



Obviousness in *Inter Partes* Review Proceedings

Apparently the Patent Trial and Appeal Board (“PTAB”, “the Board”) loves obviousness. In 2015, nearly two-thirds of claims instituted for *inter partes* review (“IPR”) were based on obviousness grounds,¹ as illustrated in Chart 1.

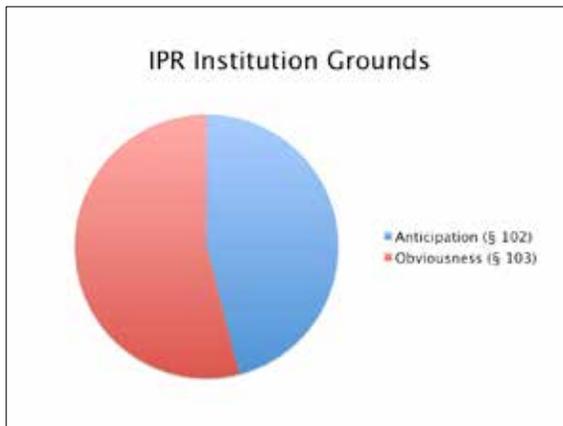


Chart 1

While an IPR petition may be based on either anticipation or obviousness, 35 U.S.C. § 311(b), petitioners pursue obviousness at a much higher rate. And, the institution rate for claims based on grounds of anticipation (46 percent) is lower compared to obviousness (54 percent), as shown in Chart 2. This is unlike district

court patent litigation, where a finding of obviousness occurs infrequently.

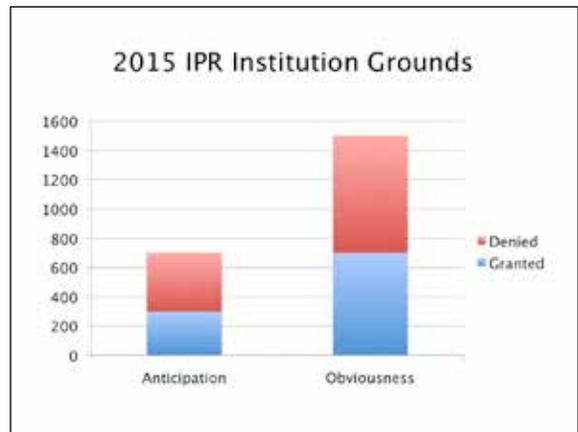


Chart 2

Although the principles of obviousness are the same as in district court litigation, it is instructive to examine their application by the PTAB given the volume of cases decided in the past three years since inception of IPR under the America Invents Act. Two critical lessons emerge from this analysis:

- Lesson 1: Don't stretch an anticipation argument where an obviousness argument would suffice.
- Lesson 2: The PTAB's obviousness analysis is exacting.

¹ Docket Navigator, PTAB Institutions (through Dec. 31, 2015).

Obviousness Principles

The Patent Act prescribes that claims are not patentable where “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C. § 103. The guiding principles for an obviousness analysis are found in well-established precedent, and are articulated in seminal cases such as *Graham* and *KSR*.

The *Graham* Factors

Under *Graham*, obviousness must be assessed on the basis of factual inquiries regarding (i) the scope and content of the prior art, (ii) differences between the claimed subject matter and the prior art, (iii) the level of skill in the art, and (iv) objective evidence of nonobviousness. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966).

Prior Art Must Be Meaningfully Addressed. The PTAB has made clear that, to be successful, petitioners must “meaningfully” address the first two *Graham* factors: (i) the scope and content of the prior art, and (ii) any differences between the claimed subject matter and the prior art. *Google Inc. v. EveryMD.com LLC*, IPR2014-00347, Paper 9, slip op. at 23–25 (May 22, 2014). In *Google*, for example, the PTAB acknowledged that the petitioner provided summaries of the prior art references, and claim charts containing quotations and citations from those references. *Id.* But the petitioner failed, according to the PTAB, to specify sufficiently where each element of the claim is found and explain the significance of the quotations and citations. *Id.* The PTAB refused to accept the burden to “sift through the information” to make such a determination and denied institution. *Id.*

Level of Ordinary Skill in the Art. The level of ordinary skill in the art may be established by factors such as:

- “(1) educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.”

Intri-Plex Techs., Inc. v. Saint-Gobain Performance Plastics Rencol Ltd., IPR2014-00309, Paper 83, slip op. at 34, n. 17 (PTAB Mar. 23, 2014).

To be persuasive before the PTAB, parties should provide detailed support for their positions. See *Oracle Corp. v. Thought, Inc.*, IPR2014-00119, Paper 45, slip op. at 23 (Apr. 23, 2015) (failing to “explain[] sufficiently why a graduate degree would be necessary”).

