

THE PTAB IS NOT AN ARTICLE III COURT, PART 4: ISSUES OF FACT IN *EX PARTE* APPEALS—PITFALLS TO AVOID, STRATEGIES FOR SUCCESS

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ABSTRACT

Effective and efficient patent prosecution must include appeals to the Patent Trial and Appeal Board as an important tool in the toolbox. Most ex parte appeals to the PTAB turn on disagreements on issues of fact—the

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“broadest reasonable interpretation” of claim terms, the interpretation of prior art references, similarities and differences between prior art and the claims, the Wands factors for enablement, facts by examiner assertion or official notice, etc. The law on these issues has been crystal clear for decades: (a) on almost all issues of fact, the Board’s standard of review should be a non-deferential de novo application of a “preponderance of evidence” favoring the appellant, and (b) Official notice doesn’t hold water unless the fact had substantial evidence support, the Board explained its view of contrary evidence and argument, and the Board’s fact-finding process was not arbitrary and capricious.

However, the Board decisions and the PTO’s relevant Federal Register notices demonstrate that a substantial minority of APJs hold an opposing view: that the standard of review to be applied by the Board is the same as the deferential “substantial evidence” review that the Federal Circuit applies in its review of the Board. The Federal Circuit has reminded the Board of this law on multiple occasions; the minority view persists.

This article suggests proactive action that applicants may take to prevent the Board from making errors in its evaluation of issues of fact.

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I. INTRODUCTION

Most *ex parte* appeals to the Patent Trial and Appeal Board turn on disagreements on issues of fact—the “broadest reasonable interpretation” of terms of art used in claims, the interpretation of prior art references, similarities and differences between prior art and the claims, the *Wands* factors for enablement, etc. The law on these issues has been crystal clear for decades: (a) on almost all issues of fact, the Board’s standard of review should be a non-deferential *de novo* application of a “preponderance of evidence” favoring the appellant, and (b) Official notice doesn’t hold water unless the fact has substantial evidence support, the Board explains its view of contrary evidence and argument, and the Board’s fact-finding process was not arbitrary and capricious.

However, the Board’s decisions and the PTO’s relevant Federal Register notices demonstrate that a substantial minority of APJs hold an opposing view: Section III shows this minority view, holding that the Board is to apply the same deferential “substantial evidence” review that the Federal Circuit applies in its review of the Board (and a few APJs go even further, applying the even-more-deferential “rational basis” standard).

The Federal Circuit has reminded the Board of this law on multiple occasions, as laid out in Sections II(A), II(E), and II(F). Nonetheless, this minority view persists and is often case-dispositive.

This article suggests proactive action that applicants may take to prevent the Board from making errors in its evaluation of issues of fact.

This article further develops a theme from several previous articles: the PTAB is Not an Article III Court.¹ These differences generally redound to the benefit of applicants. Understanding these differences will help you develop stronger appeals.

II. BASIC OBLIGATIONS OF AGENCIES: “PREPONDERANCE OF EVIDENCE” AND THE OBLIGATION TO EXPLAIN

A. *Standards of review, and “preponderance of evidence”*

Standards of review first fall into two basic groups.

First are first-instance standards of *proof*. In a standard of proof, the trier of fact considers evidence (physical, documentary, and witness), and the persuasive weight of explanations of that evidence (typically delivered as attorney argument).² Everyone has a basic understanding of “beyond a reasonable doubt” (criminal law), “clear and convincing evidence” (a few high-stakes issues in civil disputes, such as termination of parental rights, involuntary commitment, allegations of fraud, deceit, or malice, contested or lost wills, punitive damages, or invalidity of

¹ David Boundy, *The PTAB is Not an Article III Court, Part 1: A Primer on Federal Agency Rule Making*, LANDSLIDE, Nov./Dec. 2017, at 9, 9–13, 51–57; David Boundy & Andrew Freistein, *The PTAB Is Not an Article III Court, Part 2: Aqua Products v. Matal as a Case Study in Chevron Deference and Administrative Law*, LANDSLIDE, May/Jun. 2018, at 44, 44–51, 64, available at <https://ssrn.com/abstract=3258047>; David Boundy, *The PTAB is Not an Article III Court, Part 3: Precedential and Informative Opinions*, *infra* note 79; David Boundy, *What Every Patent and Trademark Lawyer Should Understand About the MPEP, TMEP, and Other Guidance: How to Use (and Defend Against) the MPEP to be a Better Advocate*, *infra* note 79.

² WIGMORE ON EVIDENCE, §§ 2485–2487 (Chadbourn rev. 1981); 2 JOHN STRONG, MCCORMICK ON EVIDENCE §§ 336–339 (7th ed. 2014).

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patents), and “preponderance of the evidence” (the standard that applies in the overwhelming majority of civil cases and agency adjudications, including *ex parte* patent appeals). These standards apply when there is no lower tribunal, or when the standard of review requires the reviewing tribunal to reapply *de novo* the standard applied below.³

Second are the standards of *review* that are applied by reviewing courts. The common ones are *de novo*, arbitrary and capricious and the other “pigeonholes” of 5 U.S.C. § 706(2) (most Article III reviews of most agencies), substantial evidence (common in appellate court review of agencies, and review of jury verdicts.⁴), abuse of discretion and “clear error” (for appellate court review of bench decisions).⁵ These standards (except *de novo*) generally connote some degree of deference to the tribunal below.

The two families of standards apply in different contexts (the same case may warrant different standards at different points of its procedural lifetime); they are different in character; they differ in application.⁶

³ *E.g.*, *United States Steel Corp. v. U.S.*, 97 F.4th 1364, 1370 (Fed. Cir. 2024).

⁴ Jury “substantial evidence” and agency “substantial evidence” standards differ significantly *See* *Chen v. Mukasey*, 510 F.3d 797, 801–02 (8th Cir. 2007); *Universal Camera Corp. v. Nat’l Labor Relations Bd.*, 340 U.S. 474, 487–88 (1951) (explaining how the “basis of evidence which in and of itself justified it, without taking into account contradictory evidence” standard used today for review of jury decisions had been displaced, for agencies, by the Administrative Procedure Act in 1946).

⁵ *See* *Dickinson v. Zurko*, 527 U.S. 150, 158 (1999); HARRY T. EDWARDS, *FEDERAL STANDARDS OF REVIEW: REVIEW OF DISTRICT COURT DECISIONS AND AGENCY DECISIONS*, §§ II, IV, VII (3rd ed., West Pub. 2018).

⁶ *See, e.g., In re Kollar*, 286 F.3d 1326, 1329 (Fed. Cir. 2002) (contrasting the two standards of review for issues of fact: before the *Board*, the standard is “preponderance of evidence,” while on review *at*

For decades, courts have reminded the PTO that the standard of review that is to be applied by both examiners and by the Board in reviewing examiners' rejections is *de novo* preponderance of evidence.⁷ This is deeply rooted in

the Federal Circuit, the standard of review is § 706(2) "substantial evidence.").

⁷ *Rambus, Inc. v. Rea*, 731 F.3d 1248, 1255 (Fed. Cir. 2013) ("The Board erroneously placed the burden on Rambus to prove that its claims were not obvious," awarding costs); *In re Glaug*, 283 F.3d 1335, 1338 (Fed. Cir. 2002) ("During patent examination the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. If the PTO fails to meet this burden, then the applicant is entitled to the patent. However, when a *prima facie* case is made, the burden shifts to the applicant to come forward with evidence and/or argument supporting patentability. Patentability *vel non* is then determined on the entirety of the record, by a preponderance of evidence and weight of argument." (citations omitted)); *In re Alton*, 76 F.3d 1168, 1175 (Fed. Cir. 1996) (once the examiner or Board carries the burden of making out a *prima facie* case of unpatentability, "the burden of coming forward with evidence *or argument* shifts to the applicant. . . . After evidence *or argument* is submitted by the applicant in response, patentability is determined on the totality of the record, by a preponderance of the evidence with due consideration to *persuasiveness of argument*," (emphasis added)); *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) ("After evidence or argument is submitted by the applicant in response, patentability is determined on the totality of the record, by a preponderance of evidence with due consideration to persuasiveness of argument."); *Ex parte Frye*, 94 U.S.P.Q. 2d 1072, 1075 (B.P.A.I. 2010) (precedential, expanded panel) ("[T]he Board reviews the particular finding(s) contested by an appellant anew in light of all the evidence and argument on that issue," using a "preponderance of evidence" standard); *see also In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1375–81 (Fed. Cir. 2016) (in a review of an IPR, cataloging a number of erroneous instances where the PTAB shifted the burden of proof to the wrong party: "it is the placement of the burden of persuasion that matters. Where, as here, it is clear that the Board did not require the [patent challenger] to support its claim of obviousness by a preponderance of the evidence, we must reverse."). *See also In re ThermoLife Int'l LLC*, 796 Fed. Appx. 726, 732 (Fed. Cir. 2020) (Board's reliance on the wrong standard of review

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history and statute.⁸ No known statute, regulation, or case law authorizes the PTAB to apply court/agency standards of review to Board/examiner proceedings.

When the burden of proof is against the examiner, *legally*, an applicant can rebut by simple argument.⁹ If attorney counterargument is sufficient to push the credibility of the story told by the party *with* the burden of proof below the required standard, the unburdened party wins.¹⁰

Application of the wrong burden of proof by a lower tribunal is arbitrary and capricious when reviewed by a reviewing court.¹¹

was “errant”—on the facts of the case, “harmless,” but error nonetheless).

⁸ *In re Warner*, 379 F.2d 1011, 1016 (C.C.P.A. 1967) (“We think the precise language of 35 USC 102 that ‘a person shall be entitled to a patent unless,’ . . . clearly places a burden of proof on the Patent Office.”); *In re Hofstetter*, 362 F.2d 293, 298–99 (C.C.P.A. 1966) (tracing history of a “benefit of doubt” standard of review (essentially equivalent to “preponderance of evidence”) at least as far as 1827).

⁹ See Section II(E) for who has what burden, and contrast between different standards of review, varying burdens of proof, and obligation to explain.

¹⁰ *Allentown Mack Sales & Service, Inc. v. NLRB*, 522 U.S. 359, 374 (1998) (reversing the NLRB: when the NLRB was required to apply a “preponderance of evidence” standard, but the NLRB’s actual reasoning imposed a higher burden: “It is hard to imagine a more violent breach of [the arbitrary and capricious] requirement than applying . . . a standard of proof which is in fact different from the rule or standard formally announced”); *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1375–81 (Fed. Cir. 2016) (“it is the placement of the burden of persuasion that matters. Where, as here, it is clear that the Board did not require the [patent challenger] to support its claim of obviousness by a preponderance of the evidence, we must reverse.”).

¹¹ *Allentown Mack*, 522 U.S. at 374.

B. Official notice

The statute for Article III court review of agency findings, 5 U.S.C. § 706(2), treats “Official notice” the same as any other finding of fact. On appeal to the Federal Circuit, § 706 only allows affirmance if the Board’s factual determination—whether evidence-based or Official notice—had substantial evidence support, the Board explained its view of contrary evidence and argument, and the Board’s fact-finding process was not arbitrary and capricious.¹² An agency’s bald assertion of opinion or “common sense” is not “substantial evidence.”¹³ Very few

¹² 5 U.S.C. § 706(2); *Dickinson v. Zurko*, 527 U.S. 150, 164 (1999) (PTO findings of fact must be reviewed under APA standards of review); *In re Google LLC*, 56 F.4th 1363, 1368 (Fed. Cir. 2023); *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1361–63 (Fed. Cir. 2016); *In re NuVasive, Inc.*, 842 F.3d 1376, 1383–84 (Fed. Cir. 2016); *see also* *Icon Health and Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1046–47 (Fed. Cir. 2017); *In re Wallen*, 565 Fed. Appx. 867, 869 (Fed. Cir. 2014) (reversing: even if “propagation channel estimates” as a single claim element in isolation might be obvious, Board at best gave “conclusory” analysis, with no citation to evidence, for motivation to combine into the specific context of Wallen’s claim); *In re Beasley*, 117 Fed. Appx. 739, 744 (Fed. Cir. 2004) (nonprecedential); *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000) (PTO findings must be supported by “substantial evidence”); *Gover*, *infra* note 21.

¹³ *Universal Camera Corp. v. Nat’l Labor Relations Bd.*, 340 U.S. 474, 478, 484, 487–88 (1951) (agencies may not rely on “irresponsible admission and weighing of hearsay, opinion, and emotional speculation in place of factual evidence” or “suspicion, surmise, implications, or plainly incredible evidence”); *In re Zurko*, 258 F.3d 1379, 1385–86 (Fed. Cir. 2001) (“[T]he Board cannot simply reach conclusions based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings.”); *In re Gartside*, 203 F.3d at 1312, 1316 (after *Dickinson v. Zurko*, holding that PTO factual determinations will be reviewed under a “substantial evidence” standard of review).

The Federal Circuit regularly reverses when the Board relies on personal opinion, or “suspicion, surmise, implications” rather than

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Federal Circuit cases affirm Board reliance on official notice in *any* capacity,¹⁴ unless the reliance was “harmless error” (where the noticed fact really is inescapable), or under ordinary principles of waiver or forfeiture (because the appellant failed to timely raise the issue).¹⁵

substantial evidence. *In re Fought*, 941 F.3d 1175, 1178–79 (Fed. Cir. 2019) (reversing Board’s claim construction because conflicts with the substantial evidence); *In re Facebook, Inc.*, 743 Fed. Appx. 998 (Fed. Cir. Aug. 14, 2018) (PTAB’s reading of prior art unsupported by substantial evidence); *In re Van Os*, 844 F.3d 1359, 1361–62 (Fed. Cir. 2017) (“intuitive,” “common sense,” “obvious to combine” are not “substantial evidence” supporting motivation to combine); *In re Chudik*, 851 F.3d 1365, 1373–74 (Fed. Cir. 2017) (Board’s assertion that reference could be modified to anticipate was not supported by substantial evidence); *In re Schweickert*, 676 Fed. Appx. 988, 996 (Fed. Cir. Jan. 26, 2017) (“within knowledge of skilled artisan” isn’t “substantial evidence” of obvious motivation); *In re LeMay*, 660 Fed. Appx. 919, 924 (Fed. Cir. Sep. 19, 2016) (Board’s reading of references not supported by substantial evidence when the PTO relies on properties of two disparate parts of the reference to meet a single claim limitation; another is internally inconsistent); *Dixon v. Dep’t of Transportation*, 8 F.3d 798, 804 (Fed. Cir. 1993) (“[E]xaggeration, inherent improbability, self-contradiction, omissions in a purportedly complete account, imprecision, and errors detract from the weight of that particular to be accorded the evidence.”).

¹⁴ See, e.g., *In re Abbot Diabetes Care, Inc.*, 696 F.3d 1142, 1151 (Fed. Cir. 2012), reviewing *Ex parte Abbott Diabetes Care Inc.*, Appeal No. 2010-006837 (B.P.A.I. Jan. 18, 2011); *Van Os*, 844 F.3d at 1361 (reversing the Board and awarding costs: “Absent some articulated rationale, a finding that a combination of prior art would have been ‘common sense’ or ‘intuitive’ is no different than merely stating the combination ‘would have been obvious.’ . . . Here, neither the Board nor the examiner provided any reasoning or analysis to support finding a motivation to add [the two references] beyond stating it would have been an ‘intuitive way’ to initiate Hawkins’ editing mode.”).

¹⁵ See, e.g., *In re Ahlert*, 424 F.2d 1088, 1091–92 (C.C.P.A. 1970) (“Where the appellant has failed to challenge a fact judicially noticed and it is clear that he has been amply apprised of such finding so as to have the opportunity to make such challenge, the board’s finding will be considered conclusive by this court”—note the requirement for “amply apprised” and “this court”); *In re Soli*, 317 F.2d 941, 946

The MPEP's and Board's application of Official notice are built on two fundamental misunderstandings. First, they neglect differences between the Federal Circuit's standard of review and the Board's.¹⁶—the Court's standard of review for Official notice doesn't apply to the Board. Second, many panels of the Board misunderstand the legal effect of the MPEP (see *infra* Section II(G)).

C. Vocabulary: “issue of fact” vs. “issue of law,” “burden of going forward” vs. “burden of persuasion”

To appeal effectively, you must understand the applicable standard of review, and where the burden of proof lies. If the burden of proof is against you, or there's a close question of fact, you must introduce evidence into the record (typically via a declaration or affidavit). If your disagreement with the examiner is an issue of law, then you need to find relevant legal support (statutes, regulations, cases).

