of claims at issue are the "normalization" claims (claims 43 and 44 of the Challenged Patents).

In this context, "normalization" generally refers to de-duplicating and simplifying database entries (for instance, combining entries for "car" and "automobile"). Claim 43 of the '433 patent is representative of these claims:

> A method for inter-relating different databases structured as recited in claim 41,[2] comprising the steps of:
>
> > [43.1] for each of said databases, and in any order, normalizing names of like data elements having different names in said different databases and normalizing names of different data elements having like names in said different databases;
> >
> > [43.2] normalizing data elements which are separate in any one of said databases and which are grouped together as single data elements in any other of said databases;
> >
> > [43.3] comparing each of said normalized databases with each other one of said normalized databases;
> >
> > [43.4] recording all common data elements found during each said comparing step; and,

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[2] As relevant here, claim 43 depends from claim 41, which includes these limitations: "each said tangible data element being linked to each said effect data element partially or wholly caused by said tangible data element; each said effect element being linked to each said tangible data element required for said effect to occur; and, all said data elements being stored in hierarchal structures of parent-child relationships, said hierarchal structures defining vertical lines and horizontal levels." '433 pat. claim 41.

> [43.5] recording one location of each said common data element in each of said databases.

Representative of the issues presented by Mindbase's cross-appeal is claim 1 of the '433 patent:

> A database of information stored in a fixed medium, said database comprising:
>
> > [1.1] a set of tangible data elements, said tangible data elements representing things which have physical weight and can cause an effect;
> >
> > [1.2] a set of intangible data elements, said intangible data elements representing words and concepts which have no physical weight and cannot be weighed;
> >
> > [1.3] said set of intangible data elements including a first subset of effect data elements, said effect data elements representing verbs standing alone and in combination with other words, which describe actions, objectives, results, missions, procedures and processes; and,
> >
> > [1.4] said set of intangible data elements including a second subset of descriptive data elements, said descriptive data elements describing said tangible data elements, said effect data elements and degrees of performance of said tangible data elements.

Google petitioned for *inter partes* reviews ("IPR"), contending that every claim of the Challenged Patents is invalid as obvious based on combinations of four prior art

references. Three of these references – Conlon,[3] Miller,[4] and Beckwith[5] – relate to lexical databases (i.e., databases of words), computational linguistics, and computational lexicography, and their implementation. The fourth reference, Fong,[6] relates to designing a normalized database.

The Board found that Google failed to prove claims 14-19, 33-40, and 43-46 of the Challenged Patents are obvious under any of the grounds asserted in the petition but succeeded in proving that claims 1-13, 20-32, 41, and 42 are obvious based on various combinations of Conlon, Miller, and Beckwith. Google timely appealed the Board's final written decision; Mindbase cross-appealed, arguing that the Board erred in finding certain claims obvious.

The Board had jurisdiction under 35 U.S.C. § 316(c). We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

II

We review the Board's ultimate claim construction and obviousness determinations de novo and its underlying factual determinations for substantial evidence. *See Wasica*

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[3] Sumali Pin-Ngern Conlon et al., *Developing a Large Lexical Database for Information Retrieval, Parsing, and Text Generation Systems*, 29(4) Info. Processing & Mgmt. 415 (1993).

[4] George A. Miller, *Nouns in WordNet: A Lexical Inheritance System*, 3(4) Int'l J. Lexicography 245 (1990).

[5] Richard Beckwith & George A. Miller, *Implementing a Lexical Network*, 3(4) Int'l J. Lexicography 302 (1990).

[6] Elizabeth N. Fong et al., *Guide on Logical Database Design*, NBS Special Publication 500-122 (1985).

Fin. GmbH v. Cont'l Auto. Sys., Inc., 853 F.3d 1272, 1278 (Fed. Cir. 2017); *Uber Techs., Inc. v. X One, Inc.*, 957 F.3d 1334, 1337 (Fed. Cir. 2020). We review decisions related to compliance with Board procedures for abuse of discretion. *See Ericsson Inc. v. Intell. Ventures I LLC*, 901 F.3d 1374, 1379 (Fed. Cir. 2018).

