

Case Studies and Trends at the PTAB Involving 35 U.S.C. § 112

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Summary

Over the last 20-plus years, US Court of Appeals for the Federal Circuit cases concerning written description and enablement have become a hot-button issue in the chemical and life sciences practices. The year 2021 was no different, with *Amgen v. Sanofi*¹ (enablement) decided in February and *Juno v. Kite*² (written description) decided in August.³ Both *Amgen* and *Juno* involved genus claims with functional language, and both cases seemingly exacerbated the uphill battle for patent applicants and patentees to obtain and defend such claims. Indeed, the Federal Circuit's recent stance on § 112 for chemical and life science genus claims has caused some to feel that the "sky is falling."⁴ In light of the current § 112 landscape at the Federal Circuit, we examined the USPTO Patent Trial and Appeal Board's (PTAB) recent views on written description and enablement law in the chemical and life sciences. For this work, we reviewed PTAB decisions from Technology Center 1600 (Biotechnology & Organic Chemistry), issued between January 2020 and November 2021. Our review included decisions from *ex parte* appeals and America Invents Act (AIA) post-grant proceedings (including decisions on institution and final written decisions).

We found that the sky is not falling, at least not at the PTAB. For example, we identified several recent *ex parte* appeals in which patent applicants successfully obtained broad genus claims after the PTAB's reversal of Examiners' § 112 written description and/or enablement rejections. The PTAB also – at least in some cases – considered evidence of routine screening to favor enablement of genus claims. While none of the PTAB cases highlighted below is currently designated precedential or informative, they nonetheless indicate that the PTAB's application of § 112 offers patent owners in the chemical and life sciences a glimmer of hope. Below we highlight cases from our review, placing the PTAB decisions into three primary categories: (i) written description cases applying the representative species / common structural features rubric; (ii) written description cases applying the *Capon* factors; and (iii) enablement cases applying the routine screening rubric.

Written description: cases applying representative number of species / common structural features rubric.

In *AbbVie Deutschland v. Janssen Biotech*, 759 F.3d 1285 (Fed. Cir. 2014)—an antibody case involving genus claims with functional language—the Federal Circuit

applied the representative number of species / common structural features rubric:

[A] sufficient description of a genus . . . requires the disclosure of either a representative number of species falling within the scope of the genus or structural features common to the members of the genus so that one of skill in the art can 'visualize or recognize' the members of the genus.

AbbVie, at 1299.

In August 2021, the Federal Circuit applied this rubric in *Juno Therapeutics, Inc. v. Kite Pharma, Inc.*, 10 F.4th 1330 (Fed. Cir. 2021). The asserted claims in *Juno* were drawn to a nucleic acid polymer encoding a chimeric antigen T-cell receptor (CAR T-cell) comprising three segments: an intracellular signaling segment, a co-stimulatory segment comprising a specific amino acid sequence, and a binding segment (scFv). *Id.*, at 1334. *Juno*'s specification disclosed two exemplary scFvs that bind to specific targets (CD19 and PSMA). *Id.*, at 1333. *Juno* argued that other scFvs were known in the art, and that scFvs were interchangeable components with a shared, common structure. *Id.*, at 1336.

The Federal Circuit acknowledged that scFv sequences were known in the art, and that scFvs share a common structure (seemingly satisfying the common structural features rubric), but nevertheless concluded that *Juno*'s specification lacked written description. The court stated:

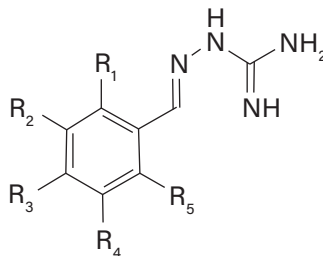
[T]he written description of the '190 patent discloses only two scFv examples and provides no details regarding the characteristics, sequences, or structures that would allow a person of ordinary skill in the art to determine *which* scFvs will bind to which target. That scFvs in general were well-known or have the same general structure does not cure that deficiency.

Juno at 1339-1340 (emphasis added). In other words, as the court stated: "For the claimed functional scFv genus, the '190 patent does not disclose representative species or common structural features to allow a person of ordinary skill in the art to distinguish between scFvs that achieve the claimed function and those that do not." *Id.* at 1342.