(C.C.P.A. 1963) (“This court has long held that wherever possible, issues should be crystallized *before* appeal to this court. It is neither the function of oral arguments nor briefs before this court to question for the first time the propriety of actions of the examiner or the board to which a response conveniently could have been made before the Patent Office.”) (emphasis in original—again stressing “this court”); *In re Chevenard*, 139 F.2d 711, 713 (C.C.P.A. 1943) (official notice not traversable *for the first time* on appeal to court “[i]n the absence of anything in the record to contradict the examiner’s holding, and in the absence of any demand by appellant for the examiner to produce authority for his statement”) (emphasis added).

¹⁶ *In re Kollar*, 286 F.3d 1326, 1329 (Fed. Cir. 2002). This disconnect between the court/agency standard of review, the Board/examiner standard of review, “substantial evidence,” and the conflicting view stated in MPEP § 2144 was well-developed in Dawn-Marie Bey, *Shifting the Burden of Proving Patentability Vel Non In View of Dickinson v. Zurko*, 12 J. INTEL. PROP. L. 1 (2004).

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What is the difference between an “issue of fact” vs. an “issue of law,” and why does it matter?

This goes back to pre-Revolution England. “Issues of fact” are the decisions made by juries—was the light red or green, did the prosecution prove that the defendant committed the act, did the defendant have the requisite level of intent or negligence, was there some pre-existing condition that excused the act, etc. “Issues of law” are issues decided by judges. Before the Revolution, there were almost no statutes governing contract, criminal, tort, property, or procedure—nearly the entirety of the law was judge-made common law.

That same division carries forward today. The division is essential to a sound *ex parte* appeal, because it determines what kinds of support is relevant, who has the burden to produce what kind of evidence, what kind of explanation is necessary, and what standards of review apply. For *ex parte* appeals, the most important difference is that:¹⁷

- Issues of fact are decided based on *evidence* (printed publications, declarations, etc., not argument of the party that has the burden), with a preponderance burden of proof favoring one side or the other.
- Issues of law are decided based on cites to and explanations of legal sources (statutes, precedent,¹⁸ etc.) and there’s no preponderance burden favoring either side.

For issues of fact, the burden of proof has two subcomponents: the *burden of going forward* (also called the *burden of production*) and the *burden of persuasion*. The former is the burden of producing satisfactory evidence

¹⁷ These are only general rules; specific pigeonholes for specific issues are cataloged *infra* Section II(F).

¹⁸ *Ex parte* Holt, 19 USPQ2d 1211, 1214 (B.P.A.I. 1991).

and/or explanation, whereas the latter is the burden of persuading the trier of fact that the alleged fact is true. The party having the burden of persuasion on an issue bears the risk of non-persuasion—the issue must be decided against that party if it fails to meet either half of the burden.¹⁹ Typically, the burden of persuasion is carried by argument that interprets the evidence.²⁰

D. Vocabulary: evidence, findings of fact, and legal conclusions

“Evidence” is what you would expect: written documents, declarations, affidavits, and the like. Neither examiner argument nor applicant argument is “evidence.”²¹

¹⁹ Good explanations are in WIGMORE, *supra* note 2, §§ 2483–2489; Dir. Off. of Workers’ Comp. Programs, Dep’t of Labor v. Greenwich Collieries, 512 U.S. 267, 276 (1994), and MCCORMICK, *supra* note 2, §§ 336–339.

²⁰ MCCORMICK, *supra* note 2, § 339; *Guide to Writing Closing Arguments*, UNITED STATES COURTS, <https://www.uscourts.gov/about-federal-courts/educational-resources/about-educational-outreach/activity-resources/guide-writing-closing-arguments> [<https://perma.cc/8RVU-ZP7L>] (Last visited Apr. 16, 2026) (the purpose of closing argument is “[t]o persuade the jurors to adopt your view of the significance of the evidence and your view of the case.”); Jarod Stewart, Patrick Fields, *Anatomy of a Persuasive Closing Argument*, STEPTOE (Jan. 14, 2026), <https://www.steptoel.com/en/news-publications/anatomy-of-a-persuasive-closing-argument.html> [<https://perma.cc/V2RY-XWHL>] (“Unlike the opening statement, which previews evidence, the closing argument synthesizes it.”).

²¹ *In re Google LLC*, 56 F.4th 1363, 1368 (Fed. Cir. 2023) (“In making this assertion, however, neither the Board nor the examiner cited any evidence suggesting such a technique was in fact conventional or widespread. . . . [W]hile common knowledge can be invoked, even potentially to supply a limitation missing from the prior art, it must still be supported by evidence and a reasoned explanation. . . . An examiner’s assertion that a particular fact or principle is well-known is not evidentiary support. . . . Assumptions about common sense cannot substitute for evidence thereof.” (cleaned up)); *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1361–63 (Fed. Cir. 2016); *In re NuVasive*,

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Both can *interpret* evidence, but neither *is* evidence. In most “preponderance of evidence” decisions, those two interpretations must be weighed against each other, under the appropriate allocation of the burden of persuasion.²²

A “finding of fact” is a fact inferred from evidence. Very seldom does evidence state exactly the legally-relevant fact in exactly the legally-relevant words (a word-for-word match to specific claim language at issue, “motivation to combine,” “quantity of experimentation needed to make or use the invention based on the content of the disclosure” (see the lists of “issues of fact” in Sections II(F)(1) to II(F)(3)). In *ex parte* appeals, the most-

Inc., 842 F.3d 1376, 1383–84 (Fed. Cir. 2016) (the Board may not accept examiner argument without evidentiary support as adequate support for a finding); *Icon Health and Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1046–47 (Fed. Cir. 2017) (The Board must independently “examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made” and explain why it adopts examiner’s argument. The Board cannot rely on examiner’s findings without that independent reevaluation—where Board adopted examiner’s view simply because appellant “did not challenge,” Court vacates the Board, because the Board “failed to make the requisite factual findings or provide the attendant explanation.”); *Ex parte Coon*, Appeal No. 2010-010394, slip op. at 4 (P.T.A.B. Dec. 24, 2012) (“The Examiner has provided argumentation, but not evidence . . .”); *Ex parte DirecTV Group, Inc.*, Reexamination 90/008,646, Appeal No. 2009-010259, slip op. at 17 (B.P.A.I. May 3, 2010) (“Mere argument by the Examiner is not evidence.”); *Ex parte Gover*, Appeal No. 1999-0288, slip op. at 17–18 (B.P.A.I. Mar. 31, 2003) (“The extensive arguments of the examiner, even if we agreed with him from our own experience and background knowledge of the art, are not a substitute for evidence on the record. . . . Stated differently, the subjective opinion of the examiner as to what is or is not obvious, without evidence in support thereof, does not provide a factual basis upon which the legal conclusion of obviousness can be reached.”); *see also In re Rijckaert*, 9 F.3d 1531, 1533 (Fed. Cir. 1993) (“[T]he Commissioner’s brief is not prior art”). *See also* obligation to explain, *supra* Section II(E).

²² *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

commonly-relevant rules for bridging from the verbatim words in the evidence to “findings of fact” are (a) inherency, (b) official notice (under rules discussed *infra* Section IV),²³ and (c) “preponderance of evidence” (the Board is required to weigh the examiner’s interpretation of the evidence and explanation against the appellant’s under the relevant burden of persuasion, as discussed *supra* Sections II(F)(1), II(F)(2), II(F)(3) and II(E)). A “finding of fact” is the conclusion of that bridging.

A legal conclusion (see the list of “issues of law” in Section II(F)(5)) typically arises by inference from underlying findings of fact.

The Patent Law, Administrative Procedure Act (APA), and PTO regulations set requirements for rational “reasoned decisionmaking” and explanation for both the evidence-to-finding and the finding-to-conclusion steps (*see, e.g.*, Sections II(B) and II(E)). Sections II(E), II(F), III, IV, and V give you tips to proactively assist the examiner and Board to observe these requirements.

E. The PTO’s obligations to provide substantial evidence and to explain

It’s not legally sufficient for an examiner (or the PTAB) to throw random evidence in the general direction of a rejection form paragraph and ask you to figure it out. This Section II(E) introduces several laws that obligate an agency to come forward with evidence that is “substantial,” and explain the connection from evidence to finding of fact to legal conclusion, at least for issues where the burden of persuasion favors the appellant. These principles govern, *e.g.*, anytime that a reference doesn’t use identically the

²³ Techniques to address inherency and official notice are developed *infra* Section IV.

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same words as a claim, or anytime that the issue is *interpretation* of evidence.

The Patent Act in 35 U.S.C. § 102(a) provides that “[a] person shall be entitled to a patent unless— . . .” That creates a rebuttable presumption of patentability. Under 35 U.S.C. § 132, upon making a rejection in an application, the PTO “shall notify the applicant thereof, stating the reasons for such rejection . . . together with such information and references as may be useful in judging of the propriety of continuing the prosecution of his application.” 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.”²⁴ Importantly, § 132 is not the only applicable law governing examiner actions (and it’s the weakest of the group).

The APA requires that all findings of fact by all federal agencies must be supported by “substantial evidence.”²⁵ As Antonin Scalia explained while on the D.C. Circuit, “it is impossible to conceive of a ‘nonarbitrary’ factual judgment supported only by evidence that is not substantial in the APA sense.”²⁶ The requirements for

²⁴ *In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011).

²⁵ *Universal Camera Corp. v. Nat’l Labor Relations Bd.*, 340 U.S. 474, 477 (1951); *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mutual Auto. Ins. Co.*, 463 U.S. 29, 43–44 (1983); *In re Kahn*, 441 F.3d 977, 985 (Fed. Cir. 2006); *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000) (holding that 5 U.S.C. § 706(2)(A) “arbitrary and capricious” review requires that “we should therefore review Board factfinding for “substantial evidence.”“).

²⁶ *Ass’n of Data Processing Serv. Orgs. v. Bd. of Governors of the Fed. Reserve Sys.*, 745 F.2d 677, 684 (D.C. Cir. 1984) (Scalia, J.); *see also Universal Camera*, 340 U.S. at 487–88. 5 U.S.C. § 706(2)(E) is not by its terms applicable to the PTO’s informal adjudications because neither examination nor Board proceedings are subject to the formal adjudication requirements of §§ 556 and 557. However, all courts considering the issue nonetheless require substantial evidence support

“substantial evidence” and “explicit analysis” extend to both examiners and the Board, at that evidence and explanation must be provided at a time that the applicant can respond.²⁷

The leading Supreme Court case characterizes “substantial evidence” as follows:

[S]ubstantial evidence is more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. Accordingly, it “must do more than create a suspicion of the existence of the fact to be established.” . . . The “irresponsible admission and weighing of hearsay, opinion, and emotional speculation in place of factual evidence” was said to be a “serious menace.” . . . The substantiality of evidence must take into account whatever in the record fairly detracts from its weight. This is clearly the significance of the requirement . . . that courts consider the whole record.²⁸

“[T]he possibility of drawing two inconsistent conclusions from the evidence does not prevent an administrative agency’s finding from being supported by

for informal adjudications, as part of reviewing findings of fact under the “arbitrary,” “capricious,” or “abuse of discretion” prongs of § 706(2)(A).

²⁷ 37 C.F.R. § 1.104(d)(2) (“[T]he data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee”); *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (court must look to objective evidentiary sources “in order to determine whether there was an *apparent* reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit,” emphasis added); *Gartside*, 203 F.3d at 1316 (“[The record [of an appeal to the Board] reflects the results of a proceeding in the PTO during which the applicant has been afforded an opportunity to bring forth the facts thought necessary to support his or her position.”).

²⁸ *Universal Camera*, 340 U.S. at 477, 478, 484, 487–88 (citations and internal quotations omitted).

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substantial evidence,”²⁹ but the PTAB or examiner *must* weigh evidence that does not support the agency, and *must* explain its position vis-à-vis that evidence.³⁰ When an agency decides against the party favored by the burden of proof, the agency must “adequately . . . explain why it has rejected the arguments for [that party’s] understanding of the evidence.”³¹

The Administrative Procedure Act, 5 U.S.C. § 555(e), requires “Except in affirming a prior denial or when the denial is self-explanatory, [any notice of denial] shall be accompanied by a brief statement of the grounds for denial.” “This requirement not only ensures the agency’s careful consideration of such requests, but also gives parties the opportunity to apprise the agency of any errors it may have made.”³² The explanation must be sufficient to reflect “a considered response to the evidence and contentions of the losing party,” at least when the

²⁹ *Gartside*, 203 F.3d at 1312 (quoting *Consolo v. Federal Maritime Comm’n*, 383 U.S. 607, 620 (1966)).

³⁰ *Universal Camera*, 340 U.S. at 488; *Allentown Mack Sales & Service, Inc. v. NLRB*, 522 U.S. 359, 374 (1998) (reversing an agency decision on substantial evidence grounds where agency’s rules called for preponderance of evidence in favor of the party, but the agency’s explanation showed it applied something harsher); *CQV Co., Ltd. v. Merck Patent GmbH*, 130 F.4th 1344, 1347–48 (Fed. Cir. 2025); *In re Anova Hearing Labs, Inc.*, 809 Fed. Appx. 840, 842–43 (Fed. Cir. Apr. 7, 2020) (Board’s failure to explain rational connections was a failure of “substantial evidence”); *VirnetX Inc. v. Cisco Sys. Inc.*, 776 Fed. Appx. 698, 702–03 (Fed. Cir. Jun. 28, 2019) (reversing issues on which the Board relied on only opinion, without evidence, failed to address an argument, and failed to set forth a factual finding interpreting the evidence); *In re Fought*, 941 F.3d 1175, 1178–79 (Fed. Cir. 2019) (reversing Board’s claim construction because unsupported by substantial evidence); *Schering-Plough Corp. v. Federal Trade Comm’n*, 402 F.3d 1056, 1063 (11th Cir. 2005).

³¹ *Arc Bridges, Inc. v. NLRB*, 861 F.3d 193, 197–200 (D.C. Cir. 2017).

³² *Tourus Records, Inc. v. DEA*, 259 F.3d 731, 737 (D.C. Cir. 2001) (Garland, J.).

losing party has the benefit of the burden of proof.³³ The APA guarantees a written explanation sufficient to “keep the administrative agency within proper authority and discretion,” “to avoid and prevent arbitrary, discriminatory, and irrational action,” and to “inform[] the aggrieved person of the grounds of the administrative action so that he can plan his course of action.”³⁴ The right to an explanation under § 555(e) is separate from and somewhat higher than the right under § 132. The PTO must observe whichever law is highest in a given instance.³⁵ The U.S. Supreme Court held that the burden on an agency of proving factual propositions is the burden of *persuasion*, proof by a preponderance of the evidence,³⁶ and the evidence must be “substantial.”³⁷

To avoid being “arbitrary and capricious” under 5 U.S.C. § 706(2)(A), an agency decision must demonstrate “reasoned decisionmaking” as elaborated in *Motor Vehicle Mfrs. Ass’n of United States, Inc. v. State Farm Mutual Auto. Ins. Co.* (one of the most-cited cases in administrative law, always referred to as “*State Farm*”).³⁸ At a minimum, agency decisions must “examine the relevant data and articulate a satisfactory explanation for its action including

³³ *Katzson Bros., Inc. v. EPA*, 839 F.2d 1396, 1400 (10th Cir. 1988).

³⁴ *McHenry v. Bond*, 668 F.2d 1185, 1192 (11th Cir. 1982); *Reeder v. James*, 121 F. Supp. 3d 1, 9 (D. D.C. 2015).

³⁵ 5 U.S.C. § 559 (§ 555(e) applies to all agency proceedings unless carved-out expressly); *FCC v. NextWave Personal Communs., Inc.*, 537 U.S. 293, 300, 303–04 (2003) (“The Administrative Procedure Act requires federal courts to set aside federal agency action that is ‘not in accordance with law,’ 5 U.S.C. § 706(2)(A)—which means, of course, any law, and not merely those laws that the agency itself is charged with administering.”).

³⁶ *Dir. Off. of Workers’ Comp. Programs, Dep’t of Labor v. Greenwich Collieries*, 512 U.S. 267, 276 (1994).

³⁷ *Universal Camera Corp. v. Nat’l Labor Relations Bd.*, 340 U.S. 474, 477, 478, 484, 487–88 (1951).

³⁸ *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mutual Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (“*State Farm*”).