Education and Work Experience May be Insufficient. It is not uncommon that educational level and work experience are the only disputed factors. But it may be a mistake to focus on these factors to the exclusion of all others.

The PTAB has observed that “specifying the level of ordinary skill in terms of an academic degree in a field of study and the number of years of practical working experience is generally unhelpful, as a practical matter, because it does not convey whether one with ordinary skill in the art would have been aware of anything specific or particular.” *Samsung Electronics Co. Ltd. v. Rembrandt Wireless Techs., LP*, IPR2014-00518, Paper 47, slip op. at 17 (Sep. 17, 2015). Accordingly, patent owners and petitioners should consider presenting “evidence regarding what a person of ordinary skill in the art would have known.” *Digital Ally, Inc. v. Utility Assocs., Inc.*, IPR2014-00725, Paper 29, slip op. at 9 (PTAB Nov. 16, 2015).

Skill Level Reflected by Prior Art. “The level of ordinary skill in the art usually is evidenced by the references themselves.” *Autel U.S. Inc. v. Bosch Auto. Serv. Solutions LLC*, IPR2014-00183, Paper 59, slip op. at 11 (May 5, 2015). In *Autel*, for example, the Board relied on specific examples from a prior art reference in making a detailed finding of the level of ordinary skill. *Autel*, IPR2014-00183, slip op. at 14–15 (finding level of ordinary skill included familiarity with certain tools and sensors used during vehicle service by an automotive technician); see also *Intri-Plex Techs., Inc. v. Saint-Gobain Performance Plastics Rencol Ltd.*, IPR2014-00309, Paper 83, slip op. at 34 (Mar. 23, 2014) (finding level of ordinary skill, based on prior art, included familiarity with “the use of tolerance rings in conjunction with actuator bearing cartridges”).

In fact, the Federal Circuit recently remanded a case where the Board failed to consider a reference as evidence of

ordinary skill in the art. *Ariosa Diagnostics v. Verinata Health, Inc.*, 2015 U.S. App. LEXIS 19847 (Fed. Cir. Nov. 16, 2015). The Federal Circuit emphasized that “[a]rt can legitimately serve to document the knowledge that skilled artisans would bring to bear in reading the prior art identified as producing obviousness.” *Id.* at *15. Thus, even if a petitioner fails to state the level of skill in the art or provide support for its position, the Board may still rely on the references themselves to make that determination. *Primera Tech., Inc. v. Automatic Mfg. Sys., Inc.*, IPR IPR2013-00196, Paper 52, slip op. at 8–9 (Aug. 29, 2014) (citing *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001)); *Redline Detection, LLC v. Star Envirotech, Inc.*, IPR2013-00106, Paper 66 (Jun. 30, 2014).

Secondary Considerations. Patent owners should seek objective evidence supporting a conclusion that the claimed invention was not obvious. “However, such a conclusion requires the finding of a nexus to establish that the evidence relied upon traces its basis to a novel element in the claim and not to something in the prior art.” *BioMarin Pharm. Inc. v. Genzyme Therapeutic Prods. LP*, IPR2013-00537, Paper 79, slip op. at 22 (Feb. 23, 2015).

First, “mere attorney argument” will not substitute for objective evidence. *Johnson Controls, Inc. v. Wildcat Licensing WI, LLC*, IPR2014-00305, Paper 45, slip op. at 28, n. 3 (June 22, 2015). Second, patent owners must establish the required nexus between the evidence and the invention. *Smith & Nephew, Inc. v. ConvaTec Techs., Inc.*, Paper 87, slip op. at 44–45 (May 29, 2014) (“In order to establish a proper nexus, the patent owner must offer proof that the sales were a direct result of the unique characteristics of the claimed invention—as opposed to other economic and commercial factors unrelated to the quality of the patented subject matter.”). Third, the cases illustrate that support must be provided to establish the evidence. *Ebay, Inc. v. Paid, Inc.*, CBM2014-00125, slip op. at 43 (PTAB Sep. 16, 2015) (Paper 37) (“Patent Owner has not provided evidence of the market share ... to back up its claim of commercial success.”); see also *Oracle Corp. v. Thought, Inc.*, IPR2014-00117, Paper 44, slip op. at 25–26 (Apr. 23, 2015) (finding “no evidence of record as to how these awards were given ... [or] whether these awards were well-known or respected in the industry.”)