How is the PTAB applying representative species / common structural features?

While the outlook for some biotech patent owners at the Federal Circuit may seem bleak at the moment, patent applicants continue to successfully obtain genus claims. For example, in *Ex parte Way*, No. 2019-006053 (PTAB, July

Figure 1: Chemical structure in *Ex parte* Way



9, 2020), the claims were drawn to a “method of treating a demyelinating disorder” comprising administering a compound “of Formula I” (see Figure 1), “wherein R₁, R₂, R₃, R₄, and R₅ are independently hydrogen, deuterium, halogen, haloalkyl, alkyl, alkoxy, hydroxyl, aryl, or aryloxy.” *Way*, at 2. *Way*’s specification disclosed working examples using a single compound (guanabenz) within the scope of the claimed genus of compounds. The Examiner rejected the claims for lack of written description and enablement. *Id.*, at 3. On appeal, the PTAB reversed the Examiner’s written description rejection,⁵ stating that *Way*’s specification provided structural limitations that correlated with the claimed function: “Claim 2 recites a *reasonably small genus* of compounds with specific and complete *structural limitations that are correlated with the function* of treating a demyelinating disorder.” *Way*, at 9 (emphasis added).

Applicants in the biologics space have also successfully overturned § 112 rejections at the PTAB. In *Ex parte Keler*, No. 2019-006094 (PTAB, June 10, 2020), the applicant claimed a “method for inducing or enhancing an immune response” using a monoclonal antibody which binds to human CD27, “wherein the antibody comprises heavy and light chain variable region sequences having at least 95% identity to SEQ ID NOS: 37 and 43, respectively.” *Id.*, at 2. *Keler*’s specification disclosed three exemplary antibodies with the claimed 95% sequence identity, and further disclosed data pertaining to binding, blocking, competition, and complement-mediated cytotoxicity. On appeal, the PTAB reversed the Examiner’s written description rejection, holding that the three example antibodies exhibit a common structure that correlates with the claimed function, thus satisfying written description:

The Specification further demonstrates that these *species exhibit both the structure* recited in claim 10 (i.e., comprises heavy and light chain variable region sequences having at least 95% identity to SEQ ID NOS: 37 and 43) *as well as the recited function* (i.e., they bind to human CD27 and induce/enhance an immune response) Thus, Appellant’s *description correlates the structure of these species to the claimed function*.

Keler, at 11 (emphasis added).

Ex parte Campbell, No. 2021-000865 (PTAB, July 20, 2021), is similar to *Way*. *Campbell*’s claims recited “a method of

treating an autoimmune disease or condition, a systemic inflammatory disease or condition, or transplant rejection” comprising administering an anti-OX40L antibody having 90% sequence identity in the antibody’s heavy and light chain variable regions to specific sequences disclosed in the application. *Id.* at 2-3. *Campbell*’s specification disclosed two example antibodies, both meeting the claimed sequence identity limitations, and further disclosed experimental data such as ligand/receptor neutralization and IL-2 secretion assays. *Id.*, at 9, 15.

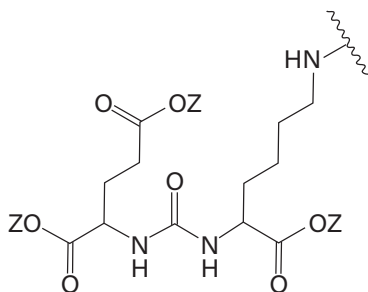
On appeal, the PTAB reversed the Examiner’s §112 rejection, holding that the specification disclosed a representative number of species and that the claimed genus shared common structural features:

“[T]he claimed antibodies are not exclusively claimed functionally, *but are also claimed structurally*, i.e., by requiring that the light and heavy chains have a structure corresponding to 90–95% of the recited SEQ ID NOS. Furthermore, *the number of possible substitutions is relatively small*: the variable regions of the antibodies comprise approximately 100 amino acid sequences, and so the total number of potential substitutions is no more than 10–12 Additionally, the Specification provides at least two embodiments antibodies: 2D10 and 10A07, that are *fully functional in their antigen-binding capabilities*.