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a ‘rational connection between the facts found and the choice made.’”³⁹ An agency may not “rel[y] on factors which Congress has not intended it to consider, [or] entirely fail to consider an important aspect of the problem.”⁴⁰

The major implementing regulation for these statutory obligations is 37 C.F.R. § 1.104. Rule 104 sets three obligations on the examiner:

- 37 C.F.R. § 1.104(c)(2) requires “In rejecting claims for want of novelty or for obviousness . . . [w]hen a reference is complex or shows or describes inventions other than that claimed. . . , the particular part relied on must be designated as nearly as practicable.” Note the broad applicability: any reference that contains *anything* extra relative to the claim, any reference that is anything more than one-for-one with the claim. Read in the context of § 555(e), § 1.104(c)(2) obligates the examiner to clearly and specifically designate the portions of the reference that form the basis for a rejection. For example, citing a long paragraph by paragraph number alone, without identifying specific components within that paragraph, is insufficient.

³⁹ *State Farm*, 463 U.S. at 43.

⁴⁰ *State Farm*, 463 U.S. at 43; *Icon Health and Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043–44 (Fed. Cir. 2017) (Court vacates the Board, because the Board “failed to make the requisite factual findings or provide the attendant explanation.”); *Ex parte Berg*, Appeal No. 2002-0456, slip op. at 4 (B.P.A.I. Feb. 6, 2003) (unpublished) (“[T]he examiner must present a full and reasoned explanation of the rejection in the statement of the rejection, specifically identifying underlying facts and any supporting evidence, in order for appellants to have a meaningful opportunity to respond.”); *Ex parte Schricker*, 56 U.S.P.Q.2d 1723, 1725 (B.P.A.I. 2000) (applicants are not required to “guess as to the basis of the rejection” or to “further guess . . . what part of [the references] supports the rejection”).

- 37 C.F.R. § 1.104(c)(2) also requires “The pertinence of each reference, if not apparent, must be clearly explained.” The examiner may not leave you to guess.
- 37 C.F.R. § 1.104(d)(2) requires “When a rejection . . . is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee.” Notice that this applies to any assertion of fact by the examiner, whether inherency, official notice, well-known, or any other examiner personal opinion without a cite to evidence.

An examiner is required to follow whichever of these laws is strictest in any specific context.⁴¹

F. Who has what burden on what issue?

1. Issues of fact where appellant has benefit of both components of burden of proof

The following are issues of fact where you (the appellant) are on the favorable side of the burden of proof—that is, the examiner must satisfy the burden of production of evidence and the burden of offering an explanation that connects the evidence to the examiner’s conclusion, and does so more persuasively than the applicant’s. Importantly for appeal, the examiner bears the risk of non-persuasion:

- For § 101 subject matter, the “something more” factors under Step 2 of *Alice*⁴²

⁴¹ See cases cited *supra* note 35; *Accardi* principle, *supra* § II(G)(2).

⁴² *Alice Corp. Pty. v. CLS Bank Int’l*, 573 U.S. 208 (2014).

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- Public nature of a prior use, and whether a reference was publicly accessible⁴³
- The content and interpretation of a reference⁴⁴
- Anticipation, including inherency⁴⁵
- The differences between the claim (as construed) and the reference⁴⁴
- The underlying facts for *prima facie* obviousness: motivation to modify or combine,⁴⁶ reasonable expectation of success,⁴⁷ the difference between the prior art and the claim⁴⁵—*but not the Graham* secondary considerations of nonobviousness
- Written description⁴⁸
- For § 112(a) enablement, the underlying *Wands* factors⁴⁹
- Best mode⁵⁰

⁴³ *Ingenico Inc. v. Ioengine, LLC*, 136 F.4th 1354, 1363 (Fed. Cir. 2025); *Medtronic, Inc. v. Barry*, 891 F.3d 1368, 1380 (Fed. Cir. 2018).

⁴⁴ *Allergan, Inc. v. Sandoz, Inc.*, 796 F.3d 1293, 1303 (Fed. Cir. 2015); *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1280 (Fed. Cir. 2015) (“What a reference teaches and the differences between the claimed invention and the prior art are questions of fact.”).

⁴⁵ *In re Best*, 562 F.2d 1252, 1254–55 (C.C.P.A. 1977).

⁴⁶ “Motivation to combine” requires evidence, and explanation to connect that evidence to “motivation.” *In re NuVasive, Inc.*, 842 F.3d 1376, 1381–82 (Fed. Cir. 2016); *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1327 (Fed. Cir. 2012); however, some tests are inadequate as a matter of law. *Virtek Vision Int’l ULC v Assembly Guidance Sys.*, 97 F.4th 772, 886–87 (Fed. Cir. 2024) (reversing the Board as a matter of law because the Board applied an improper test—mere existence of two arrangements in the prior art does not provide motivation to combine them).

⁴⁷ *ActiveVideo*, 694 F.3d at 1328.

⁴⁸ *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351, 1355 (Fed. Cir. 2010) (en banc).

⁴⁹ See *In re Wands*, 858 F.2d 731 (Fed. Cir. 1988); MPEP § 2164.01(a) (9th ed. Rev. 01.2024, Nov. 2024).

2. Issues of fact where appellant has burden of going forward or production, but then has benefit of burden of persuasion

It's important to understand that the burden of production is separate from the burden of persuasion. For some issues, once the examiner makes an initial showing, the burden of going forward with argument or evidence is on the appellant, while the ultimate burden of persuasion is on the examiner. For some of these, you meet your burden by simply raising the issue by argument. For several (including the *Graham* factors), you must provide *evidence*:

- Utility under § 101: the initial presumption is that a patent applicant's assertion of utility is correct; however, once an examiner makes an initial showing of lack of utility, the burden shifts to the applicant to submit evidence.⁵¹
- "Level of ordinary skill" is rarely relevant, but when it is, it is the appellant's burden to "place[] the level of ordinary skill in the art in dispute and *explain[] with particularity how the dispute would alter the outcome.*"⁵² You must identify what the ordinary level is, and show why it affects obviousness.
- For nonanalogous art, you can't just toss up a jump ball, "The examiner makes no showing." Accept that, as a practical matter, the burden of going forward shifts to you—typically, you must identify two fields of endeavor and two problems, and show that they're different. Once

⁵⁰ *Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1535–36 (Fed. Cir. 1987).

⁵¹ *In re Swartz*, 232 F.3d 862, 864 (Fed. Cir. 2000).

⁵² *In re Fought*, 941 F.3d 1175, 1179 (Fed. Cir. 2019) (emphasis added).

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you’ve done that, then the burden of *persuasion* is on the examiner.⁵³

- To rebut “motivation to combine” based on “change the principle of operation,” or “render the prior art unsatisfactory for its intended purpose” (MPEP § 2143.01(V) and (VI)) or “combination fails to achieve the invention,”⁵⁴ you must identify a principle or intended purpose, and make a showing. Again, that puts the burden of *persuasion* back on the examiner.
- “Reasonable expectation of success” and “combination achieves the invention”⁵⁵ can be relevant in the mechanical/ electrical/computer arts. To raise these issues, you have to make a showing, not just comment on examiner silence.
- An argument on any of the *Graham* secondary considerations (commercial success, long felt but unsolved need, failure of others, unexpected results, skepticism or disbelief, copying, praise, industry acceptance, etc.) requires “objective evidence of nonobviousness,” not just argument. For example, it is your burden to prove “nexus” between factors such as “commercial success” and the claimed features.⁵⁶ But once you have met your burden on those subsidiary issues, patentability is decided on the whole record,

⁵³ Netflix, Inc. v. DivX, LLC, 80 F.4th 1352, 1360 (Fed. Cir. 2023).

⁵⁴ MPEP §§ 2143.01(V), 2143.01(VI) (9th ed. Rev. 01.2024, Nov. 2024); ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc., 694 F.3d 1312, 1328 (Fed. Cir. 2012); *In re* Magnum Oil Tools Int’l, Ltd., 829 F.3d 1364, 1381 (Fed. Cir. 2016).

⁵⁵ See cases cited *supra* note 54.

⁵⁶ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966); *Brown & Williamson Tobacco Corp. v. Philip Morris, Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000); *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1382 (Fed. Cir. 1988).

under a burden of persuasion favoring the applicant.⁵⁷

- For “overlapping range” cases, once the examiner shows an overlap, *prima facie* obviousness is presumed, and the burden shifts to the applicant to rebut and show “criticality” by substantial evidence.⁵⁸
- For written description and enablement, the examiner can put up a *prima facie* case on fairly minimal explanation. That shifts the burden of going forward to you to genuinely show the requisite correspondence between the specification and specifically-challenged aspect of the claim.⁵⁹

On these issues, the examiner doesn’t have to address them in an Office action. They only come into the case after you meet your burden of going forward by raising the argument. Once you do, that puts the burden of persuasion back on the examiner, and the Board has to give you the benefit of the burden of persuasion.⁶⁰

The Federal Circuit has explained this split of the two burdens on multiple occasions;⁶¹ yet the Board’s cases

⁵⁷ See cases cited *supra* notes 7, 8, 12, 13, 14, 15; *infra* 61.

⁵⁸ *Ineos USA LLC v. Berry Plastics Corp.*, 783 F.3d 865, 870 (Fed. Cir. 2015).

⁵⁹ *Hyatt v. Dudas*, 551 F.3d 1307, 1313 (Fed. Cir. 2008).

⁶⁰ See cases cited *supra* notes 7, 8, 12, 13, 14, 15; *infra* note 61.

⁶¹ See *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992); *In re Rinehart*, 531 F.2d 1048, 1052 (C.C.P.A. 1976) (“When *prima facie* obviousness is established and evidence is submitted in rebuttal, the decision-maker must start over. . . . Facts established by rebuttal evidence must be evaluated along with the facts on which the earlier conclusion was reached, not against the conclusion itself. Though the tribunal must begin anew, a final finding of obviousness may of course be reached, but such finding will rest upon evaluation of all facts in evidence, uninfluenced by any earlier conclusion reached by an earlier board upon a different record.”).

demonstrate a recurring failure to apply the concept.⁶² That requires prophylactic action on your part.

3. Issues of fact where appellant must carry both components of the burden of proof

For the following issues of fact, you have the burden of proof. That is, you should not appeal these unless you have actual evidence on your side of the balance—argument alone won’t cut it:

- Inoperability or non-enablement of prior art for § 102—to rebut anticipation on this ground requires a preponderance of *evidence* that overcomes the presumption of operability.⁶³ (In contrast, for § 103 “reasonable expectation of success,” the burden is on the examiner.)
- Once a claim is construed as product-by-process, the burden shifts to the applicant to come forward with evidence establishing a nonobvious difference between the claimed product and the prior art product.⁶⁴
- Derivation.⁶⁵

4. “Broadest reasonable interpretation”

On issues of claim interpretation, “broadest reasonable interpretation” is a different standard than the “ordinary meaning” standard used in litigation. The difference has special force for terms that are highly specific to a narrow field and haven’t made it into

⁶² See cases cited *supra* notes 95, 99–109, 122, 152.

⁶³ *Amgen Inc. v. Hoechst Marion Roussel*, 314 F.3d 1313, 1355 (Fed. Cir. 2003) (citing *In re Sasse*, 629 F.2d 675, 681 (C.C.P.A. 1980)).

⁶⁴ *In re Marosi*, 710 F.2d 799, 803 (Fed. Cir. 1983).

⁶⁵ *Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1344 (Fed. Cir. 2003).

dictionaries. As a practical matter, you should assume that the Board will only honor the definition of a term if:

- (a) The definition is stated in the claim itself.
- (b) The term is defined in a dictionary, treatise, or other reliable document, and you provide that definition in the evidence appendix.⁶⁶
- (c) In the specification, you have a sentence in the form of a definition: “The term ‘x’ means ‘y.’” Examples in the specification that are not in the form of a definition are not limiting, at least not in any predictable, practical sense.⁶⁷ (And of course you don’t want them to be—to construe a term, do you want an infringer to look for every mention of the term in the specification, and argue that the term as used in the claims imports every one of those limitations?)
- (d) If it’s a term of art in a narrow field, and you can’t find a dictionary definition, or there are multiple definitions and in context only one is applicable (for example, the term “segment” in computer memory system design), you need a declaration of an expert. (Expert declarations giving an expert’s opinion on the definition of a term of art are low-risk.)

Without one of those four, you must assume that the “broadest reasonable interpretation” is constrained only by the outermost periphery of “reasonable.” Definitions in your arguments carry no weight at all. For IPRs/PGRs that were decided on “broadest reasonable interpretation” (from

⁶⁶ MPEP § 2111 (9th ed. Rev. 01.2024, Nov. 2024); *see infra* Section V(E).

⁶⁷ *Thorner v. Sony Computer Entertainment America LLC*, 669 F.3d 1362 (Fed. Cir. 2012).

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2012–2019),⁶⁸ the Federal Circuit was willing to narrow claim construction based on the specification, but an appellant can't count on that at the Board in an *ex parte* appeal. MPEP § 2111 gives a long string cite that suggests that there are limits, notably categories (a), (b), and (c).⁶⁹ While the string cite of § 2111 implies there are other “rules of reason” that govern over examiner opinion, § 2111 doesn't give an actionable principle that you can rely on.⁷⁰

It's an appellant's burden to challenge an unreasonable “broadest reasonable interpretation,”⁷¹ but once challenged, the burden of persuasion is on the examiner.⁷² For individual claim terms or phrases,

⁶⁸ Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51340 (Oct. 11, 2018).

⁶⁹ MPEP § 2111 (9th ed. Rev. 31, Jan. 2024).

⁷⁰ On claim construction, you must assume that the examiner wins, unless you show that the examiner's construction is entirely unreasonable. *E.g.*, *Ex parte Koch*, Appeal No. 2020-005427, slip op. at 6-7 (P.T.A.B. Jul 2, 2021) (construing “inconclusive, ambiguous, or contradictory” sensor inputs to be any sensor reading that may have some unmeasured context, no matter how unambiguous and consistent the signal itself may be).

⁷¹ *In re Morris*, 127 F.3d 1048, 1057 (Fed. Cir. 1997).

⁷² *Ex parte Zhao*, Appeal No. 2020-002949, slip op. at 5–6 (P.T.A.B. Mar. 30, 2021) (*Oetiker* initial burden, in presenting a *prima facie* case on prior art *or any other ground*, requires examiner to present *prima facie* case, including use of a reasonable claim interpretation); *Ex parte Jeannot*, Appeal No. 2020-000547, slip op. at 14–15 (P.T.A.B. Nov. 10, 2020) (reversing examiner because examiner failed to identify evidence supporting examiner's interpretation); *Ex parte Boyle*, Appeal No. 2019-001292, slip op. at 9 (B.P.A.I. Dec. 27, 2019) (as part of examiner's initial burden of establishing a *prima facie* case of obviousness, examiner must advance a reasonable claim interpretation); *Ex parte Aas*, Appeal No. 2012-009083, slip op. at 4 (P.T.A.B. Jul 30, 2014) (reversing because examiner failed to explain basis for construction); *Ex parte Charlton*, Appeal No. 95-4253, slip op. at 2 (B.P.A.I. Mar. 22, 1999) (unpublished) (“The examiner has premised

especially terms of art in the specific technical field, the “ordinary meaning” is an issue of fact,⁷³ so on these, once challenged, the examiner must come forward with *evidence*.

5. Issues of law

The following are issues of law, so there is no burden of persuasion at all—but that means a declaration will be ineffective on them *as ultimate issues*:

- Claim interpretation is a question of law, reviewed *de novo* for whether the PTO’s “broadest reasonable interpretation” is “reasonable,” “consistent with the specification,” and “as it would be interpreted

the rejection on [a specified claim construction] but has not submitted any reason why one of ordinary skill in the art would find that the broadest reasonable interpretation [meets the examiner’s position] . . . We must conclude that the examiner has failed to make out a *prima facie* case of obviousness with respect to the appealed claims as a whole since he has not provided evidence and/or scientific reasons in the record why one of ordinary skill in this art would have [construed the claim as the examiner argues].”); *see also In re Fought*, 941 F.3d 1175, 1178–79 (Fed. Cir. 2019) (reversing Board’s claim construction because unsupported by substantial evidence); *Webb v. Osborne*, Interference No. 102,602, 1994 Pat. App. LEXIS 1, *7–*8 (B.P.A.I. Sep. 20, 1994) (junior party has burden of proof on broadest reasonable interpretation); *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992); 5 U.S.C. § 555(e) (general agency obligation to respond to arguments, *see supra* text accompanying footnotes 32–40); *but see In re Jung*, 637 F.3d 1356, 1363 (Fed. Cir. 2011) (“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”—surely that’s correct, that an examiner need not address issues that are not in controversy, but the parties in *Jung* did not raise agency’s § 555(e) obligation to engage on *single* issues of a *specifically-challenged* claim construction, so there is no decision on that issue).

⁷³ *Teva Pharmaceuticals USA v. Sandoz, Inc.*, 574 U.S. 318, 325–27 (2015).