III

A

Google first appeals the Board's determination that it failed to prove that the "dictionary routine" claims (claims 14-19 (system claims) and 33-40 (method claims) of the Challenged Patents) are obvious. This aspect of Google's appeal turns principally on the meaning of the limitation "a dictionary routine for automatically classifying and storing words entered into said database according to said sets and subsets of data elements" (hereinafter, the "automatically classifying and storing limitation"). Google argues, as it did before the Board, that the correct construction of the automatically classifying and storing limitation is "a conventional lookup process that retrieves dictionary information from a database and also stores the queried word." Open. Br. at 36. In Google's view, the Board's "analysis necessarily rested on a flawed reading of that limitation that required a routine to *create* a database or definition," resulting in the limitation not being satisfied by mere *use* (i.e., "looking up words *already in* the database"). Open. Br. at 1-2. The proper construction, Google continues, requires "using a dictionary" but does *not* necessarily require "creating a dictionary or dictionary definitions in the first place." Open. Br. at 33 (citing Appx2728-31, 4132-33, 5219 ¶ 42); *see also* Google's Reply Br. at 5 ("Creation and use are separate and distinct processes, and the claims require only that the latter process be automatic. They are agnostic about how the database was built."). Google faults the Board for "effectively constru[ing] 'automatically classifying' to exclude automatic retrieval of a word's

predetermined classification . . . . thus requir[ing] automatically *creating* a classification." Open. Br. at 42.

Google's proposed construction of the automatically classifying and storing limitation is correct. In light of the other claims and the specification, Google explains that "classifying" refers to identifying a word's predetermined categorizations (i.e., classifications). *See id.* Mindbase does not meaningfully dispute this argument. Accepting this construction of "classifying," nothing about the term "automatically classifying and storing words" would inform a person of ordinary skill in the art that automatic "creation" of a database, in addition to "use" of an already-created database, is a requirement of the dictionary routine claims. That the plain and ordinary meaning of the claim language is broad enough to include "use" is reflected in the fact that certain claims of the Challenged Patents, including claims 20-32, add limitations expressly requiring "creating" a database. Similarly, several of the dictionary routine claims themselves (claims 39-40) add the limitation "further comprising the step of *generating* a dictionary." '433 pat. 38:37-44 (emphasis added). These claims provide clear indications that "automatically classifying and storing words" does not itself require "creating" or "generating," as otherwise there would be no need to call out these latter steps through additional claim language. *See also* Appx656 (during prosecution, applicant distinguishing "claims 14-20 [reciting] a dictionary routine for automatically classifying and storing words" with claims 39 and 40 requiring "[g]enerating such a dictionary").

Moreover, as Google correctly states, the "specification describes the 'dictionary routine' as the act of looking up words *already in* the database." Open. Br. at 2; *see also* '433 pat. 3:33-35 ("The [claimed] system can advantageously be provided with a very detailed dictionary routine that classifies all words as causes, effects, or descriptors. This routine also differentiates between uses of the same word for different parts of speech."). The specification also

provides examples of use – that is, mere lookup – not accompanied by creation. '433 pat. 13:65-15:4. These "use" embodiments would be excluded from the scope of the dictionary routine claims by a construction that requires creation of a dictionary in order to meet the automatically storing and classifying words limitation. Such an outcome is generally disfavored. *See Apple Inc. v. Corephotonics, Ltd.*, 81 F.4th 1353, 1359 (Fed. Cir. 2023) ("Our caselaw counsels against interpreting the claims in a way that would omit a disclosed embodiment absent clear evidence to the contrary."). It is notable, as well, that the specification nowhere describes automatically *creating* a dictionary; all instances of creating dictionary entries rely, at least in part, on manual data entry by users. '433 pat. 13:57-60 (referring to storing in dictionary "all cause-effect relationships that are *created by users*" (emphasis added)); *see also* Appx4132-33.