Campbell, at 15 (emphasis added).

Recent PTAB decisions from AIA proceedings appeared to include more mixed outcomes when it comes to §112. One reason may be that AIA trials, unlike *ex parte* appeals, are *inter partes* proceedings where a motivated adversary presses the patentability issues. In the PTAB’s decision on institution in *Advanced Accelerator Applications v. Molecular Insight Pharms*, PGR2021-00048, Paper 7 (PTAB, July 29, 2021), the challenged claims recited a method of treating a patient with prostate cancer comprising administering a therapeutically effective amount of a glutamate-urea-lysine PSMA-binding moiety comprising the structure shown in Figure 2, wherein each Z, independently, is H or C₁-C₄ alkyl. *Id.*, at 4. The specification disclosed *in vitro* binding data (IC₅₀ values) for about two dozen compounds, and provided biological data for a single compound. *Id.*, at 18, 24.

Figure 2: PSMA-binding moiety in Advanced Accelerator



At the institution stage, the PTAB instituted post-grant review because it determined it was more likely than not that the challenged claims lacked written description:

[T]he '461 patent *does not disclose a sufficiently representative number of species* because the patent only provides PSMA-binding data for a *handful of compounds*, many of which show poor binding, and only provides further biological in vivo testing for one compound, MIP-1072. Given the apparent breadth of the challenged claims, this *limited number of disclosed compounds and limited data* does not appear sufficient to provide adequate written description support. We also find that the record sufficiently shows that the '461 patent *does not disclose structural features common to members of the genus*.

Id. at 24. Although *Advanced Accelerator* is still in trial,⁶ the decision at institution illustrates that the PTAB is carefully scrutinizing the representative species/common structural features rubric. And we found several other PTAB AIA decisions applying rationales similar to *Advanced Accelerator*. See e.g., *Syngenta Crop Protection AG v. FMC Corporation*, PGR2020-00028, Paper 33 (PTAB, Aug. 31, 2021) (finding claims covering “more than a billion different compounds” unpatentable for lack of written description, when the specification failed to “divine a relationship between structure and activity, given that the test data is clustered around a narrow range of structures.”); *Allgenesis Biotherapeutics v. Cloudbreak Therapeutics*, IPR2020-01438, Paper 7 (PTAB, Feb. 18, 2021) (“disclosure of a single species [of multikinase inhibitor] cannot be extrapolated to the genus.”).

In contrast to *Advanced Accelerator*, the PTAB determined in *SweeGen, Inc. v. PureCircle Sdn Bhd*, PGR2020-00070, Paper 14 (Jan. 19, 2021), that the petitioner failed to show it was more likely than not to prevail on its §112 written description arguments. In *SweeGen*, the claims recited a method of adding a glucose unit to a steviol glycoside comprising contacting the steviol glycoside with an enzyme comprising UDP-glucosyltransferase. The PTAB rejected the petitioner's assertion that the claimed scope was overbroad in view of the specification: “We agree with Patent Owner that a person of ordinary skill in the art could envision the steviol glycosides and UDP-glucosyltransferases

encompassed by the claims because they have *common structural features*.” *SweeGen*, at 32 (emphasis added). Thus, in contrast to *Advanced Accelerator*, the PTAB panel in *SweeGen* noted that members of the genus shared common structural features.

This snapshot of PTAB decisions in TC1600 indicates that the PTAB seems to apply the representative number of species / common structural features rubric in a relatively balanced manner that, at least in some cases, favors the patent applicant or patentee. Time will tell if the PTAB begins applying a stricter standard in light of *Juno*.

Written description: cases applying the *Capon* factors

We also reviewed PTAB decisions to assess how the PTAB applied *Capon v. Eshhar*, 418 F.3d 1349 (Fed. Cir. 2005). *Capon* established the following well-known factors for assessing written description of a genus claim in the biological arts:

[T]he determination of what is needed to support generic claims to biological subject matter depends on a variety of factors, such as the existing knowledge in the particular field, the extent and content of the prior art, the maturity of the science or technology, the predictability of the aspect at issue, and other considerations appropriate to the subject matter.