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by one of ordinary skill in the art,” subject to underlying issues of fact for individual words and phrases.⁷⁴

- Under the *Alice* formulation of § 101, whether a claim is “directed to” an abstract idea or law of nature, with underlying fact inquiries⁷⁵
- Ultimate legal conclusion of obviousness, though subject to underlying issues of fact.⁷⁶
- The ultimate conclusion of enablement, subject to the underlying *Wands* issues of fact.⁷⁷
- Definiteness⁷⁴
- Obviousness-type double patenting is an issue of law premised on underlying factual inquiries.⁷⁸

An effective declaration can testify to underlying issues, but not these issues of law as ultimate issues.

⁷⁴ *Id.*

⁷⁵ *Alice Corp. Pty. v. CLS Bank Int’l*, 573 U.S. 208 (2014). As this article goes to press in spring 2026, during intra-PTO proceedings, the operative law is 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) and the *October 2019 Update: Subject Matter Eligibility* (Oct. 17, 2019), available at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf [<https://perma.cc/GT7C-Y5JA>].

⁷⁶ *In re Google LLC*, 56 F.4th 1363, 1367 (Fed. Cir. 2023); *In re NuVasive, Inc.*, 842 F.3d 1376, 1381 (Fed. Cir. 2016).

⁷⁷ *U.S. Synthetic Corp. v. ITC*, 128 F.4th 1272, 1285 (Fed. Cir. 2025).

⁷⁸ *Allergan USA, Inc. v. MSN Labs. Priv. Ltd.*, 111 F.4th 1358, 1366 (Fed. Cir. 2024).

G. Subregulatory guidance has asymmetric legal effect⁷⁹

1. The MPEP is not binding against the public

The PTO may not use subregulatory guidance to bind the public.⁸⁰ To bind the public, the PTO must act by *regulation*.⁸¹ The Foreword to the MPEP assures that “[t]his Manual . . . does not have the force and effect of law or the force of the rules in Title 37 of the Code of Federal Regulation, and are not meant to bind the public in any

⁷⁹ The role of subregulatory guidance (both nonenforceability against the public and binding effect against agency employees) is explained at David Boundy, *The PTAB is Not an Article III Court, Part 3: Precedential and Informative Opinions*, 47 AIPLA Q. J. 1, 13 n.46, 14 n.49 (2019) (a “director’s cut” with additions reflecting subsequent case law is at <https://ssrn.com/abstract=3258694>), and David Boundy, *What Every Patent and Trademark Lawyer Should Understand About the MPEP, TMPEP, and Other Guidance: How to Use (and Defend Against) the MPEP to be a Better Advocate*, 2023 PATENTLY-O PATENT L.J. 1 (Jan. 10, 2023), available at <https://ssrn.com/abstract=4326469>.

⁸⁰ 35 U.S.C. § 2(b)(2)(A) (“The Office . . . may establish regulations, not inconsistent with law, which . . . shall govern the conduct of proceedings in the Office.”); *Facebook, Inc. v. Windy City Innovations, LLC*, 973 F.3d 1321, 1350 (Fed. Cir. 2020) (additional views of unanimous panel) (when a statute requires “regulations,” the PTO may not substitute sub-regulatory guidance); *Aqua Prods., Inc. v. Matal*, 872 F.3d 1290, 1331 (Fed. Cir. 2017) (Moore, J., concurring) (“It is not for courts to second guess Congress’ decision that the Director must effect such rulemaking through regulation.”).

15 C.F.R. § 29.2 (in effect from 2019 until the last weeks of the Biden administration, and likely to be reenacted in due course), Executive Orders 12866, 13891, 13892, and the President’s *Bulletin for Agency Good Guidance Practices*, *infra* note 87, remind agencies that they may not enforce subregulatory guidance as binding against the public.

On the other hand, subregulatory guidance stated in mandatory terms is binding *unilaterally* against the agency and against agency employees. *See infra* Section II(G)(2).

⁸¹ 35 U.S.C. § 2(b)(2).

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way.”⁸² The Federal Circuit has criticized the PTAB for relying on the MPEP when it is inconsistent with Federal Circuit law.⁸³ Purporting to bind the public via MPEP guidance is unlawful.

This is hornbook law that applies to the entire federal government—applying equally to the PTO.⁸⁴

⁸² MPEP Foreword (9th ed. Rev. 01.2024, Jan. 2024).

⁸³ As a general rule, the MPEP may not be enforced if it conflicts with statute or regulation, or if it imposes an obligation against you that is not fairly within the scope of interpretation of a statute or regulation. *In re Youman*, 679 F.3d 1335, 1345 (Fed. Cir. 2012) (criticizing the PTAB for relying on the MPEP); *In re Mostafazadeh*, 643 F.3d 1353, 1360 (Fed. Cir. 2011) (same); *Belkin Int’l, Inc. v. Kappos*, 696 F.3d 1379, 1384 (Fed. Cir. 2012) (“Statutes rank higher than regulations, which rank higher than the MPEP.”); *EmeraChem Holdings, LLC v. Volkswagen Group of Am., Inc.*, 859 F.3d 1341, 1348 (Fed. Cir. 2017) (“To the extent the MPEP describes our case law differently, however, [the MPEP’s interpretation does not control.]. The MPEP is “entitled to judicial notice ‘so far as it is an official *interpretation* of statutes or regulations *with which it is not in conflict*.’” *Airbus S.A.S. v. Firepass Corp.*, 793 F.3d 1376, 1380 (Fed. Cir. 2015) (emphasis added).

⁸⁴ *Chrysler Corp. v. Brown*, 441 U.S. 281, 295, 313–315 (1979). The statutes that apply by default to govern rulemaking include the Administrative Procedure Act (“APA,” 5 U.S.C. § 552(a)(1) and (2), § 553); the Regulatory Flexibility Act (5 U.S.C. § 603 and 604); the Paperwork Reduction Act (44 U.S.C. §§ 3506, 3507, 3512; 5 C.F.R. §§ 1320.8, .10, and .12) especially 44 U.S.C. § 3512, 5 C.F.R. § 1320.6 (if an agency skips steps under the Paperwork Reduction Act, the agency may not penalize a party that attempts to comply with statute by a reasonable mechanism outside the agency’s rule). None permit an agency to enforce a rule promulgated as subregulatory guidance. *Perez v. Mortgage Bankers Ass’n*, 575 U.S. 92, 97 (2015) (“Interpretive rules [issued without notice-and-comment] “do not have the force and effect of law and are not accorded that weight in the adjudicatory process.”); *Mid-Continent Nail Corp. v. U.S.*, 846 F.3d 1364, 1368 (Fed Cir. 2017) (vacating an agency adjudication because that adjudication relied on a rule that had been promulgated under defective procedure); *Center for Auto Safety v. Nat’l Highway Traffic Safety Admin.*, 244 F.3d 144, 148–49 (D.C. Cir. 2001) (limiting a decision of NHTSA because of defects in an agency’s Paperwork procedures).

Agencies are forbidden from enforcing guidance documents against any member of the public—to bind the public, an agency must promulgate *regulations* via whatever procedural rules the relevant statute requires. The Supreme Court has held that when an agency exercises the § 553(b)(A) opt-out to adopt a rule without notice and comment, the agency “pays a price:” subregulatory guidance may not be given force of law against the public.⁸⁵

Where the law is otherwise silent, an agency may use guidance to give advisory instructions to tentatively fill the gap, but that guidance may not be enforced with force of law.⁸⁶

Every president since Bill Clinton has issued executive orders and presidential memoranda reminding agencies that they are *not* to treat guidance as binding against the public, are to remove “must” statements from guidance that go beyond interpreting statute or regulation, and are to have personnel and processes in place to ensure that guidance documents comply with lawful limits.⁸⁷ As this article goes to press in 2026, President Trump’s Executive Orders 13891 and 13892 couldn’t be clearer:

⁸⁵ *Perez*, 575 U.S. at 97; *see also* guidance cases cited *supra* note 84.

⁸⁶ *Christensen v. Harris Cnty.*, 529 U.S. 576, 588 (2000); *Aqua Prods.*, *supra* note 80, 872 F.3d at 1316 (O’Malley lead plurality opinion) (“*Auer* does not authorize an agency to rewrite its regulations in the guise of ‘interpretation.’”).

⁸⁷ E.g., Executive Office of the President, OMB Bulletin 07-02, Final Bulletin for Agency Good Guidance Practices, <https://georgewbush-whitehouse.archives.gov/omb/memoranda/fy2007/m07-07.pdf> [<https://perma.cc/G697-GMVK>] (Jan. 18, 2007), reprinted 72 Fed. Reg. 3432 (Jan. 25, 2007) has remained in effect almost continuously since 2007, and requires agencies to review their guidance documents to remove impermissible content and to train employees in proper use of guidance. In decades of practice, the author has not found a way to explain to an examiner or a petitions decision-maker that reliance on the MPEP or other subregulatory guidance is unlawful, and that Federal Circuit law should control.

neither an examiner nor the Board may rely on the MPEP to “impose new standards of conduct on persons outside the executive branch.”⁸⁸ Guidance may not bind against the public, and guidance stated in mandatory terms is not an authorized exercise of agency authority. The PTO has taken no observable action to implement any of these presidential directives.

2. The MPEP is binding against agency employees

Once an agency issues guidance that uses mandatory language to state obligations of agency employees with respect to “important procedural benefits” to the public, or publishes an “interpretative” rule interpreting the agency’s statute or regulation, agency employees (including ALJs) are bound, the public is entitled to rely on employees’ observing the guidance, and the agency is obligated to enforce the procedural commitments it makes to the public.⁸⁹ Guidance and

⁸⁸ Exec. Order No. 13892 § 3. The PTAB defies the President. *E.g.*, *Ex parte* Rosas-Maxemin, Appeal No. 2024-002588, slip op. at 12 (P.T.A.B. Apr. 2, 2025).

⁸⁹ Named for *United States ex rel. Accardi v. Shaughnessy*, 347 U.S. 260 (1954). *Service v. Dulles*, 354 U.S. 363, 386–88 (1957) (once an agency adopts an employee staff manual, even though unpublished, “having done so [the Secretary of State] could not, so long as the [staff manual] remained unchanged, proceed without regard to them”); *Vitarelli v. Seaton*, 359 U.S. 535, 539–40 (1959) (“Because the proceedings [underlying the agency action] fell substantially short of the requirements of the applicable departmental [subregulatory guidance], we hold that such [agency action] was illegal and of no effect.”); *Sargisson v. United States*, 913 F.2d 918, 921 (Fed. Cir. 1990) (agency rules may constitute an independent basis for judicial review, over and above any substantive statute: “once the Secretary promulgated regulations and instructions ..., his action became the subject of judicial review for compliance with those regulations and instructions, even though he was not required to issue them at all”); *Voge v. United States*, 844 F.2d 776, 779 (Fed. Cir. 1988) (“It has long

regulations that state obligations on agency decision-making “even though generous beyond [statutes] binding the agency . . . must be scrupulously observed.”⁹⁰ An agency may amend its guidance after due deliberation and without notice and comment, but employees do not have individual authority to depart without appropriate justification and supervisory concurrence.⁹¹

H. Vocabulary: “entered”

“Entered” is a technical term of art. It doesn’t mean “I uploaded it into Patent Center and clicked ‘submit’ and I can see it in Patent Center.” It means that some gatekeeper—typically the examiner—checked that it complies with requisite rules, and formally “entered” it. Amendments that are filed out of time, or after final without one of the showings of § 1.116(a), are in the record, but not “entered.” Evidence that is filed outside the deadlines of § 1.116(e) or § 41.33 is not “entered.”

III. RECURRING PROBLEM: INCORRECT STANDARD OF REVIEW

It’s commonplace that different standards of review apply to the same case at different stages. On appeal at the Federal Circuit, the court applies the standards of 5 U.S.C.

been established that government officers must follow their own regulations, even if they were not compelled to have them at all . . .”). *See. e.g., In re Kaghan*, 387 F.2d 398, 401 (C.C.P.A. 1967) (“[W]e feel that an applicant should be entitled to rely not only on the statutes and Rules of Practice but also on the provisions of the MPEP in the prosecution of his patent application.”). *See also* 35 U.S.C. § 3(b)(2)(A) (Commissioner for Patents “shall be responsible for the management and direction of all aspects of the activities of the Office that affect the administration of patent . . . operations”); Gillian Metzger, *The Constitutional Duty To Supervise*, 124 YALE L.J. 1836 (2015).

⁹⁰ *Service*, *supra* note 89, 354 U.S. at 386–88.

⁹¹ *See supra* note 89.

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§ 706, which are generally deferential to the agency.⁹² In contrast, on issues of fact, the PTAB is supposed to apply a *de novo* “preponderance of evidence” standard that tips the balance in favor of the appellant.⁹³

Directly contrary, the PTO’s only published Federal Register notice on the issue takes the position that the two standards should be the same—a position in tension with well-established Federal Circuit precedent. In 2008, the PTO attempted to amend the appeal rules to shift the burden to the appellant.⁹⁴ The PTO gave a three-column explanation in the Federal Register that the Board would use a deferential standard of review analogous to the Court’s court/agency review:

In most appellate administrative and court tribunals, a decision under review is presumed to be correct until an appellant can convince the appellate tribunal that the decision is incorrect . . .

If an appellant believes the examiner has not satisfied the examiner’s initial burden, then an appellant needs

⁹² See JONATHAN GAFFNEY, CONG. RSCH. SERV., LSB10558, JUDICIAL REVIEW UNDER THE ADMINISTRATIVE PROCEDURE ACT (APA) 3 (2024).

⁹³ See cases cited *supra* Section II(A) and notes 7, 8, 12, 13, 14, 15, 61, 72.

⁹⁴ The authors of this article were involved in the proceedings at the Office of Management and Budget that resulted in quashing this rule. Gene Quinn, *PTO Proposes Rescission of Stayed Ex Parte Appeals Rules*, IPWATCHDOG (Nov. 15, 2010), <https://ipwatchdog.com/2010/11/15/pto-proposes-rescission-of-stayed-ex-parte-appeals-rules> [<https://perma.cc/4Y97-PB4L>]; Dennis Crouch, *New Patent Appeals Rules: Delayed by Whitehouse OMB*, PATENTLY-O (Dec. 9, 2008), <https://patentlyo.com/patent/2008/12/new-patent-appe.html> [<https://perma.cc/L2RX-74EQ>]; Stephen Jenei, *OMB Runs Out the Clock on Appeal Rules. Will the USPTO Force an Overtime?*, PATENT BARISTAS (Dec. 9, 2008), available at <https://patentbaristas.com/archives/2008/12/09/omb-runs-out-the-clock-on-appeal-rules-will-the-uspto-force-an-overtime> [<https://perma.cc/5RCW-8B28>].

to convince the Board that there is no *prima facie* case. . . .

[A comment opposing the amendment] overlooks similarities between an appeal to the Board and a subsequent appeal to the Federal Circuit. . . . Just as the Board is presumed to have been correct in the Federal Circuit, until the contrary is shown to the satisfaction of the Federal Circuit, the examiner should be presumed to have been correct on appeal to the Board until the contrary is shown to the satisfaction of the Board.⁹⁵

This explanation is difficult to reconcile with governing law.

First, of course, the PTAB failed to explain how its “presumed to be correct” assumption squares with statute and the Federal Circuit. As explained in Section II(A), for almost all issues of fact, the burden of persuasion is against the examiner; almost never does the law place the burden on the “appellant . . . to convince the Board that there is no *prima facie* case.”⁹⁶ That’s the Article III court/agency standard of review from 5 U.S.C. § 706(2), not the intra-agency Board/examiner standard of review.

Second, the assertion of “most appellate administrative tribunals” is not correct. In agencies that use non-lawyer hearing officers to make initial determinations and then provide an appeal to an administrative judge, applying a *de novo* preponderance standard is common.⁹⁷ Though not as strong as a “presumption,” the standard of

⁹⁵ Rules of Practice Before the Board of Patent Appeals in *Ex Parte* Appeals, Final rule, 73 Fed. Reg. 32937, 32960–61, response to comments 48–61 (Jun. 10, 2008).

⁹⁶ See cases cited *infra* notes 6, 7, 8.

⁹⁷ *E.g.*, 20 C.F.R. § 404.929, § 422.203(c) (2026) (social security appeals are open record, preponderance of evidence); 7 C.F.R. § 1.329 (2026) (from initial decisions re fraudulent claims at Department of Agriculture, appeals are redetermined on preponderance standard).

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review in “most appellate administrative tribunals” is *against the lower fact-finder*, not the appellant.