Mindbase does not point to anything in the prosecution history detracting from our conclusion. Thus, the intrinsic evidence establishes that Google's proposed construction is correct, and we adopt it.[7]

Our agreement with Google's construction does not necessarily prevent us from affirming the Board's judgment. This is because the Board did not expressly construe the automatically classifying and storing limitation. It stated, instead, that "we do not need to expressly construe any term, including 'dictionary routine' and 'automatically classifying and storing,' . . . [because] whether these terms are construed in the sense of using a dictionary lookup

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[7] We do not need to analyze Google's arguments that rely on extrinsic evidence. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (explaining we generally look to extrinsic evidence only where a term's meaning remains ambiguous after review of all intrinsic evidence).

function, or initially creating the dictionary, Petitioner has not shown by a preponderance of the evidence that Conlon teaches" the disputed limitation. Appx24; *see also* Appx40-43. The Board purported to apply Google's proposed construction in reaching its conclusion that Google failed to meet its burden.

Google argues that while the Board *said* it was not construing the automatically classifying and storing limitation, in actuality it implicitly construed the term and, relatedly, failed to evaluate Google's obviousness combination under Google's proposed construction. Google states that the Board's "analysis continued to require automatically creating a dictionary definition" and, therefore, ignored evidence "that the prior art disclosed an automatic dictionary lookup." Open. Br. at 3. Google may be right. The statements from Conlon on which the Board relied in rejecting Google's obviousness case relate to creating a database. *See, e.g.*, Appx40-42 (citing Appx725-26, 732-36). In providing its reasoning for finding that Conlon did not render the dictionary routine claims obvious, the Board emphasized that in Conlon "the process of translating knowledge from a machine-readable dictionary into a form usable in a lexical database . . . [is] describe[d] [in Conlon] . . . as semi-automatic, not automatic." Appx42. If, as we have now held, the dictionary routine claims can be satisfied by mere use of a lexical database, and do not also require the automatic creation of additional definitions, these distinctions of Conlon may lack merit.

In sum, as Google contends and we now hold, the "dictionary routine" claims can be practiced by *use* of an already-created dictionary, and do not also require the automatic *creation* of a dictionary. The Board needs to consider Google's evidence and argument by applying this construction of the automatically classifying and storing limitation, and using this understanding to determine whether Conlon may, in fact, render the "dictionary routine" claims obvious (and, relatedly, whether its prior

distinctions of Conlon may be immaterial). Therefore, we vacate the Board's judgment and remand for such further proceedings.[8]

B

Google next challenges the Board's conclusion that it failed to prove the "normalization" claims (claims 43-46 of both Challenged Patents) obvious in view of Fong. According to Google, the Board reached this determination by improperly excluding Google's reply argument and the accompanying supplemental declaration of its expert. Again, we agree with Google.

In its final written decisions, the Board stated that Google's petition failed to "identif[y] with particularity how the references, particularly Fong," teach limitations [43.3] ("comparing each of said normalized databases with each other one of said normalized databases"), [43.4] ("recording all common data elements found during each said comparing step"), and [43.5] ("recording one location of each said common data element in each of said databases"). Appx54. The Board further determined that Google's reply brief and supplemental expert report raised new arguments that could have been included in its petition and, therefore, should not be considered. According to the Board:

> [Google's] Reply does not merely "respond" to the issues discussed in our Institution Decision but instead "proceed[s] in a new direction with a new approach as compared to the positions taken in" the Petition by introducing in the Reply new argument and evidence not presented in the Petition regarding how limitations [43.3], [43.4], and [43.5] are

[8] While, as we have explained, it appears to us that the Board did not actually apply Google's proposed construction, on remand it will necessarily do so.

> "necessary" or inherent. We decline to consider these late arguments and evidence.