Capon, at 1359. Since *Capon* was decided in 2005, patentees and patent applicants alike have often interpreted it as confirming that common knowledge in the art—such as known nucleotide sequences—need not be disclosed in the specification to support written description.

The Federal Circuit in *Juno* acknowledged this principle, stating that a patentee need not “in all circumstances” disclose nucleotide or amino acid sequences “when such sequences are already known in the prior art.” *Juno*, at 1337. However, the Court in *Juno* distinguished *Capon*:

Our *Capon* decision neither made the determination *Juno* alleges nor determined that the inventors there satisfied the written description requirement. *Instead, we vacated the Board's decision for imposing too high a standard to satisfy the written description requirement, and remanded for the Board to consider the*

evidence and determine whether the specification adequately supported the claims at issue . . . *Capon* does not support Juno's arguments regarding its exceedingly broad functional claim limitations.

Id., at 1338 (emphasis added). With this new insight from *Juno*, we investigated how the PTAB is applying *Capon*.

How is the PTAB applying *Capon*?

Juno does not appear to have impacted the PTAB's stance on *Capon* in TC1600—at least not yet. Indeed, we found PTAB decisions issued before and after *Juno* that applied the same interpretation of *Capon*. For example, in *Ex parte Harriman*, No. 2020-004459 (PTAB, Feb. 10, 2021), decided before *Juno*, the claims recited a transgenic chicken comprising human immunoglobulin genes. The specification did not disclose any specific chicken or human immunoglobulin sequences, and provided only prophetic examples. The Examiner rejected the claims for lacking written description, asserting that the specification did not disclose any "transgene comprising an exogenous 'pre-arranged human light chain Ig gene' for targeted integration." *Harriman* at 8. In reversing the §112 rejection, the PTAB expressly relied on *Capon*, stating that "a pre-rearranged human Ig light chain variable region simply requires knowledge of human Ig light chain variable region sequences, which are replete in Genbank and other sources." *Id.* at 11. The PTAB explained: "Consistent with *Capon*, the ordinary artisan may select any known described deposited sequences for joinder by PCR or other well-known methods and use in the invention."

Id.; see also, *Ex parte Roninson*, No. 2019-006086 (PTAB, June 9, 2020) (applying *Capon* in reversing Examiner's §112 rejection); *Ex parte Terbrueggen*, No. 2018-004820 (PTAB, April 1, 2020) (applying *Capon* in reversing Examiner's §112 rejection; affirming on other grounds).

In *Ex parte Oliver*, No. 2021-000044 (PTAB, Oct. 8, 2021), decided after *Juno*, the claims recited a method for preparing a biomolecule analyte comprising hybridizing oligonucleotide probes to a single-stranded human DNA or human RNA template, performing a base extension reaction (e.g., PCR), terminating the reaction such that a single-strand region is adjacent to a hybridized probe, and reacting the product with a binding moiety. The Examiner argued that the specification did not provide any specific sequences for the template or oligonucleotide probes, and did not describe, e.g., how to direct a probe to polyA sequences that are not adjacent to one another. *Id.*, at 9-10. The PTAB rejected the Examiner's hypothetical, and, citing *Capon*, stated that a skilled artisan would have relied on the general knowledge in the art:

[W]e are not persuaded that Examiner's postulated hypothetical, which *would have been recognized as inoperable by those of ordinary skill in this art*, at the time of Appellant's claimed invention, supports a conclusion that Appellant's claimed invention lacks written descriptive support. See, e.g., *Capon*, 418 F.3d at 1359 ('It is not necessary

that every permutation within a generally operable invention be effective in order for an inventor to obtain a generic claim.')

Oliver, at 10 (emphasis added).

Similarly, in *Ex parte Landegren*, No. 2021-001167 (PTAB, Nov. 17, 2021), decided after *Juno*, the claims recited a method of selecting a target region of interest (ROI) in a target nucleic acid, comprising a specific oligonucleotide probe capable of hybridizing with itself to form a stem loop structure, and a series of steps involving hybridizing a probe to the target nucleic acid, base extension reactions (e.g., PCR), ligations to circularize the extended probes, and further amplification. The Examiner rejected the claims under §112(a), asserting that the probes comprise multiple sequences that can bind to multiple undisclosed targets, that the ROI can range from 10 to 100,000 nucleotides in length, but the specification only discloses three example target sequences. *Landegren*, at 4-5. In reversing the §112 rejection, the PTAB cited *Capon* and leaned on the knowledge in the art:

In view of the state of the art and the knowledge of those working in the areas such as nucleic acid hybridization, ligation, and amplification, the Examiner has not shown that the description provided by the Specification of the claimed method, and of the probes used in it, would fail to show possession to those of ordinary skill in the art.