Third, “similarities” between court/agency review and the PTAB’s review of examiners are few. Six years before this notice, in *Kollar*,⁹⁸ the Federal Circuit had contrasted the two standards of review: for the *PTAB*, the standard is “preponderance of evidence” (a first instance standard of proof), while on review *at the Federal Circuit*, the § 706(2) standard of review applies, including “substantial evidence.” The 2008 notice fails to account for these well-established principles.

Though this 2008 rule did not go into effect, this 2008 Notice remains the PTO’s only Federal Register interpretation of the language now in 37 C.F.R. § 41.37(c)(1)(iv), “The arguments shall explain why the examiner erred.”

On issues where the burden of proof favors the appellant, Board decisions frequently suggest lack of appreciation for the law of “evidence” and “burdens” and the role of rebuttal argument, and depart from the plain language of § 41.37(c)(1)(iv). Surprisingly often, the Board uses court/agency review language like “We are not persuaded that the examiner erred”⁹⁹ or “Appellant has not

⁹⁸ *In re Kollar*, 286 F.3d 1326, 1329 (Fed. Cir. 2002).

⁹⁹ 37 C.F.R. § 41.37(c)(1)(iv) only requires the appellant to “explain why,” not “persuade.” In contrast, LEXIS, “We are not persuaded that the examiner erred” (March 2026) gives over 4,000 hits; LEXIS ““not persuaded” /3 examiner /3 err!” yields over 10,000. *E.g.*, *Ex parte Huttelmaier*, Appeal No. 2017-005677, slip op. at 6–7 (P.T.A.B. Jan. 30, 2018) (“Appellants have not persuaded us of Examiner error:” in an *anticipation* analysis, accepting the examiner’s “could modify” analysis); *Srivastava*, *infra* note 102, slip op. at 4. 6 (“Appellants fail to persuade us the Examiner errs . . .”). Obviously not every one of the 10,000 is Board error; on a few issues, the burden *is* on the appellant to persuade the Board that the examiner erred. *See* Section II(F)(3). But these issues are quite rare.

persuasively . . .”¹⁰⁰ or “Appellant has the burden of showing that the Examiner was unreasonable to a preponderance of evidence”¹⁰¹ or “We find Appellant’s arguments unpersuasive”¹⁰² or “Appellant has not

¹⁰⁰ LEXIS, “Appellant has not persuasively” (March 2026) gives almost 1500 hits. *E.g.*, *Ex parte* Kim, Appeal No. 2022-004325, slip op. at 7 (P.T.A.B. May 24, 2023) (brushing aside the requirement that an “obvious to try” rationale requires a showing of motivation to modify or combine, “Appellant has not persuasively shown error in the Examiner’s [“obvious to try”] rationale;” “Appellant has not persuasively explained” a “changes principle of operation” argument, after accepting that the reference shows doing the two different things the same way, and the claim requires doing them different ways); *Ex parte* Johns, Appeal No. 2022-003219, slip op. at 4–5 (P.T.A.B. Feb 28, 2023) (in a case where the invention depends on which node of a network causes data to move, after conceding that the art and claim differ in the relevant respect, “Appellant has not persuasively shown error in the Examiner’s interpretation” of the reference); *Ex parte* Andersson, Appeal No. 2020-003475, slip op. at 8 (P.T.A.B. Dec. 18, 2020) (“Appellant has not provided any persuasive substantive argument beyond arguing a lack of showing by the Examiner . . .”).

¹⁰¹ LEXIS, “Appellant has the burden of showing” (March 2026) gives over 800 hits. *E.g.*, *Ex parte* Binder, Appeal No. 2020-005890, slip op. at 13 (P.T.A.B. Dec. 14, 2021) (citing no authority, “Nor is there persuasive evidence on this record proving that the examiner’s combination renders the prior art unsatisfactory for its intended purpose”—motivation to combine is the examiner’s burden, not the appellant’s); *Ex parte* Petersen, Appeal No. 2013-004816, slip op. at 6 (P.T.A.B. Jul. 17, 2015) (in a § 102 rejection where the issue is interpretation of the reference, “Appellants have the burden of showing that the Examiner’s interpretation is unreasonable”); *Ex parte* Ivri, Appeal No. 2012-004821, slip op. at 7 (Jan. 7, 2015) (citing no authority, “the Appellant has the burden of showing, by a preponderance of the evidence, that Examiner’s claim interpretation was unreasonably broad”).

¹⁰² LEXIS, “We find Appellant’s arguments unpersuasive” (March 2026) gives nearly 600 hits. *E.g.*, *Ex parte* Srivastava, Appeal No. 2015-003159, slip op. at 4–7 (P.T.A.B. June 26, 2017) (three invocations of wrong standard of review: “We find Appellants’ argument unpersuasive,” “Appellants fail to persuade us the Examiner errs,” and

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convinced us . . .”¹⁰³ or “We are not persuaded of harmful error”¹⁰⁴ or “Appellant has not shown by a preponderance of evidence that . . .”¹⁰⁵ or “The examiner cites sufficient

relying on APJ personal opinion to overrule an expert affidavit on the definition of term of art);

¹⁰³ LEXIS, “Appellant has not convinced us” (March 2026) gives over 130 hits. *E.g.*, *Ex parte* Xu, Appeal No. 2019-004840, slip op. at 8 (P.T.A.B. Jul 16, 2020) (in an invention relating to carbon nanostructures, after accepting examiner arguments with no discussion of appellant’s counterarguments, concluding with no explanation that “dual-component conductive carbon matrix” is in the art: “Appellant has not convinced us of reversible error”); *Ex parte* Bergner, Appeal No. 2010-006541, slip op. at 7–8 (P.T.A.B. Nov. 1, 2012) (after misstating the burden of proof for “motivation to combine” as “Appellant has not presented persuasive arguments or evidence as to why it would be unreasonable to combine,” concluding “Appellant has not convinced us of any error”); *Ex parte* Dane, Appeal No. 2010-009433, slip op. at 5–6 (P.T.A.B. Sep. 27, 2012) (after coining a new test for analogous art, “the simple mechanical nature of the claimed subject matter justifies searching a broad spectrum of art,” and assuming that the person of ordinary skill already knew of the problem, “Appellant has not convinced us of error in the rejection”).

¹⁰⁴ LEXIS, “We are not persuaded of harmful error” (March 2026) gives over 100 hits. *E.g.*, *Ex parte* Oliver, Appeal No. 2013-004340, slip op. at 3–4 (P.T.A.B. Jun. 8, 2015) (when claim recites “metallic foil wrapped” around an outside, and, the Board concedes, the art has “absence of embodiments in which a metal foil layer is outermost layer,” and reference shows only “outermost frictional insert wrapped . . . to increase the adhesive friction” (foils do not create friction; quite the opposite—in shear friction applications, they bind and tear), nonetheless, the Board holds “we are not persuaded of harmful error in the Examiner’s proposed combination”) The Board cites no authority that puts the burden on the appellant to show engineering failure.

¹⁰⁵ *E.g.*, *Ex parte* Nishiki, Appeal No. 2012-002333, slip op. at 8 (P.T.A.B. Sep. 2 2014) (“The Appellant has the burden of showing that the Examiner’s claim interpretation was unreasonable . . . by a preponderance of the evidence.”) The *Nishiki* panel misstates the burden: the appellant has the burden of *going forward* to raise the issue, but the *preponderance burden of persuasion* is against the *examiner*. See Section II(F)(4) and cases cited *supra* note 72.

evidence, and the explanation is reasonable”¹⁰⁶ or the Board dismisses the appellant’s argument as “conclusory” or “attorney argument,”¹⁰⁷ or finds in appellant’s favor on

¹⁰⁶ LEXIS, “(expla! /4 reasonab!) /s obvious!” (March, 2026) gives over 100 hits. *E.g.*, *Ex parte Aizenberg*, Appeal No. 2010-010865, slip op. at 5 (P.T.A.B. Mar. 1, 2013) (“The Examiner can satisfy [the test for obviousness] by showing some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness,” that is, the court/agency standard, without citing authority for this allocation of the burden, and without weighing the persuasive value of the appellant’s arguments, and explicitly rejecting the appellant’s demand that the examiner meet the burden). *In re Kahn*, 441 F.3d 977, 987-88 (Fed. Cir. 2006) holds that rational explanation is a *necessary* condition, not a *sufficient* standard of review.

¹⁰⁷ LEXIS, “conclusory OR ‘attorney argument’ OR ‘probative value’” (March 2026) gives over 10,000 hits. *E.g.*, *Ex parte Hong*, Appeal No. 2023-001215, slip op. at 10–11 (Feb. 27, 2023) (after the appeal brief gives a two-page analysis of why two prior art software techniques are incompatible, Judge MacDonald dismisses it: “Appellant asserts that ‘Stern is incapable of generating the general type of rules described in Gargi.’ However, this is a mere conclusory statement unsupported by factual evidence and is entitled to little probative value.” Judge MacDonald does not explain how two pages of explanation can be “conclusory.”); *Ex parte Reexamination of Pat. 9,736,689*, Appeal No. 2022-001642, slip op at 8–9 (P.T.A.B. Mar. 8, 2022) (after patent owner points out a key silence in the references and shows that examiner’s proposed combination won’t work, PTAB responds “such a contention is unsubstantiated on this record and, therefore, is mere attorney argument with low probative value . . . Moreover, [the mechanism] the Examiner proposes would have been at least an obvious variation to ordinarily skilled artisans”—it’s not an “obvious variation” if there’s no evidence!); *Ex parte Macher*, Appeal No. 2020-003737, slip op. at 4 (P.T.A.B. Jun. 8, 2021) (“Appellant asserts that hollow glass microspheres are fragile . . . Appellant provides no evidence to support this assertion. Therefore, it amounts to a mere conclusory statement that is entitled to little, if any, probative weight.”).

Many of these Board cases cite *Icon Health*, *supra* note 21, 849 F.3d at 1043, *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997); *In re Pearson*, 494 F.2d 1399, 1405 (C.C.P.A. 1974). This reflects a remarkable lack of understanding of administrative law. These are *court/agency* cases. In *court/agency* review, the § 706 standard of

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an underlying issue, but still decides in the examiner's favor even though a necessary prerequisite is now missing, because the appellant failed to disprove every conceivable possibility.¹⁰⁸ (On the other hand, even when the Board applies the wrong burden of proof, "appellant has shown by a preponderance . . ." or "we are persuaded of harmful error" sometimes the Board finds in the appellant's favor).¹⁰⁹ Such language is appropriate in the Federal

review favors the agency. In court/agency review, even new evidence (let alone attorney argument) is not sufficient to challenge an agency's finding of fact. *Icon Health* was an *inter partes* proceeding, and the burden of proof was against a party that offered only attorney argument. But none of those contexts are relevant to Board/examiner review on issues where the burdens favor the appellant, and "persuasiveness of argument" is sufficient to rebut an examiner's position. See cases cited *supra* notes 7, 8, 12, 13, 14, 15, 61. When the burden of proof is on the examiner, attorney argument directed to flaws in the examiner's evidence or explanation is *entirely* adequate to rebut. The pervasive failure by some APJs to honor the burden of proof is beyond baffling. Nonetheless, it's a fact of life that has persisted despite decades of Federal Circuit law to the contrary, and something you must take pains to guard against.

¹⁰⁸ *Ex parte* Kovach, Appeal No. 2025-002367, slip op. at 6–7 (P.T.A.B. Dec. 11, 2025) (after agreeing with the appellant that the examiner's claim construction was wrong, and therefore implicitly agreeing that the examiner had made no showing of obviousness on the correct construction, affirming anyway because the appellant "fails to address the merits and actual findings . . ."—in any other tribunal, claim construction is "the merits," and a failure to make an appropriate showing under the correct claim construction is the end of the matter); *Ex parte* Da Silva, Appeal No. 2024-002065, slip op. at 5 (P.T.A.B. Apr. 2, 2025) (Board shifts burden to the appellant to prove the negative, a document that doesn't mention a feature really didn't have it, instead of keeping the burden on the examiner to show that the document *does* teach the feature). In *Ex parte* Cousins, 16/246,076, Petition for Director Review, Exhibit B (Jan. 10, 2022) lists hundreds of PTAB decisions that use an incorrect statement of burden of proof.

¹⁰⁹ On claim construction, the burden is on the examiner to show "reasonable," not on the applicant to show unreasonable. See *supra* notes 71, 72. Nonetheless, even on the wrong standard of review,

Circuit's § 706 court/agency review, but apply the wrong standard of review and wrong burden of proof in a Board review of an examiner (on issues of fact where the burden of persuasion favors the appellant). Contrariwise, in the Board decisions reviewed for this article, strikingly *infrequently* the Board uses phrases like "The evidence has persuasively shown, and the examiner has persuasively explained . . ." or "In resolving the ambiguity in the evidence, the burden of persuasion favors the Appellant, so we reverse" or "The examiner's argument is unpersuasive." In a non-scientific survey, the statements of wrong standard of review are at least as common as correct ones.

The law is that the favorable end of "preponderance of evidence" burden of proof is to rest with the appellant—if a reference is ambiguous, the Board is supposed to weigh the two arguments, and the win is supposed to go to the appellant unless the examiner is *more* persuasive.¹¹⁰ In a substantial number of cases, the Board accepts the examiner's view as a starting point, and affirms it if there is any rational basis or some other standard of review that defers to the examiner.¹¹¹

Because an appellant cannot count on the Board applying the correct standard of review, Sections IV and V discuss techniques you can take to reduce the likelihood that the Board will misapply the law.

sometimes the Board rules in the appellant's favor. *Srivastava, supra* note 102 ("[W]e find a preponderance of the evidence supports Appellants contention."); *Ex parte Bidner*, Appeal No. 2014-003827, slip op. at 3 (P.T.A.B. May 27, 2016) (after stating the wrong standard of review, "Appellants have the burden of showing that the Examiner's interpretation of the disputed claim terms is unreasonable," nonetheless deciding in appellant's favor).

¹¹⁰ See cases cited notes 7, 8, 12, 13, 14, 15, 61.

¹¹¹ See *supra* notes 106, 109.

**IV. SETTING UP THE APPEAL DURING “REGULATION
TIME” PROSECUTION—EXAMINER ASSERTIONS
OF FACT WITHOUT EVIDENCE (INHERENCY,
OFFICIAL NOTICE, PERSONAL KNOWLEDGE,
COMMON SENSE, AND BALD ASSERTION)**

Whenever an examiner asserts an issue of fact based on official notice, personal opinion, or any other ground other than evidence (collectively, “fact-by-examiner-argument”), you should take proactive steps before appeal.

Once you sense that this application is likely to be appealed, then your overall focus shifts: in addition to persuading the examiner, now it’s just as important to get the markers down. In the author’s experience, most appeals arise from examiner *inaction*—silent failure to address claim language, silent failure to answer material traversed—and almost never from two well-articulated positions in opposition to each other. It’s *very* difficult to appeal a silence, because it’s impossible to know precisely what the disagreement *is*, let alone frame a pointed argument. Is the disagreement about claim construction, about the law, about the interpretation of the reference, about some other external fact, about the application of law to the facts, or something else? If the examiner is silent, you can’t really know, and you can’t target your argument. Appeal becomes doubly difficult because (unlike any other known appellate tribunal), the Board is free to fill in the examiner’s silence with a new ground.¹¹² That “new ground” power suggests that you should guess at what the Board will see that the examiner didn’t explain, and box it in as much as you can before appeal.

Therefore, it’s *really* important to make a *clear* (unmistakable, almost to the point of aggressive) demand

¹¹² 37 C.F.R. § 41.50(b) (2026).

for evidence or explanation, as the case may be. One of three things will happen, all of which are good:

- The examiner will provide evidence or explain something that you hadn't seen, and you can address it.
- The examiner will give an explanation that is clearly wrong, which makes the appeal easy.
- The examiner will stonewall, which at least gives you *something* to work with (see *infra* Section V(F)(2) for techniques to amplify and leverage examiner silence). Your demand must be so clear that the examiner's supervisor can see "clear error" in a pre-appeal.¹¹³

If the fundamental appeal issue is silence, then no later than the last reply before your Notice of Appeal, start laying the foundation, as *infra* Section V(C). It's easy to appeal examiner silence if you directly challenged the silence and demanded evidence or explanation with a cite to the applicable rule; it's harder to appeal if your challenges are ambiguous. Draw the line in the sand and dare the examiner to *not* step across.