But when properly supported, objective evidence can provide a powerful independent basis for nonobviousness. In *Intri-Plex Techs., Inc. v. Saint-Gobain Performance Plastics Rencol Ltd.*, the PTAB found that the Patent Owner’s evidence of commercial success alone outweighed the other three *Graham* factors. IPR2014-00309, Paper 83, slip op. at 46 (Mar. 23, 2014). The PTAB found that sales of the patented invention were significant and that the patent owner held a dominant position in the market. *Id.*

Motivation to Combine

The PTAB scrutinizes petitions for clearly stated reasons to combine references. “An invention ‘composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.’” *Volkswagen Grp. of Am., Inc. v. Velocity Patent LLC*, IPR2015-00276, Paper 8, slip op. at 10 (PTAB Jun. 1, 2015) (quoting *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007)). “A party that petitions the Board for a determination of obviousness must show that ‘a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.’” *Apotex Inc. v. Wyeth LLC*, IPR2014-00115, Paper 94, slip op. at 11 (Apr. 20, 2015) (quoting *Procter & Gamble Co. v. Teva Pharms. USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009)).

A reason to combine may be found explicitly or implicitly in market forces; design incentives; the “interrelated teachings of multiple patents”; “any need or problem known in the field of endeavor at the time of invention and addressed by the patent”; and the background knowledge, creativity, and common sense of the person of ordinary skill.

Ericsson, Inc. v. Intellectual Ventures I LLC, IPR2014-00527, Paper 41, slip op. at 27–28 (May 18, 2015).

A common error before the PTAB is failing to “include articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Volkswagen*, IPR2015-00276, slip op. at 11. In *Volkswagen*, for example, the petitioner provided only “conclusory assertions by counsel,

unsupported by testimony of an expert witness.” *Id.* at 11–13. To prevail, however, the analysis must be explicit as to why one skilled in the art would “combine the elements in the way the claimed new invention does.” *Id.* at 11.

Similarly, in *Shopkick, Inc. v. Novitaz, Inc.*, the petitioner failed to provide a meaningful analysis and relied on the fact that the cited references were analogous art and shared common design incentives with the patent under review. IPR2015-00279, Paper 7, slip op. at 26–30 (May 29, 2015). In denying institution, the PTAB explained that “conclusory labels do not substitute for a fact-based analysis ... establishing what is being modified and why, based on the differences between the prior art and the claimed invention, it would have been obvious to a person of ordinary skill to make the modification.” *Id.* at 30.

Lower Burden of Proof

In district court litigation, invalidity must be shown by clear and convincing evidence. In contrast, a lower “preponderance of evidence” is required in an IPR because the PTAB determines patentability, not validity. 35 U.S.C. § 316(e). Furthermore, a deferential “substantial evidence” standard of review applies to the PTAB’s factual findings in an obvious inquiry. *Merck & Cie v. Gnosis S.p.A.*, 2015 U.S. App. LEXIS 21927, at *7 (Fed. Cir. Dec. 17, 2015). In a close case, the lower burden of proof combined with the deferential appellate review standard may result in invalidating a patent that would have remained valid in district court litigation. *Id.* at *29 (Newman, J., dissenting) (“The substantial evidence standard determines whether the decision could reasonably have been made, not whether it was correctly made.”). Thus, patent owners must take even more seriously the need to build the strongest case possible in proceedings before the PTAB.

Obviousness Insights and Tips

Obviousness-Related Reasons to Deny Trial Institution

The insights and tips presented herein are based on a review of 27 decisions *denying* institution on grounds of obviousness during the month of September 2015.

Reasons for denial generally fall into two categories—either basic mistakes or special issues. Failure to show that a combination includes all elements or limitations of the challenged claim is one basic mistake; insufficient evidence of a reason to combine is another.

Examples of special issues include improperly relying on an inherent property in the prior art or on a patent from the same family as the challenged patent, attempting to present a non-printed publication as admitted prior art, and submitting an unhelpful expert declaration.

Basic Mistakes. Most obviousness-based denials to institute an IPR fall into the category of basic mistakes. Out of 27 reviewed denials on the ground of obviousness, 22 (or 81 percent) were due to either (i) **missing elements and limitations**, or (ii) **insufficient argument for a combination**, i.e., not meeting the “articulated reasoning with some rational underpinning” standard.

- **Missing Elements and Limitations.** Twelve denials cited the Petitioner’s failure to assert a combination of prior art references that would include all elements or limitations of the challenged claim. Several lessons can be drawn from a review of these decisions not to institute.

The petition must specifically identify where the cited prior art references disclose each and every element of the claim. It’s not enough to identify the main structural elements of the claim. The particular relationship between the elements, if recited by the claim, must be present in the references. For example, in *Microsoft Corp. v. Global Touch Solutions, LLC*, the PTAB agreed a publication disclosed “detecting user proximity and user contact,” but found the petitioner failed to “*distinguish[] between proximity and physical contact events*” as the claim required. IPR2015-01024, Paper 11, slip op. at 7 (September 23, 2015) (emphasis in original).