Landegren, at 9 (emphasis added).

While this sample size is small, it appears—at least for now—that *Juno* has not had much of an impact at the PTAB.

Enablement: cases applying the routine screening rubric

Enablement cases at the Federal Circuit are also a topic of debate lately. In *Idenix Pharmaceuticals LLC v. Gilead Sciences Inc.*, 941 F.3d 1149 (Fed. Cir. 2019), the claims at issue recited a method of treating hepatitis C virus (HCV) infection with a particular type of nucleoside compound. Idenix argued that the key to its invention and the treatment of HCV infection is the use of "2'-methyl-up" nucleosides. *Idenix*, at, 1154. Gilead argued that Idenix's claim was overbroad, and Idenix's patent specification provided no guidance in determining which of the "billions and billions" of potential 2'-methyl-up nucleosides are effective in treating HCV. *Id.*, at 1157. Idenix's specification provided four examples. *Id.*, at 1161. The Court held that, even though synthesis of the 2'-methyl-up compounds was routine, "[T]he immense breadth of screening required to determine which 2'-methyl-up nucleosides are effective against HCV can only be described as undue experimentation." *Id.*, at 1162. The Court affirmed the district court's judgment that Idenix's claims were invalid for lack of enablement. *Id.*, at 1165.

In February 2021, the Federal Circuit decided *Amgen Inc. v. Sanofi, Aventisub LLC*, 987 F.3d 1080 (Fed. Cir. 2021).

Amgen's claims recited an antibody that binds at least one or at least two specific amino acid residues in the PCSK9 receptor and blocks binding of PCSK9 to its ligand, LDLR. The Federal Circuit noted that functional claim limitations "*pose high hurdles* in fulfilling the enablement requirement for claims with broad functional language" and "the use of broad functional claim limitations *raises the bar for enablement.*" *Amgen*, at 1087 (emphasis added). Similar to *Idenix*, the Federal Circuit in *Amgen* held that the skilled artisan must be able to make and screen every antibody within the genus for the claims to be enabled, explaining that "the scope of the claims encompasses millions of candidates claimed with respect to multiple specific functions, and that it would be necessary to *first generate and then screen each candidate antibody* to determine whether it meets the double-function claim limitations." *Amgen*, at 1088 (emphasis added). The Court affirmed the district court's judgment that Amgen's claims were invalid for lacking enablement. *Id.*

How is the PTAB applying routine screening for enablement?

We found varying views from the PTAB on routine screening and enablement. For example, in *Ex parte Way*, *supra*, the PTAB assessed and weighed each of the *Wands*⁷ factors, noting that the specification disclosed routine screening assays that weighed in favor of enablement. *Way*, at 7. Similarly, in *SweeGen*, *supra*, the PTAB again assessed the *Wands* factors to find that the petitioner failed to establish it was more likely than not to prevail on its enablement challenge. There, the PTAB stated that, "although there is some unpredictability in the art, the *testing appears to have been routine* and information known in the art as well as homology modeling could have been used to make the field somewhat more predictable and reduce the amount of experimentation needed." *SweeGen*, at 24 (emphasis added).

However, in *Advanced Accelerator*, *supra*, the PTAB leaned into *Idenix* and *Amgen*, stating that "the sheer number of candidate compositions that must be synthesized and then assayed weighs against enablement. This is especially true in light of the lack of guidance in the specification as to which of these compounds would have such therapeutic activity." *Advanced Accelerator*, at 20. Likewise, in *Syngenta Crop Protection*, *supra*, the PTAB acknowledged that synthesis and screening of compounds was routine, but—relying on *Idenix*—concluded that the *volume* of synthesis and screening weighed against enablement: "[S]imilar to *Idenix*, despite the high level of skill in the art

and routine nature of synthesis and screening techniques, the 'immense breadth of screening required to determine which [compounds] are effective [herbicides] can only be described as undue experimentation.'" *Syngenta*, at 40 (quoting *Idenix* at 1162).