On appeal to the Federal Circuit, the court will only affirm the Board's factual determination if the Board's conclusion had substantial evidence support, the Board explained its view of contrary evidence and argument, and the Board's fact-finding process was not arbitrary and capricious.¹¹⁴ An agency's bald assertion of Official notice,

¹¹³ New Pre-Appeal Brief Conference Pilot Program, 1296 OFF. GAZ. PAT. & TRADEMARK OFFICE 67 (U.S. Patent & Trademark Off. Jul. 12, 2005), <https://www.uspto.gov/web/offices/com/sol/og/2005/week28/patbref.htm> [<https://perma.cc/E7HY-ALAC>], now excerpted into MPEP § 1204.02 (9th ed. Rev. 01.2024, Nov. 2024).

¹¹⁴ 5 U.S.C. § 706(2); *Dickinson v. Zurko*, 527 U.S. 150, 164 (1999) (PTO findings of fact must be reviewed under APA standards of review); *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000) (PTO findings must be supported by "substantial evidence"); *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mutual Auto. Ins. Co.*, 463 U.S.

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opinion or “common sense” is not “substantial evidence.”¹¹⁵ Very few Federal Circuit cases affirm Board reliance on official notice in *any* capacity,¹¹⁶ unless the reliance was “harmless error” (where the noticed fact really

29, 43 (1983) (agency obligation to explain); *see also* cases cited *supra* note 14.

¹¹⁵ *Universal Camera Corp. v. Nat’l Labor Relations Bd.*, 340 U.S. 474, 477, 478, 484, 487–88 (1951) (agencies may not rely on “irresponsible admission and weighing of hearsay, opinion, and emotional speculation in place of factual evidence” or “suspicion, surmise, implications, or plainly incredible evidence”); *In re Zurko*, 258 F.3d 1379, 1385–86 (Fed. Cir. 2001) (“[T]he Board cannot simply reach conclusions based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings.”); *Gartside*, 203 F.3d at 1312, 1316 (after *Dickinson v. Zurko*, holding that PTO factual determinations will be reviewed under a “substantial evidence” standard of review).

The Federal Circuit regularly reverses when the Board relies on personal opinion, or “suspicion, surmise, implications” rather than substantial evidence. *In re Fought*, 941 F.3d 1175, 1178–79 (Fed. Cir. 2019) (reversing Board’s claim construction because conflicts with the substantial evidence); *In re Facebook, Inc.*, 743 Fed. Appx. 998 (Fed. Cir. Aug. 14, 2018) (PTAB’s reading of prior art unsupported by substantial evidence); *In re Van Os*, 844 F.3d 1359, 1361–62 (Fed. Cir. 2017) (“intuitive,” “common sense,” “obvious to combine” are not “substantial evidence” supporting motivation to combine); *In re Chudik*, 851 F.3d 1365, 1373–74 (Fed. Cir. 2017) (Board’s assertion that reference could be modified to anticipate was not supported by substantial evidence); *In re Schweickert*, 676 Fed. Appx. 988, 996 (Fed. Cir. Jan. 26, 2017) (“within knowledge of skilled artisan” isn’t “substantial evidence” of obvious motivation); *In re LeMay*, 660 Fed. Appx. 919, 924 (Fed. Cir. Sep. 19, 2016) (Board’s reading of references not supported by substantial evidence when the PTO relies on properties of two disparate parts of the reference to meet a single claim limitation; another is internally inconsistent).

¹¹⁶ *See, e.g., Abbott Diabetes Care*, *supra* note 14; *Van Os*, 844 F.3d at 1361 (reversing the Board and awarding costs).

is totally inescapable), or under ordinary principles of waiver or forfeiture for failure to timely raise the issue.¹¹⁷

The fundamental problem is that both the MPEP and many Board decisions confuse the court/agency standard of review with the Board/examiner standard of review.¹¹⁸ MPEP § 2144 presents the court/agency standard of review as if it applied intra-PTO. MPEP § 2144 is inconsistent with governing law, but because it's the MPEP, agency personnel tend to rely on it, and until the MPEP is fixed, you have to work around the error.

If the fact-by-examiner-argument is untrue, or at least not “capable of instant and unquestionable demonstration” at the breadth that the examiner asserts, then you should traverse using the appropriate one or two bullets in the following list. If the fact-by-examiner-

¹¹⁷ See, e.g., *In re Ahlert*, 424 F.2d 1088, 1091–92 (C.C.P.A. 1970) (“Where the appellant has failed to challenge a fact judicially noticed and it is clear that he has been amply apprised of such finding so as to have the opportunity to make such challenge, the board’s finding will be considered conclusive by this court”—note the requirement for “amply apprised”); *In re Soli*, 317 F.2d 941, 946 (C.C.P.A. 1963) (“This court has long held that wherever possible, issues should be crystallized *before* appeal to this court. It is neither the function of oral arguments nor briefs before this court to question for the first time the propriety of actions of the examiner or the board to which a response conveniently could have been made before the Patent Office.”) (emphasis in original); *In re Chevenard*, 139 F.2d 711, 713 (C.C.P.A. 1943) (official notice not traversable *for the first time* on appeal to court “[i]n the absence of anything in the record to contradict the examiner’s holding, and in the absence of any demand by appellant for the examiner to produce authority for his statement”) (emphasis added).

¹¹⁸ See *In re Kollar*, 286 F.3d 1326, 1329 (Fed. Cir. 2002); Bey, *supra* note 6; *Contrast Stone Strong LLC v. Del Zotto Products of Florida, Inc.*, 455 Fed. Appx. 964, 969, 971 (Fed. Cir. Oct. 17, 2011) (Article III judge may base facts on naked “common sense”), *with Arendi*, *supra* note 21, 832 F.3d at 1366 (reversing Board’s resort to “common sense:” “This assessment of basic knowledge and common sense was not based on any evidence in the record and, therefore, lacks substantial evidence support.” (quoting *In re Zurko*, 258 F.3d at 1385–86).

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argument is quite exotic or clearly wrong, you might well simply make a demand under § 1.104(d)(2) and let the procedural traverse speak for itself. On issues where the burden of proof requires it, or where an issue of fact is close enough that an APJ acting in good faith but imperfect knowledge could get it wrong, prepare a declaration on the topic (another topic that deserves a full article).

- “Call for” substantial evidence under 37 C.F.R. § 1.104(d)(2). If the unstated disagreement *might* be about an issue of fact on which the examiner bears the burden of proof, state a demand for evidence: “The Action claims x, but provides no supporting evidence. The Federal Circuit instructs that ‘An examiner’s assertion that a particular fact or principle is well-known is not evidentiary support.’¹¹⁹ Pursuant to 37 C.F.R. § 1.104(d)(2), Applicant calls for substantial evidence to support [fact x]. In absence of such evidence, Applicant requests withdrawal of the rejection.”
- Whether the fact-by-examiner-argument is designated as “official notice” or something else (or no designation at all), demand a showing of “specific factual findings predicated on sound technical and scientific reasoning” and “explicit basis on which the examiner regards the matter as subject to official notice” as required by MPEP § 2144.03(B), or “a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent

¹¹⁹ *In re Google LLC*, 56 F.4th 1363, 1368 (Fed. Cir. 2023). In the opinion of the authors, MPEP § 2144(I) on “common knowledge” and “examiner explanation”—as a substitute for substantial evidence—was never good law, and certainly is not good law after *Google*, *Arendi*, and *NuVasive*, *supra* note 21.

characteristic necessarily flows from the teachings of the applied prior art,” as required by MPEP § 2112(IV). “The Action asserts that x is well-known in the art, but fails to make the showings required by MPEP § 2144.03(B). Applicant requests such a showing, or withdrawal of the rejection.”

- Even though usually not legally required, you’ll be miles ahead if you explain why the examiner’s fact is wrong, or at least why it is not “capable of such instant and unquestionable demonstration as to defy dispute.”
- Traverse based on the specific legal context under a specific legal principle—for example, argue that your range is “critical” vis-à-vis the prior art range; or argue that rearranging parts results in a functional difference; or demand “underpinning reasoning” for a “routine optimization” rationale; or whatever the relevant legal issue may call for.
- Pose interrogatories, questions that demand answers from the examiner.¹²⁰ Frame them so that the examiner’s silence gives you a hook for your appeal.

It’s also valuable to make case law arguments in the last reply to the examiner. Very few examiners will respond to them, but it’s important to get the marker down so that your appeal brief can point out that you made the direct challenge and call for evidence, and the examiner ignored it—examiner nonfeasance is a much easier appeal than appealing complete silence. For obviousness, cite cases that are either after *KSR*, or that have been cited since *KSR*.¹²¹

¹²⁰ See, e.g., 17/928,894, Reply to Office Action at 6–8 (May 21, 2024); 17/784,326, Reply at 5–6 (Jan. 21, 2024).

¹²¹ On April 30, 2007, *KSR v. Teleflex*, *supra* note 27 upset the prior law. Good post-*KSR* cases include *Van Os*, 844 F.3d at 1362 (Newman,

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If the fact-by-examiner-argument is solidly plausible but you think it's wrong, you *could legally* stand on the burden of proof, but *tactically* you should come forward with rebuttal explanation or evidence, perhaps a rebuttal declaration, or amend the claim. It's very seldom

J. concurring) ("The Patent Office has the initial duty of supplying the factual basis for its rejection. It may not, because it may doubt that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis." (quoting *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967)); and *In re Lee*, 277 F.3d 1338, 1342–44 (Fed. Cir. 2002) ("Judicial review of a Board decision denying an application for patent is thus founded on the obligation of the agency to make the necessary findings and to provide an administrative record showing the evidence on which the findings are based, accompanied by the agency's reasoning in reaching its conclusions. . . . [I]t is fundamental that rejections under 35 U.S.C. § 103 must be based on evidence comprehended by the language of that section. . . . The factual inquiry whether to combine references must be thorough and searching. It must be based on objective evidence of record. . . . The need for specificity pervades this authority. . . . This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. . . . Thus the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." (cleaned up)). Several pre-*KSR* cases are regularly cited by the PTAB. *In re Jones*, 958 F.2d 347, 349–51 (Fed. Cir. 1992) ("Conspicuously missing from this record is any *evidence*, other than the PTO's speculation (if it be called evidence) that one of ordinary skill in the . . . art would have been motivated to make the modifications of the prior art . . . necessary to arrive at the claimed [invention].") (emphasis in original, cited by the PTAB 195 times after April 2007); *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967) ("The Patent Office has the initial duty of supplying the factual basis for its rejection. It may not, because it may doubt that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis. . . . Likewise, we may not resolve doubts in favor of the Patent Office determination when there are deficiencies in the record as to the necessary factual bases supporting its legal conclusion of obviousness.") (cited over 3000 times).

sound strategy to traverse a procedural error if you're dead on the merits.

Attorney explanation of evidence has a too-high probability of being dismissed by the Board as “conclusory” or “attorney argument;”¹²² if there's any ambiguity, think carefully about supporting your position with a declaration. The law tells us that attorney argument is *fully* sufficient to meet an explanation of evidence by the side that has the burden of proof, and forces a *de novo* “preponderance of evidence” weighing.¹²³ But actual practice frequently differs.¹²⁴ Misapplication of the burden of proof is one of the recurring errors in Board decisions that you must proactively guard against, and sometimes the inequitable conduct risk of a declaration is a necessary trade-off.

V. WRITING A BRIEF TO PROACTIVELY PROTECT AGAINST ERROR

A brief is a contest for two things: (a) credibility—who's been careful and is paying attention? (b) holding your reader's trust and attention. Good legal writing is a learnable skill—get a copy of a good book on brief writing¹²⁵ and follow its advice.

¹²² See cases cited *supra* note 107; *Macher*, *supra* note 109, slip op. at 4 (Board defers to examiner's no-evidence speculation of adequate strength over attorney's argument that “hollow glass microspheres are fragile”); *Andersson*, *supra* note 100, slip op. at 8 (“Appellant has not provided any persuasive substantive argument beyond arguing a lack of showing by the Examiner . . .”).

¹²³ See *supra* Sections II(A) and II(F) for standards of review, *infra* Section V(F).

¹²⁴ See *supra* notes 99–109.

¹²⁵ Good books include BRYAN A. GARNER, *THE REDBOOK: A MANUAL ON LEGAL STYLE* (West Academic Publishing, 5th ed. 2023), BRYAN A. GARNER, *THE WINNING BRIEF: 100 TIPS FOR PERSUASIVE BRIEFING IN TRIAL AND APPELLATE COURTS* (Oxford University Press, 2nd ed. 2004) [hereinafter GARNER, *WINNING BRIEF*], JOAN M. ROCKLIN ET

A. *Begin each argument with an appellate-court-style statement of issue, with the correct standard of review*

Identify the specific point on which you disagree with the examiner, and focus your argument there. Almost always, the disagreement is one of (a) claim construction, (b) a disagreement about a fact, typically the interpretation of the content of a reference, (c) a disagreement about the law, (d) a disagreement about application of law to fact. Clearly identify *exactly* the point of disagreement, at least in your own mind. Almost always you should state it explicitly in the brief. If you can't identify the precise disagreement, it's legally plausible to argue that the examiner failed to set forth a *prima facie* case, but as a practical matter, arguing at that generality is *rarely* effective—almost always you should go one step further and argue affirmative patentability.¹²⁶

Good appellate briefing requires knowing and stating the standard of review for each issue.¹²⁷ It's

AL., AN ADVOCATE PERSUADES (Carolina Academic Press, 2nd ed. 2022), and ROSS GUBERMAN, POINT MADE: HOW TO WRITE LIKE THE NATION'S TOP ADVOCATES (Oxford Univ. Press, 2nd ed. 2014). Federal Circuit Judge Richard Linn collected his advice in *Effective Appellate Practice Before the Federal Circuit*, 2 J. MARSHALL REV. INTELL. PROP. L. 1 (2002).

¹²⁶ *In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (“[W]e hold that the Board reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art.”) *Lovin* reflected the absolute zenith of *Auer* deference—translating a “should” statement in an unpublished article by four APJs (not the agency), into an additional requirement that is not within the range of ambiguity of the regulation. After *Kisor v. Willkie*, 588 U.S. 558, 574–79 (2019), *Lovin*’s continuing vitality is questionable.

¹²⁷ Linn, *supra* note 125, at 3, 5; GARNER, WINNING BRIEF, *supra* note 125, gives examples at Tips 8–12.

generally good practice to state issues the way you would for an Article III court of appeals: a series of sentences that state the relevant facts and general principle of law, and a yes/no question that applies the law to your specific facts under the relevant standard of review, all totaling no more than 75 words.¹²⁸ Be especially aware of issues where the initial burden of going forward is on the appellant, sufficient to shift the ultimate burden of persuasion back against the examiner.¹²⁹ Examples:

- The Action fails to show that reference u teaches claim limitation “x” and has not engaged to respond to appellant’s counterarguments. Can the examiner’s *non*-explanation be affirmed under a *de novo* preponderance of evidence standard that puts the burden of persuasion on the examiner?
- Appellant showed that the combination of references x and y violates the principle of operation of reference y. The examiner does not offer any counterargument. Can the examiner be affirmed under a *de novo* preponderance of evidence standard?
- The Examiner has not shown, to a preponderance of evidence, that the combination of y and z achieves the claimed invention. Can the examiner be affirmed under a *de novo* preponderance of evidence standard?
- Applicant showed that the Examiner’s proposal to meet claim limitation w by reference x ¶ [000y] is implausible, because the Examiner’s showing relies on a technologically-implausible premise, z. Can the Examiner’s

¹²⁸ Good issue statements are discussed in GARNER, WINNING BRIEF, *supra* note 125, Tips 8–12.

¹²⁹ Split burdens are discussed at Section II(F)(2).

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implausible explanation meet the burden of persuasion to a preponderance of evidence?

- The Action cites no evidence whatsoever for its claim of “motivation to combine.” Can “reasonable expectation of success” be affirmed on “preponderance of evidence” review?
- *not* “Did the examiner err . . .” or “Did the Action show a *prima facie* case?” Overly-general issues will get you nowhere.

Precise identification of the issue in dispute is helpful for the Board, and crucial for you as the brief-writer. It’s generally better to state these issue statements as the introductory paragraph of each section of the brief (rather than in a separate “grounds of rejection to be reviewed on appeal” section of your brief¹³⁰—it’s far better to keep each argument self-contained.)

When you raise one of the split burden issues (see Section II(F)(2)), be sure to state the issue in a way that makes clear that the ultimate burden of persuasion is on the examiner.

Often, you will want to juxtapose the two relevant positions “the Action says this, Appellant says that” or “Appellant pointed out the defect in the rejection at the Reply of 1/23/2021; the Advisory Action of 3/1/2021 offers no response.” Put the two sentences right next to each other—direct juxtaposition (with nothing between) is the starkest way to make the point of disagreement very clear for the Board.