Appx57 (internal citation omitted; alteration in original).

By not considering the arguments made by Google in its reply and the supplemental declaration provided by Google's expert, Dr. Jansen, the Board abused its discretion. These materials appropriately elaborated on the petition's contention that Fong's disclosure of four conditions of a normalized database would have motivated a person of ordinary skill in the art to modify Conlon's system with Fong to practice the normalization limitations of claims 43-46. Google appropriately used its reply and supplemental declaration to address reasons the Board had provided in its institution decision for why it believed Google's references failed to teach three limitations of claim 43 ([43.3], [43.4], [43.5]) and an additional limitation of claim 44 ([44.6]). In doing so, Google and Dr. Jansen relied on the same theory as set out in the petition, based on the same portions of the same prior art references.[9]

Specifically, and contrary to the Board's finding, Google's petition and reply advanced the same theory of obviousness: "a skilled artisan would have been motivated to

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[9] The Board noted that at the oral hearing, Google had described its theory that Fong renders limitation [43.3] obvious as "an inherency argument." Appx56. We are not holding that the Board abused its discretion by failing to consider an "inherency" theory that the Board found was missing in the petition; nor are saying that Board must address "inherency" on remand. Instead, we are requiring that the Board address the evidence and argument Google submitted with its reply that supports the theory Google articulated in its petition. This is, as Google puts it, an "express-disclosure theory," not an "inherent-anticipation theory." Open. Br. at 51.

normalize Conlon's database using Fong's four conditions, and a skilled artisan would have performed the limitations of claims 43-36 to reach that result." Open. Br. at 51 (internal emphasis omitted); *see also* Appx4099-4100 (Dr. Jansen explaining how his supplemental illustrations, at Appx4157, depicted how Fong's four normalization conditions mapped onto claim limitations, as articulated in words in original declaration, at Appx360-61, 363). In particular, Dr. Jansen visually depicted the same theory he had described verbally in his earlier declaration, and explicitly described how his supplemental analysis was substantively identical to his original analysis. Appx4110-15, 4123-24.

The Board's decision to exclude Google's rebuttal argument and supplemental declaration is based on a clear factual error (i.e., that Google improperly raised a new theory of obviousness), rendering its exclusion an abuse of discretion. *See Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016) (explaining abuse of discretion occurs where, *inter alia*, Board's decision "is based on an erroneous conclusion of law" or "rests on clearly erroneous fact finding"); *see also Apple Inc. v. Andrea Elecs. Corp.*, 949 F.3d 697, 705-07 (Fed. Cir. 2020) (finding Board erred in refusing to consider reply arguments that did not present "new theory of unpatentability" and "squarely respond[ed] to" Board's institution decision); *Ericsson*, 901 F.3d at 1381 (vacating Board refusal to consider reply arguments that "expressly follow[ed] from . . . contentions raised in the Petition").

The Board further faulted Google's reply for being "significantly more detailed" than what Google had articulated in its petition. Appx56. But greater detail is allowed on reply, provided that the reply is responsive (to the Board's institution decision and/or the patent owner's preliminary response) and not new. *See Andrea Elecs. Corp.*, 949 F.3d at 705-07; 37 C.F.R. § 42.23(b) ("A reply may only respond to arguments raised in the corresponding opposition,

patent owner preliminary response, patent owner response, or decision on institution."). Likewise, just because the evidence and argument submitted on reply could also have been included in the petition does not mean the Board can ignore it, provided such evidence and argument is responsive and not new.[10]

Accordingly, we vacate the Board's judgment that Google failed to prove the normalization claims are obvious and remand for further proceedings, which must include evaluation of the evidence and argument Google provided in reply.

IV

Mindbase raises multiple issues in its cross-appeal. None has merit.