Finally, in *Genome & Co. v. University of Chicago*, PGR2019-00002, Paper 40 (PTAB, April 14, 2020), the PTAB found the claims unpatentable for lack of enablement due, in part, to the specification's focus on antibodies. In *Genome*, the claims recited a method of treating cancer that involved administering "an immune checkpoint inhibitor," but did not recite any specific type of checkpoint inhibitor. In finding the claims unpatentable for lacking enablement, the PTAB stated, "While the Specification defines [checkpoint inhibitors] broadly as including a protein or polypeptide that binds an immune checkpoint as well as an interfering nucleic acid molecule, the CPIs listed in the Specification are almost exclusively antibodies." *Genome*, at 15. The PTAB explained, "the Specification gives no guidance as to how to select a CPI that, other than those recited in the Specification, is useful in the practice of the invention." *Id.*, at 28.

Some of these recent PTAB decisions may sound similar to *Idenix* or *Amgen* in that the PTAB considered the breadth of the claimed genus to outweigh the benefits of routine synthesis and screening for enablement. See e.g., *Advanced Accelerator*; *Syngenta*. Patent applicants and owners, however, need not give up on arguing that routine screening favors enablement, as some panels deciding cases arising from TC1600 still found that routine screening weighed in favor of enablement of a genus claim. See e.g., *Way*; *SweeGen*.

Conclusion

While recent decisions from the Federal Circuit have arguably increased § 112 scrutiny for patent owners in the chemical and life sciences, the sampling of PTAB cases in TC1600 presented here indicates that perhaps the sky is not falling; at least, not at the PTAB. At least not yet. Many patent applicants and patentees were able to successfully obtain (or defend) genus claims at the PTAB. It remains to be seen whether such claims can withstand scrutiny in litigation, but there is nevertheless value in genus claims even without asserting them in litigation. For example, genus claims can be valuable tools in licensing negotiations, attracting investors, asset sales/acquisitions, or simply serving as public notice to competitors.

1. *Amgen Inc. v. Sanofi, Aventisub LLC*, 987 F.3d 1080 (Fed. Cir. 2021), *petition for cert. filed*, _____ (U.S. Nov. 22, 2021) (No. 21-757).

2. *Juno Ther., Inc. v. Kite Pharma, Inc.*, 10 F.4th 1330 (Fed. Cir. 2021).

3. The Federal Circuit also issued two decisions concerning written description in November 2021: *Indivior UK v. Dr. Reddy's Labs.*, 2020-2073 (Fed. Cir. Nov. 24, 2021) (addressing description of claimed ranges); and *Biogen Int'l v. Mylan Pharms. Inc.*, 2020-1933 (Fed. Cir. Nov. 30, 2021) (addressing description of a "therapeutically effective amount").

4. *Amgen Inc. v. Sanofi, Aventisub LLC*, 987 F.3d 1080 (Fed. Cir. 2021), rehearing denied, 850 F.App'x 794, 796 (Fed. Cir. 2021).

5. Discussed further below, the PTAB in *Way* also reversed the enablement rejection.

6. According to a Joint Stipulation from the parties, the Patent Owner's Response is due January 21, 2022.

7. *In re Wands*, 858 F.2d 731 (Fed. Cir. 1988).

Expert Bad Behavior: The Problem and Potential Solutions

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Introduction

Imagine sitting in a conference room with your carefully crafted set of questions for a deposition, and you are exploring the basis for an opposing expert's opinions. But instead of giving thoughtful answers, the expert simply states "I don't have an opinion on that" on the basis that the material was not explicitly discussed in her declaration. Or maybe the expert simply regurgitates her written testimony or answers a different (unasked) question. Practitioners will likely tell you that such scenarios, and a range of other recalcitrant, evasive, and unreasonably obstructive behavior have recently become too common in USPTO Patent Trial and Appeal Board (PTAB) depositions. Of course, no attorney wants their client's expert to actively help an opposing counsel, who is generally seeking to craft admissions that will undermine the expert's testimony. But there needs to be limits on inappropriate behavior, or at least some consequences for bad behavior. Otherwise, the ability to cross-examine witnesses loses any meaning and becomes a waste of resources, while undermining the effectiveness and integrity of the PTAB process.