¹³⁰ A separate section was required by the 2004 version of § 41.37(c)(1)(vi), and repealed in 2011. Rules of Practice Before the Board of Patent Appeals and Interferences in *Ex Parte* Appeals, Final Rule, 76 Fed. Reg. 72270, 72271 (Nov. 22, 2011) (“*2011 BPAI final rule*”), now codified at 37 C.F.R. § 41.37.

“Error” is a court/court standard of review with deference to the tribunal below.¹³¹ Under the correct standard of review for most issues, it’s not your job to establish “error.” To frame any issue as “error” is ceding a crucial advantage—it is almost never advantageous to use the word.

B. Arguing claim construction

For reasons discussed in Section II(F)(4), on *ex parte* appeal, you’re basically confined to the broadest reasonable surface meaning of the words of the claim. The controlling principle is “broadest reasonable interpretation”—if the examiner’s construction is plausible, the examiner wins. It is rarely useful to argue a close case on claim construction.¹³² However, a few claim construction points are winnable:

- (a) literal features of the claims as written (including interconnections) that the examiner entirely ignores;
- (b) dictionary definitions, or definitions in the specification or a declaration, or definitions or usages in other technical documents that demonstrate a consistent usage; and
- (c) risky but occasionally winnable, where the usage of a term in the specification is so consistent that it’s nearly a definition, and

¹³¹ See *Dickinson v. Zurko*, 527 U.S. 150, 158 (1999); Edwards, *supra* note 5.

¹³² *Ex parte Brunner*, Appeal No. 2009-006904, slip op. at 10–11 (B.P.A.I. Feb. 14, 2011) (ten years after “graphics processing unit” had become a standard term of art that separated specialized graphics processors from general microprocessors, “Appellants have not demonstrated error in the Examiner’s conclusion that the recited ‘graphics processing unit’ is broad enough to read on Hamburg’s ‘programmable processor’”).

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the meaning the examiner ascribes is totally beyond the realm of reason.

One common claim construction problem is that the examiner treated the claims as buckets of dissociated words, while your argument was directed to the interconnections and cause-and-effect between limitations. It gives you *great* power to state the claim construction, either in the § 41.37(c)(1)(iii) “Summary of the claimed subject matter” section, or as one of the first sections of your § 41.37(c)(1)(iv) “Argument.” Explicitly list the claim interconnections or interpretations that you rely on in your argument, and label it as “claim construction” or “claim interpretation.”

Include a standard of review statement—see footnote 72 for useful cases to cite.

If there’s any disagreement on claim scope, you *must* address it in your appeal brief. Claim construction is one of those split burden issues explained in Sections II(F)(2) and II(F)(4), where the initial burden of going forward is on the appellant to raise the challenge, but the ultimate burden of persuasion is against the examiner. Most panels recognize that, once you challenge, the burden of persuasion is on the examiner to explain why the examiner’s interpretation is reasonable.¹³³ And some don’t.¹³⁴ One of the jobs of your brief is to make it difficult to fall into the “don’t” pile.

¹³³ See cases cited *supra* note 72.

¹³⁴ *Kovach*, *supra* note 108; *Andersson*, *supra* note 100, slip op. at 5–6 (“The desire for a more detailed statement of the rejection and a desire for the Examiner to expressly state the broadest reasonable interpretation of the claim language are petitionable matters to invoke the supervisory authority of the Director and are not within the jurisdiction of the Board.”); *Ex parte Lowell*, Appeal No. 2021-004929, slip op. at 7–8 (P.T.A.B. Jan. 31, 2022) (“Our review necessarily requires reading the claim limitations that are disputed by Appellant on the corresponding features found by the Examiner in the cited prior art.

Nearly every Federal Circuit infringement, anticipation, and obviousness case explains that claim construction is a separate and fundamental step, prerequisite to comparing the claim to the art or accused device—claim construction *and then* map the construed claim onto the art. That is not universally understood at the Board: some panels reverse the two steps.¹³⁵ If you made a claim construction argument to any other tribunal, where the burden of proof was in your favor, you could conclude “The other side offered no comparison to the art/accused device under the correct construction. End of case.” That is not always honored at the Board.¹³⁵ If claim construction is important to your argument, you must plan defensively. First, cite a Federal Circuit case that reminds the Board that, in your specific situation, claim construction and reading the claim onto the art are two separate steps. Second, your brief must apply the two steps separately and specifically—put the two steps under separate headings. Third, go one step beyond the burden of persuasion: explain how, on your construction, the issue falls your way.

C. *Arguing issues of fact*

If you’re arguing facts other than claim construction—for example, in a § 102 or § 103 rejection, where you’re arguing a difference between the reference and the claim, rather than a legal error—then your brief must genuinely analyze the claim, and analyze the art, and explain the difference. In any other tribunal, the party with

We then determine whether the Examiner’s claim interpretation is reasonable”); *Ex parte Bihrer*, Appeal No. 2014-004094, slip op. at 3–4 (P.T.A.B. May 4, 2016) (agreeing that examiner had burden of persuasion, but appellant failed burden of coming forward with sufficient “prove the negative” argument). The *Andersson* briefs spent several pages explaining this foundational principle; the Board failed to engage.

¹³⁵ See examples *supra* note 134.

the benefit of the burden of proof can simply show the weakness or error in position of the burdened party, and stop, relying on the burden of proof to do the work. You cannot make that same assumption at the Board.¹³⁶ Your brief must explain without requiring the APJ's to do independent research or derive independent inferences.

If the issues revolve around a dispositive fact that you have argued, yet the examiner refuses to “answer all material traversed” or otherwise engage, it can be helpful to set out a list of undisputed facts, especially in the reply brief.¹³⁷

Finally, watch out for issues (listed *supra* Section II(F)(2)) where the initial burden of going forward is on the appellant, even if the ultimate burden of persuasion is against the examiner. On these issues as a practical matter, it's hard for the Board to find in your favor unless you present an affirmative alternative to the examiner's position.

1. Use the words of any favorable standard of review

When you have a beneficial standard of review, choose your words to keep the Board on side with that standard of review. The standard of review is *de novo* “preponderance of evidence” review for the fact issues you raise,¹³⁸ and *de novo* reviews of issues of law,¹³⁹ not “error” (let alone “clear error”).

What's sauce for the goose is sauce for the gander. You should *not* inject statements of fact supported by no more than your personal expertise. For example, do not argue “one of skill in the art would understand . . .” if you

¹³⁶ See cases cited *supra* notes 99–108.

¹³⁷ E.g., Reply Brief, Application 16/096,220, at 4 (May 14, 2024).

¹³⁸ See cases cited *supra* notes 7, 8, 12, 13, 14, 15, 61, and the lists of issues of fact in Sections II(F)(1), II(F)(2), II(F)(3).

¹³⁹ See the list of “issues of law” in Section II(F)(5).

don't have *evidence*. Instead, *use the standard of review*. Keep the focus on the examiner's burden to support and explain positions: "The Examiner's view is [w]. [cite to point x in the examiner's papers]. Appellant advanced [view y]. [cite to point z in your papers]. The Examiner offers no evidence of [w], no explanation counter to [y], and no explanation to persuade the Board that [w] is more correct than [y]. If the Examiner offers no explanation to meet the burden of persuasion, the Board must accept Appellant's explanation [cite from footnotes 7, 8, and 10]." Undermine the examiner's failure to persuade, and avoid injecting new statements that require evidentiary support from you.

Watch out for the trap of the word "error" itself. 37 C.F.R. § 41.37(c)(1)(iv) says that the appeal brief "shall explain why the examiner erred." The words "erred" and "error" connote a standard of *review* that gives deference to the tribunal below.¹⁴⁰ But an *ex parte* appeal proceeds on a first-instance standard of *proof*, with the burdens (for most issues of fact) on the examiner.¹³⁸ (The Board is unlike a true first-instance tribunal to the extent that the Board only re-decides the issues presented in the brief, not all issues. But for the issues appealed, the law requires the Board to apply a first-instance "preponderance of evidence" standard.¹⁴¹)

When the burden is favorable to you, use words that reflect that allocation. If there's no evidence at all, argue "The Final Action's view is unsupported by substantial evidence." If there's some evidence but you disagree with the examiner's interpretation of it, argue that the "the Examiner's explanation is not consistent with a 'preponderance of evidence' interpretation of the evidence." If the examiner's explanation is "contrary to

¹⁴⁰ Edwards, *supra* note 5.

¹⁴¹ *Frye*, *supra* note 7, 94 U.S.P.Q. 2d at 1075; see "burden of proof" cases cited *supra* notes 7, 8, 12, 13, 14, 15, 61.

law,” use that language. If the examiner has failed to answer issues, argue “by silence, the Examiner concedes the impossibility of meeting the standard of proof.” Your brief should claim the high ground of the correct standard of review;¹⁴² don’t concede a less-favorable “error” standard. Don’t even use “clearly erred” as a rhetorical device.

2. Try to avoid standing solely on the burden of proof—if possible, make a “prove the negative” showing

While the law says you should be able to stand on the burden of proof for issues of fact that are potentially disputable,¹⁴³ in practice, you can’t count on winning 50-50 issues, or even 55-45 issues, or by simply showing that the examiner’s explanation doesn’t hold water.¹⁴⁴ Your brief should do several things to head off this class of error. First, unless the evidence is clearly and unmistakably in your favor, and for issues where the burden is *against* you,¹⁴⁵ you should get evidence into the record. If a reference or claim term is ambiguous—or capable of being misread—it’s much faster, cheaper, and effective to proactively head off issues with a dictionary, or exhibit from a technical document, or a declaration that resolves the ambiguity.¹⁴⁶ Second, you should include an issue statement with the correct standard of review, as suggested *supra* Section V(A). Third, you should include a tutorial on standards of review, as discussed *infra* Section V(F).

¹⁴² Standards of review are discussed *supra* Sections II(A), II(F).

¹⁴³ See cases cited *supra* notes 7, 8, 12, 13, 14, 15, 61.

¹⁴⁴ See *supra* notes 99–108.

¹⁴⁵ See *supra* Sections II(F)(3).

¹⁴⁶ A declaration or affidavit must be filed before the Notice of Appeal, and with rare exceptions, between the Notice of Appeal and the brief. 37 C.F.R. § 41.33. It is rare that a declaration filed with or after the Notice of Appeal will be entered.

Fourth, even though legally you shouldn't have to, try to make a technical argument to show that the examiner's presentation of the facts is wrong. For example, in addition to arguing "reference x does not teach y" (which as a matter of legal principle is sufficient to meet your burden of going forward), add an affirmative alternative that the Board can latch on to as a replacement for the examiner's view: "Instead, reference x teaches z. z is not y." It's generally easy to show the negative for element-by-element comparison. In contrast, for "motivation to combine," there's usually no easy way to show the negative, and often the burden of proof is the only available argument. Further techniques to defend against this class of error are discussed in Section V(F)(1).

3. Direct challenges and calls in the brief

The same calls discussed in Section IV should be reiterated in your appeal brief. For example, 37 C.F.R. § 1.104(d)(2) requires the examiner to specifically cite evidence for issues of fact. Draw the line in the sand, and dare the examiner to *not* step across. Point out where you made the specific challenges listed in Section IV, and point out the examiner's silence. Whether or not you did do the set up before the Notice of Appeal, do it now: make all the challenges discussed in Section IV. The § 41.37 brief is your last opportunity to raise these challenges before waiver takes over.

4. Rebutting inherency, implicit disclosure, common sense, official notice, and unsourced examiner personal assertion

If the examiner has relied on fact-by-examiner-argument, even after you use the techniques of Section IV, an appeal brief can still be tricky. Some panels understand the administrative law limits on official notice, and how improper reliance on official notice can metastasize to

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failure to show motivation to modify or combine.¹⁴⁷ Many don't—misapplication of the law of evidence, burdens of proof, and administrative law is one of the more common patterns of Board error.¹⁴⁸ Section IV and this Section V(C)(4) show you the Board's blind spots and help you prophylactically head them off.

The crucial practical reality is that you must directly and pointedly challenge any fact-by-examiner-argument in your opening appeal brief, even though the law is otherwise. If you raised the challenge before the examiner¹⁴⁹ and the examiner didn't engage, that's makes a great argument. Legally, as explained in Sections II(A) and IV, it's not necessary to disprove the examiner's contention—but the practical reality is that many APJs expect you to. The one thing that is clear all around is that the appeal brief is the last clear opportunity to challenge any fact-by-examiner-argument. The only circumstance in which you can delay to the reply brief is if the examiner raises a new assertion of fact-by-examiner-argument in the examiner's answer.¹⁵⁰

If the examiner asserted a fact-by-examiner-argument, the law is clear that you can stand on the burden of proof by simply challenging on the burden of going

¹⁴⁷ Sound analyses of the examiner's procedural notice obligations are explained in *Ex parte Nakajima*, Appeal No. 2023-000651, slip op. at 6–7 (P.T.A.B. Mar. 25, 2024). In *Ex parte Dellostritto*, Appeal No. 2020-006583, slip op. at 8–11 (P.T.A.B. Jan. 11, 2022), the first half of the Board's analysis is dead wrong and improperly shifts burdens. The second half—requiring the examiner to “provide specific factual findings predicated on sound technical and scientific reasoning to support the conclusion of common knowledge” and provide “rational connection between the facts found and the choice made” reflects sound understanding.

¹⁴⁸ See cases cited notes 95, 99–109.

¹⁴⁹ See *supra* Section IV.

¹⁵⁰ *In re Durance*, 891 F.3d 991, 1001–03 (Fed. Cir. 2018).

forward.¹⁵¹ But as a practical matter, that doesn't consistently work at the Board—you must grasp the nettle and prove the negative. In *Ex parte Elliot*,¹⁵² the applicant clearly and explicitly raised the procedural challenge, that the asserted fact was “not well-known,” but did not state that the asserted fact was wrong, or explain why. The Board affirmed the examiner on the ground that the traverse was inadequate.¹⁵³ In any other tribunal, legal errors, such as failure to provide evidence and failure to explain, are just as much “error” as technological error.¹⁵⁴ You must assume that two APJs of your panel will apply a standard inconsistent with Federal Circuit law, unless you take steps to prevent it.¹⁵⁵ You must likewise assume that two APJs are inclined to cite the MPEP as legal authority against an applicant.¹⁵⁶ As a brief writer, you must be aware of the Board's blind spots, and prophylactically protect against them: challenge the procedural failure to offer evidence, give an issue statement with the correct standard of review, explain the contrary truth of the matter, and include a tutorial in basic administrative law and burdens of proof.¹⁵⁷

¹⁵¹ See *supra* Section IV.

¹⁵² *Ex parte Elliott*, Appeal No. 2021-001850, slip op. at 12–13 (P.T.A.B. Feb. 16, 2022); see also *Ex parte Wilder*, Appeal No. 2017-001216, slip op. at 17–18 (P.T.A.B. Jan. 30, 2018) (misunderstanding of procedural obligations for official notice).

¹⁵³ *Elliott*, *loc. cit.*

¹⁵⁴ E.g., *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mutual Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

¹⁵⁵ See *supra* Section IV, and *supra* notes 99–109.

¹⁵⁶ See *supra* Section II(G)(1).

¹⁵⁷ See *supra* Section V(A) (issue statements); *infra* Section V(F) (tutorials).

**D. *Applicability of the Federal Rules of
Evidence***

The Federal Rules of Evidence, by their terms, apply only to “United States courts,”¹⁵⁸ not agencies, though agencies can adopt them by regulation. It’s clear that the Rules don’t apply by their terms to *ex parte* prosecution—for example, evidence can’t be excluded simply because it’s hearsay.¹⁵⁹

Nonetheless, there are two areas where the Federal Rules must apply, because there is no other law *to* apply.

1. Declarations/affidavits

Recall that to promulgate any requirement that is applicant-adverse, the PTO must act by *regulation*, not by mere guidance, and when guidance purports to be more applicant-adverse than underlying law, that guidance may not be enforced against an applicant.¹⁶⁰

The PTO has no regulation to govern content or foundation for expert declarations, and very little on lay fact declarations.¹⁶¹ Further, MPEP § 716 purports to restate the law applied by courts, not to change that law.¹⁶² Because the PTO does not purport to set any other binding standard, that leaves 28 U.S.C. § 1746 and the Federal Rules of Evidence (especially Fed. R. Evid. 701–704) as the only law that *could* apply. Nonetheless, the MPEP states several requirements that are stricter than the Federal Rules—the errors arise largely because MPEP § 716 is

¹⁵⁸ FED. R. EVID. 1101; *e.g.* 37 C.F.R. §§ 41.152, 42.62 (2026) (adopting Federal Rules, with carveouts, for contested cases). The Federal Rules of Evidence do not strictly apply to informal adjudications like *ex parte* appeals, *see* *Biestek v. Berryhill*, 587 U.S. 97, 104 (2019); *In re Epstein*, 32 F.3d 1559, 1565 (Fed. Cir. 1994).