First, Mindbase argues that the Board erred in adopting Google's proposed level of skill for a person of ordinary skill in the art. Substantial evidence supports the Board's finding that a person of ordinary skill in the art "would have had at least a bachelor's degree in computer science, computational linguistics, computational lexicography, or the equivalent, [and] at least two years of academic or industry experience in lexical databases, computational linguistics, computational lexicography, or the equivalent, and experience or coursework in computer science, database development, or the equivalent." Appx2479-80 (Google proposing this level of skill in its petition); *see also* Appx21 (Board adopting Google's proposal). After

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[10] The Board reiterated in its final written decisions that it had found the petition "deficient," as well as "confusing and vague," with respect to the normalization claims. Appx56. Whether or not we were to agree with the Board's characterization of the petition, an issue not before us, our holding today is limited to the Board's handling of the reply evidence and argument.

considering both parties' proposed descriptions of the person of ordinary skill in the art, including Mindbase's critique that Google required too high a level of skill and qualifications untethered to the patents, the Board determined that the specification and claims demand knowledge of Google's identified areas, even though Google's precise words are not recited in them. Indeed, the Board pointed out that the specification's references to lexical concepts were "too numerous to recount." Appx17.

Relatedly, Mindbase contends that Conlon, Miller, and Beckwith are not analogous art, because these references deal with lexical databases. Mindbase insists that the Board erred in "ignor[ing] the problems described and addressed" in the Challenged Patents and that these references are "not concerned with the particular problems the inventors sought to solve." This is essentially a reiteration of Mindbase's challenge to the Board's identification of the person of ordinary skill in the art. Having found substantial evidence supporting the Board's finding that such a person would have education and experience in computer science, computational linguistics, computations lexicography, lexical databases, or the equivalent, it follows that substantial evidence also supports the Board's finding that Conlon, Miller, and Beckwith – each of which indisputably addresses these subjects – is also supported by substantial evidence.

Mindbase next argues that substantial evidence does not support the Board's findings that elements [1.3] ("said set of intangible data elements including a first subset of effect data elements, said effect data elements representing verbs standing alone and in combination with other words, which describe actions, objectives, results, missions, procedures and processes") and [1.4] ("said set of intangible data elements including a second subset of descriptive data elements, said descriptive data elements describing said tangible data elements, said effect data elements and degrees of performance of said tangible data elements") of the

Challenged Patents were disclosed in Google's prior art references. It attacks the Board for purportedly relying on nothing more than conclusory statements that Conlon's Table 14 discloses the claimed "objectives, results, missions, procedures and processes" of element [1.3] and Conlon's Tables 19 and 21 render element [1.4] obvious. Resp. Br. at 65-67 (citing Appx31-34). We disagree. The Board's findings are supported by substantial evidence. *See* Appx31-34 (citing Appx2497-2500, 4144-47).

Finally, Mindbase asserts that the Board failed "to provide explanation as to all of the claim limitations in order to substantiate an obviousness determination" and improperly shifted the burden of proof onto Mindbase. Resp. Br. 67-69. Mindbase is wrong. The Board provided sufficient explanation to allow us to reasonably discern the basis for its findings. That the Board did not say all that much reflects Mindbase's relatively cursory arguments and the fact that the Board found them decidedly unpersuasive. *See* Appx32-33. Nor do we see any indication in the final written decisions that the Board shifted a burden onto Mindbase to prove the patentability of its claims. The statements Mindbase points to as showing such error are, instead, simply the Board's explanation for why it was persuaded by Google, after considering all of the evidence and argument before it. Appx32-34.

V

We have considered Mindbase's remaining arguments and find them unpersuasive. Accordingly, for the foregoing reasons, with respect to Google's appeal we vacate the Board's final written decisions concluding the "dictionary routine" and "normalization" claims of the Challenged Patents were not proven unpatentable and remand for further proceedings consistent with this opinion. With respect to Mindbase's cross-appeal, we affirm.

VACATED AND REMANDED IN PART, AFFIRMED IN PART

COSTS

Each party to bear its own costs.