Almost every major brief filed in a post-grant proceeding is accompanied by an expert declaration, and these declarations support the technical and factual arguments made in the brief. Moreover, expert analysis and testimony are more often than not critical evidence that the PTAB will use in reaching a decision regarding the patentability of a set of claims. Therefore, effective examination and rebuttal of expert testimony can be key to crafting responsive pleadings and eventual success in defending or challenging patents before the PTAB. Conversely, parties have strong incentives to have their experts defend their testimony as aggressively as possible.

As discussed below, parties currently have limited recourse to address bad behavior by witnesses. The Board pays little attention to witness behavior, essentially never strikes or excludes testimony, and rarely mentions expert behavior as a factor in diminishing witness credibility. We suggest two practical solutions to curb expert bad behavior: more regular live testimony of witnesses in front of PTAB judges, and the normalization of more severe consequences for unreasonable behavior during deposition.

There is very little cost associated with a witness's bad behavior

One potential avenue of recourse for parties encountering expert bad behavior is a motion to strike the witness's direct testimony. However, there is little reason to believe that such an approach will be fruitful

without change.¹ Our searching² identified 164 motions to strike that related to expert testimony for which the Board issued a decision. Of those motions, the Board granted or partially granted only 21. And within the group of 21, there were no decisions in which the Board struck expert testimony based on behavior during deposition. Rather, almost all of the successful motions to strike related to expert testimony as improper surreply evidence, or declarants that were not made available for deposition. Instead of being receptive to motions to strike expert testimony, the Board generally maintains that witness behavior is part of a credibility determination that goes to the weight, rather than the admissibility of the declaration testimony.³

Given that the Board often indicates that it prefers to analyze the weight to be given to testimony, we have looked for evidence that witnesses' bad behavior during deposition has resulted in the witness losing credibility with the Board and harming the case of the proponent of the testimony. However, there is little evidence that this occurs, as the Board rarely mentions witnesses' demeanor as a factor in reaching a final decision. Even when the Board does address demeanor, the most common result is that the Board avoids the issue. For example, in *Intel Corp. v. Pact XPP Schweiz AG*, the Board dismissed assertions that an expert was "improperly recalcitrant" and "demonstrated a lack of knowledge of the subject matter" by noting that the testimony in question was not related "to the portions of [testimony]... on which we rely for our decision."⁴ Similarly, when faced with assertions that a witness was "nonresponsive" and gave "evasive answers at deposition [that] undermine his credibility," the Board responded only by asserting that it is capable of "assign[ing] the appropriate weight to be accorded evidence."⁵

An alternative avenue of recourse is for parties to contact the Board directly during the course of the deposition and ask for relief, e.g., in the form of witness instructions or additional deposition time. While tracking the frequency of such calls is difficult because they often are not reflected in the written record of a case, we performed searches for documents that reference conference or telephone calls relating to experts⁶. As shown in the chart on pg. 31, such calls were common during the first few years of PTAB practice, but the number has drastically reduced in recent years. We posit that this difference is at least in part due to a lack of successful results from those calls.

Year	Documents Referencing Expert-Related Calls
2012	1
2013	127
2014	257
2015	87
2016	98
2017	78
2018	91
2019	12
2020	13
2021	2

What can be done to curb bad behavior?

In view of the limited recourses for witness bad behavior, there is a need for new or improved mechanisms to deter such behavior. We suggest that there are already at least two mechanisms in place, both of which could serve that purpose if appropriately strengthened by the PTAB and used more often by PTAB practitioners.