¹⁵⁹ *Epstein*, 32 F.3d at 1565.

¹⁶⁰ *See supra* Sections II(G)(1).

¹⁶¹ 37 C.F.R. § 1.130(b)(2), § 1.131(b) (2026).

¹⁶² *See* MPEP § 716 (9th ed. Rev. 01.2024, Nov. 2024).

decades out of date.¹⁶³ Thus, if you appeal or petition an examiner's refusal to credit a declaration/affidavit by demonstrating that the MPEP is obsolete and the Federal Rules of Evidence support the declaration/affidavit, it seems unlikely that the PTO would contest the applicant's position.¹⁶⁴

2. Offensive use of Official notice

Similarly, Federal Rule of Evidence 201(c)(2) reads "The court: . . . **must** take judicial notice if a party requests it and the court is supplied with the necessary information." Judicial notice is capacious for *documents* that show the kinds of issues typically decided by the Board.¹⁶⁵ The Board may (and probably must) take judicial notice of any source that goes to definition or meaning of a term, or goes

¹⁶³ Every single cite in MPEP § 716.01(c)(III) is older than *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), and many are from the 1960s—superseded *fifty years ago* when the Federal Rules of Evidence displaced the common law in 1975. *Daubert*, 509 U.S. 587–88 (Federal Rules "occupy the field" and entirely displaced the common law); *Glaser v. Strickland*, 220 U.S.P.Q. 446, 450 (B.P.A.I. Sept. 22, 1983) ("We think the time has come to reexamine [common law rationales], particularly in light of more modern concepts of evidence, viz., Rules 702 through 705 of the Federal Rules of Evidence.").

¹⁶⁴ Unfortunately, the only data point we have is to the contrary. *See* Application 16/278,112, petitions and briefs fall 2025, which fully lay out the problem—the errors of obsolescence in MPEP § 716.01(c)(III), and the applicable law from the Federal Rules. A T.C. Director denied the petition by brushing aside the Federal Rules, and standing entirely on purported binding effect of the MPEP. Application 16/278,112, Decision on Petition (Sep. 11, 2025). At press time, the issue is pending before the PTAB.

¹⁶⁵ *Phillips v. AWH Corp.*, 415 F.3d 1303, 1322–23 (Fed. Cir. 2005) (en banc) ("[J]udges are free to consult dictionaries and technical treatises **at any time** in order to better understand the underlying technology and may also rely on dictionary definitions when construing claim terms."); *contrast* official notice for *facts*, which is very constrained. FED. R. EVID. 201.

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to technology principle, such as a scientific book, journal article, or newspaper article (and probably an expert declaration opining to a definition).¹⁶⁶ However, the Board’s appeal rules hint that only dictionaries are admissible anew on appeal.¹⁶⁷ Under normal rules of regulatory interpretation, a regulatory limit on *evidence* cannot be interpreted to limit the scope of official notice: remember that official notice is not evidence, it’s a bypass around the rules of evidence.¹⁶⁸ In some cases, you can use this principle (with careful case cites) to get a document into the record on either an issue of claim construction or a legislative/non-adjudicative issue of fact for technological background; sometimes the best option is to RCE to get the treatise in as evidence.

Though no known Board case approves an *appellant’s* new facts supported by official notice, the Board relies on official notice of new documents *in favor of the examiner*, and other appellate tribunals allow parties to

¹⁶⁶ *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1462 (Fed. Cir. 1998) (Plager, J. concurring, quoting *Nix v. Hedden*, 149 U.S. 304, 306 (1893)); *Schott Optical Glass Inc. v. United States*, 612 F.2d 1283, 1286 (C.C.P.A. 1979) (relying on *Encyclopedia Britannica* to define “optical glass”); *Hancock v. Am. Steel & Wire Co.*, 203 F.2d 737, 740 (C.C.P.A. 1953) (“Courts take judicial notice of the meaning of words, . . . and the court may always refer to standard dictionaries or other recognized authorities to refresh its memory and understanding as to the common meaning of language.”); *Solid 21, Inc. v. Breitling USA Inc.*, CV 11-0457 GAF (PLAx). 2011 WL 2938209 at *4 (C.D. Cal. Jul. 19, 2011) (relying on *Oxford English Dictionary* for definition of the term “red gold”). See *infra* Section V(D) for *offensive* use of official notice for facts other than definitions.

¹⁶⁷ See 37 CFR § 41.30 (2026).

¹⁶⁸ *Nix*, 149 U.S. at 306; *Phillips*, 415 F.3d at 1322–23; *Wesley-Jessen Div. of Schering Corp. v. Bausch & Lomb*, 698 F.2d 862, 865 (7th Cir. 1983) (“Judicial notice, in essence, is a substitute for evidence.”); *Hsu v. Puma Biotechnology, Inc.*, 213 F. Supp. 3d 1275, 1280 (C.D. Cal. 2016) (“Judicial notice functions like an evidentiary exception in two different ways.”); WIGMORE, *supra* note 19, § 2565.

rely on official notice (raised as late as the appeal brief) to establish background technological facts;¹⁶⁹ in absence of a regulation to the contrary, reciprocity should govern. Federal Rule of Evidence 201 tells us that documents that have a high degree of reliability may be relied on at any stage of proceedings and entered into the record (even after the record is closed),¹⁷⁰ bypassing formal procedural requirements for formal entry. Once the document is noticed, the agency may take official notice of those facts in the document that “can be accurately and readily determined from sources whose accuracy cannot reasonably be questioned” analogous to Fed. R. Evid. 201(b)(2). For government documents, as a general rule, once a document is noticed (even if it does not go through full *voir dire* or admissibility), it is sufficient to support official notice for “legislative facts” asserted therein, but is not conclusive for its “adjudicative facts,” facts specific to a party.¹⁷¹

¹⁶⁹ *Phillips*, 415 F.3d at 1322–23 (en banc) (“[J]udges are free to consult dictionaries and technical treatises *at any time* in order to better understand the underlying technology and may also rely on dictionary definitions when construing claim terms.” (emphasis added)); *B.V.D. Licensing Corp. v. Body Action Design, Inc.*, 846 F.2d 727, 728 (Fed. Cir. 1988) (taking judicial notice of uses of the term “BVD” to conclude that BVD is a famous mark for men’s underwear); *In re Salem*, 553 F.2d 676, 683 (C.C.P.A. 1977) (in a written description issue, taking judicial notice of a technical encyclopedia apparently introduced for the first time on appeal); *In re Boon*, 439 F.2d 724, 727 (C.C.P.A. 1971) (Board raised “amplified reasons” based on official notice of documents not formally of record); *see also supra* note 166.

¹⁷⁰ *E.g.*, *Southern California Edison Co. v. Federal Energy Regulatory Comm’n*, 717 F.3d 177, 188 (D.C. Cir. 2013) (approving agency’s practice of taking official notice of ten-year Treasury bond rates, even though after the record closed, but remanding to require the agency to give the opposing party a symmetric opportunity to respond, with the record reopened for rebuttal evidence).

¹⁷¹ *Kaczmarczyk v. Immig. & Naturalization Serv.*, 933 F.2d 588, 594–95 (7th Cir. 1991) (after Poland’s regime change, INS could rely on everyday sources and government reports to establish that the

***E. The evidence appendix: dictionaries and
other definitions, judicially-noticeable
materials, including materials going to
definitions of terms and underlying
technology***

Before 2011, you had to include all cited evidence in the Evidence Appendix.¹⁷² This requirement was rescinded in 2011.¹⁷³ Nevertheless, it's a good idea to include all evidence that helps you in the Appendix, simply to make it easy for the Board to rule in your favor. Include both admitted evidence and materials that may be judicially or officially noticed without being formally admitted in evidence.¹⁷⁴ After all, a reviewing court will rely on that information: "The court . . . *must* take judicial notice if a party requests it and the court is supplied with the necessary information."¹⁷⁵ The only known Board cases relating to the issue not only *permit* but *require* inclusion of noticeable materials in the Evidence Appendix.¹⁷⁶

Solidarity union had the leading role in the government, and that even though Communists remained in control of the military and police, the likelihood of persecution for past membership in Solidarity was reduced, and it was up to the asylum seeker to come forward with evidence of continued persecution).

¹⁷² See § 41.37(c)(1)(ix), as in effect 2004-2011.

¹⁷³ 2011 BPAI final rule, *supra*, note 130, 76 Fed. Reg. at 72271, now codified at 37 C.F.R. § 41.37.

¹⁷⁴ *Boehringer Ingelheim Vetmedica Inc. v. Shering-Plough Corp.*, 320 F.3d 1339, 1346 (Fed. Cir. 2003) ("Like trial judges, we are free to consult dictionaries regardless of whether they have been offered by a party in evidence or not.").

¹⁷⁵ FED. R. EVID. 201(c)(2).

¹⁷⁶ *E.g.*, *Ex parte* Weitzel, Appeal No. 2012-000532, slip op. at 5–6 n.2 (P.T.A.B. 2013) (denying official notice recognition of a standard treatise because not included in the evidence appendix); *Ex parte* Schon, Appeal No. 2010-009338, slip op. at 14 n.66 (B.P.A.I. Sep. 26, 2012) (same for a patent); *Ex parte* Mennecart, Appeal No. 2008-0079, slip op. at 3 (B.P.A.I. Aug. 7, 2008) (same for an internet dictionary);

One specific class of noticeable materials includes definitions. The Federal Circuit and Supreme Court have long held that courts, on review of agency decisions, are “bound to take judicial notice” of the ordinary meaning of terms, or special meaning in trade or commerce: “[D]ictionaries are admitted not as evidence, but only as aids to the memory and understanding of the court.”¹⁷⁷ Such definitions are appropriate in the Evidence Appendix, even if not admitted during prosecution. The Board’s actual practice reflects this common sense—the Board uses publicly-available articles to establish definitions of terms, even if the Board locates the article *sua sponte* after briefing is closed.¹⁷⁸

37 C.F.R. § 41.30 says that dictionaries are not subject to the same rules as all other evidence, and may be relied on by simple citation, even if not in the record. However, some panels will refuse to credit the regulation’s more permissive view toward dictionaries.¹⁷⁹ If a dictionary definition or relevant web material is *not* included in the

Ex parte Virolainen, Appeal No. 2007-0989, slip op. at 4–5 (B.P.A.I. Sep. 13, 2007) (“We are unfamiliar with the content of the ‘Merriam-Webster online dictionary’ . . . [W]e remand . . . to ensure that the Appellants provide copies of the evidence on which they rely. . .”).

¹⁷⁷ See *supra* note 166.

¹⁷⁸ *Ex parte Denton*, Appeal No. 2009-002960, slip op. at 8 (B.P.A.I. Mar. 29, 2010) (“One of ordinary skill in the art, if he or she did not already know what was meant by ‘sensitivity data,’ would have reasonably looked to various articles and other technical references describing such models,” and then relies on a magazine article located on the web (apparently *sua sponte*) for a definition of a term).

¹⁷⁹ Contrast *Ex parte Stevens*, Appeal No. 2009-008817, slip op. at 6–11 (B.P.A.I. Sep. 20, 2011) (refusing an appellant’s submission of a dictionary entry and publication date for the dictionary filed on same date as notice of appeal, notwithstanding § 41.30 ¶ 3), with *Ex parte Krivulka*, Appeal No. 2010-003098, slip op. at 9–10 (B.P.A.I. Sep. 30, 2010) (after plainly stating that the rules are asymmetrical, permitting an examiner to file evidence establishing the publication date of a document, after the record was closed).

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Evidence Appendix, the Board should return the appeal to the examiner to require the dictionary definition to be *added* to the Evidence Appendix.¹⁸⁰ But some panels won't do that either. The prophylactic step to prevent this kind of error is to file all evidence—including dictionary evidence—at least a day before you file your notice of appeal, and somewhere in your brief (for example, on the cover page of your Evidence Appendix) identify the paper where the examiner checked the “entered” box (see Section II(H)), and on the cover sheet of the Evidence Appendix, identify the basis (either record entry, official notice, the 37 C.F.R. § 41.30 exception for dictionaries, etc.) for each document.

***F. Reminders of requirements for an
examiner's answer, burden of proof, and
administrative law***

While boilerplate cites to routine patent cases are *not* recommended, tutorials on administrative law, evidence law, and the burden of proof are emphatically encouraged.¹⁸¹

**1. Include a tutorial on the burden of
proof**

As explained in Sections II(A) and III, one of the Board's fairly consistent blind spots is the difference between deferential court/agency review and non-

¹⁸⁰ Decision on Petition, *Ex parte* Scroggie, Application 09/401,939, Appeal No. 2008-4478 (B.P.A.I. Jul. 18, 2008); *Mennecart*, *supra* note 176, slip op. at 3; *contrast* cases cited *supra* note 176.

¹⁸¹ Examples of such tutorials can be found at Appeal Brief, Application 11/626,962 (Aug. 21, 2012); Appeal Brief, Application 11/677,232 (Mar. 26, 2013); Appeal Brief, Application 16/096,220 (Nov. 2, 2023); Appeal Brief, Application 16/511,368 (Jan. 24, 2022); Appeal Brief, Application 16/914,344 (Aug. 19, 2024); Appeal Brief, Application 17/382,274 (Feb. 29, 2024).

deferential intra-agency “preponderance of evidence” Board/examiner review. Even though “burden of proof” is one of the most basic premises of American law, you must assume that two of three APJs start with an understanding that differs from Federal Circuit law, but will follow precedent if it is brought to their attention.¹⁸² Therefore, you must take prophylactic steps to prevent error.

Therefore, you should include in your brief a proactive reminder of the applicable burden of proof and administrative law.¹⁸³ It may not prevent a flawed decision, but it will take waiver off the table in a request for rehearing and make appeal to the Federal Circuit that much easier.

2. Procedural protections under the Administrative Procedure Act, constitutional Due Process, 37 C.F.R. § 1.104, and the MPEP

Remind the Board that its standard of review must be adjusted if the proceedings by the examiner were of questionable regularity, especially if the examiner’s breach of procedure in any way prejudiced your ability to prosecute the application. The Board’s decision will not receive deference on review by the Federal Circuit or District Court for the District of Columbia if the Board fails to appropriately discount procedurally-flawed decisionmaking by the examiner.¹⁸⁴

¹⁸² See *e.g.*, *supra* notes 99–108.

¹⁸³ See *generally supra* note 181 (examples of briefs that explained applicable administrative law).

¹⁸⁴ See *Chamber of Comm. v. SEC*, 443 F.3d 890, 899 (D.C. Cir. 2006) (informal agency action is usually reviewed deferentially, but “more exacting review may be required when the presumption of regularity is rebutted. . .”); *Stone v. FDIC*, 179 F.3d 1368, 1376 (Fed. Cir. 1999) (“Our system is premised on the procedural fairness at each stage of [agency] proceedings. [A party before an agency] is entitled to a certain amount of due process rights at each stage and, when those rights are

***G. Review for and reinforce where the PTAB
often applies a standard stricter than
required by law***

When you are nearly finished, review for issues where the Board often applies erroneous standards, and put up whatever guard rails you can:

- Against misapplication of the standard of review and burden of proof, consider the prophylactic steps discussed in Sections III, IV, and V(F)(1) and notes 7, 8, 10.
- To protect against PTAB misapprehension that examiner argument is not evidence, and misunderstanding of official notice. See the steps suggested at Sections II(E), IV, V(C)(4), II(B) and footnote 21.
- To protect against outdated statements in the MPEP about the requirements for and effect of declarations and affidavits, see Section V(D)(1).
- To protect against PTAB misapplication of subregulatory guidance; see the advice in Section II(G).
- To protect against PTAB misordering of claim construction as a prerequisite to affirmance, see Section V(B).

undermined, the [party] is entitled to relief.”); *Powell v. Heckler*, 789 F.2d 176, 178 (3d Cir. 1986) (“No such tolerance, however, is required in matters pertaining strictly to an agency’s observance and implementation of its self-prescribed procedures. The courts, to protect due process, must be particularly vigilant and must hold agencies . . . to a strict adherence to both the letter and the spirit of their own rules and regulations.”).

VI. CONCLUSION

Ex parte appeals can be daunting for practitioners and clients alike. While you should not be discouraged from initiating an appeal if the merits are good but you haven't done perfect prep work, the most successful appeals are planned and conducted as one step in an end-to-end process. The steps in that process are, in large part, governed by the standard of review. This article will help you prepare and to take advantage of favorable law.