First, we recommend facilitating more frequent live testimony of witnesses in front of PTAB judges. As noted by the PTAB's Trial Practice Guide, "[c]ross-examination may be ordered to take place in the presence of an administrative patent judge, which may occur at the deposition or oral argument."⁷ The Board recognizes that such live testimony can be useful when "the Board considers the demeanor of a witness critical to assessing credibility."⁸ Such live testimony could be a solution to bad witness behavior because it will provide judges with a more complete view of witness demeanor than snippets of testimony provided in briefs. Moreover, witnesses would be motivated to at least appear to be reasonable and honest in front of the case's decision-makers. And witnesses may be less likely to behave badly in a deposition if they know such testimony could be used for impeachment purposes during live cross-examination.

However, for live testimony to have any appreciable impact on post-grant proceedings, it must become much more commonly used. As noted in the Board's precedential *K-40 Electronics* decision, the Board allows such live testimony only "under very limited circumstances."⁹ That case noted that two factors that would favor live testimony are whether the witness's testimony "may be case dispositive" and whether the witness is a fact witness.¹⁰ Live expert testimony has been discouraged because "the credibility of experts

often turns less on demeanor and more on the plausibility of their theories."¹¹ In view of this limiting standard, live testimony has been requested in only 20 different cases, and granted in only three, during the lifetime of post-grant proceedings.¹² Therefore, establishing a more plausible and regular path to having live testimony is necessary for it to serve the purpose of deterring bad behavior. One plausible path is to allow for a limited time frame in which parties may question witnesses on pre-selected issues that are "case dispositive" as part of the oral arguments in a case. This would allow for judges to observe demeanor first-hand. With this in mind, it is also incumbent on PTAB practitioners to aggressively request live testimony when inappropriate and overly evasive expert behavior occurs.

Second, the PTAB should normalize striking or expunging of testimony in extreme cases of bad behavior, or perhaps more regularly provide commentary indicating when witness testimony is given less weight in view of unreasonable behavior during deposition. It is understandable that the PTAB is hesitant to strike expert testimony in view of the extreme prejudice to parties if central evidence supporting their case is struck or expunged. But exemplary cases demonstrating that there is a line beyond which behavior is not tolerated could prove a powerful deterrent to at least the most extreme behaviors. Again, it is incumbent upon PTAB practitioners to bring this type of bad behavior to the PTAB's attention, so the PTAB can better appreciate the extent of the issue.

Implementing either of these solutions could provide a strong incentive for witnesses to behave in a more reasonable and honest manner during deposition, further strengthening the effectiveness and integrity of the PTAB process.

1. Patent Trial and Appeal Board Consolidated Trial Practice Guide November 2019, pp. 80 (noting that striking an "entirety or a portion of a party's brief is an exceptional remedy").
2. We used DocketNavigator.com to identify motions to strike.
3. See, e.g., *10X Genomics, Inc. v. The University of Chicago*, IPR2015-01157, Paper 30, p. 2 (P.T.A.B. May 26, 2016) ("The panel noted that any nonresponsiveness of a witness to questioning during cross-examination would go to the weight given to that witness's direct testimony, but that a motion to strike the testimony altogether was not warranted).
4. IPR2020-00540, Paper 30, p. 11 (P.T.A.B. Sept. 8, 2021).
5. *Intel Corp. v. Pact XPP Schweiz AG*, IPR2020-00542, Paper 31, pp. 19, 28-29 (P.T.A.B. Sept. 7, 2021).
6. There are a variety of reasons for which a Board call may reference experts, so this data is not entirely reflective of just calls related to experts' bad behavior. Nevertheless, the trend is clear—there have been a diminishing number of Board calls about experts.
7. Patent Trial and Appeal Board Consolidated Trial Practice Guide November 2019, pp. 31-32.
8. *Id.* at 31-32; see also *K-40 Electronics, LLC v. Escort Inc.*, IPR2013-00203, Paper 34, p. 2 (P.T.A.B. May 21, 2014) (precedential).
9. *K-40 Electronics, LLC*, IPR2013-00203, Paper 34, p. 2.
10. *Id.* at 2-3.
11. *Id.* at 2-3.
12. Live testimony has been allowed in IPR2013-00203 (Paper 34), IPR2018-01524 (Paper 40), and IPR2015-00977 (Paper 32).

In reference to the firm's PTAB expertise, a peer says:

"Continues to excel in inter partes review and other USPTO proceedings, and represents a fine choice of counsel for startups and emerging companies."

— *Chambers & Partners (2020)*