Petitioners need to review the prior art publications to ensure that they do not contradict the desired construction of the claim terms. In *Apple Inc. v. Virnetx Inc.*, the petitioner argued that “[t]he HOSTENT *is a network address*” which was “contrary to [the publications] only

disclosure related to HOSTENT.” IPR2015-00813, Paper 8, slip op. at 8 (September 16, 2015) (emphasis in original). The petitioner must provide an explanation for an unfavorable disclosure in the prior art regarding what a person of skill would understand. *Kapsch Trafficcom IVHS INC. v. Neology, Inc.*, IPR2015-00823, Paper 11, slip op. at 23 (September 14, 2015).

In life sciences cases, petitioners must specifically identify how a clinical trial establishes the claimed limitation. See, e.g., *Coalition For Affordable Drugs V LLC, Petitioner, v. Biogen MA Inc.*, IPR2015-01136, Paper 23, slip op. at 11 (September 2, 2015) (the PTAB unable to find a reasonable likelihood that a trial taught that “DMF was known to be useful in treating MS.”).

- **Insufficient argument for a combination.** Ten petitions were denied during September 2015 due to an insufficient argument for a combination. As discussed above, the test for making a proper combination argument is “articulated reasoning with some rational underpinning.”

The two most important issues are ones familiar to patent prosecutors: dealing with “teaching away” references, and offering only a cursory “obvious to try” argument. In *TRW Automotive U.S. LLC v. Magna Electronics, Inc.*, the petitioner failed to explain “why a forward-facing camera orientation” would have improved a prior art system and failed to show that a “POSA would have had a good reason to change the rearward-facing orientation.” IPR2015-00951, Paper 8, slip op. at 15, 17 (September 17, 2015) (emphasis in original). Another common issue is improper hindsight, where prior art references look combinable only through a prism of knowledge gleaned from a new invention. *MasterImage 3D, Inc. v. RealD Inc.*, IPR2015-00877, Paper 8, slip op. at 21–22 (September 9, 2015).

A combination of references is sometimes achieved by substituting an element from one prior art reference with another element from another reference. Such argument must be supported with an explanation that the resulting combination will still be operational. *Apotex Inc. v. Wyeth LLC*, IPR2015-00873, Paper 8, slip op. at 11-12 (September 16, 2015) (“Petitioner does not provide

adequate evidence or explanation why a person having ordinary skill in the art reasonably would have expected that the substitution of tigecycline for minocycline in the CN '550 compositions would have resulted in a stabilized tigecycline composition.”).

Finally, a combination may be improper if the element added from the second reference is already present (or, more often, its functionality is already present) in the first reference. *TRW Automotive U.S. LLC v. Magna Electronics, Inc.*, IPR2015-00972, Paper 9, slip op. at 15, 17 (September 16, 2015) (finding no reason to combine where “the camera in [the '094 patent] already is mounted to the windshield using a bracket and does not require the direct optical coupling provided by the fastening device in [the '633 patent]”). See also *Stryker Corp. v. Karl Storz Endoscopy America, Inc.*, IPR2015-00764, Paper 13, slip op. at 13 (September 2, 2015) (“[W]e fail to see, and Petitioner does not adequately explain, why it would be obvious to add a translator to redundantly perform the function that Petitioner maintains is performed by the interconnect devices and network computer located within the surgical network.”).

Special Issues Requiring Attention to Details. Other obviousness related issues are not as easily categorized as those discussed above. The only common lesson that can be drawn from the examples analyzed below, all based on decisions issued in September 2015, is that petitioners must pay strict attention to detail.

Five decisions dealt with petitions not falling in the “basic mistakes” category. In two (both by the same petitioner, against the same patent), the problem was an improper reliance on applicant admitted prior art (“AAPA”). In another, an inherent property of a compound was not sufficiently shown. In yet another, the petitioner failed to show that a patent from the same family as a patent they were attacking was prior art. Finally, testimony of one petitioner’s own expert contradicted the petitioner’s argument.

- **Reliance on Inherent Property.** The problem with unsubstantiated reliance on an inherent property of a composition can be viewed as a subset of the “not all elements”

mistake. In chemical arts, it is well known that “[p]roducts of identical chemical composition cannot have mutually exclusive properties.” *In re Spada*, 911 F.2d 705, 709, (Fed. Cir. 1990). Without establishing the identity of the compositions, however, a conclusion of identical properties fails. In *Ferrum Ferro Capital, LLC v. Allergan Sales, LLC*, the Board concluded that “[p]etitioner [did] not establish sufficiently that the ‘without loss of efficacy’ limitation is an inherent property or a necessary result of administering the composition.” IPR2015-00858, Paper 10, slip op. at 10 (September 21, 2015).

- **Reliance on Applicant Admitted Prior Art.** Applicant admitted prior art can be a very strong indication of obviousness. In the context of an IPR petition, however, it’s important to remember that a review may be instituted “only on the basis of prior art consisting of patents or printed publications.” 35 U.S.C. § 311(b). It is not appropriate to cite to more recent declarations of patent owner’s experts in support of an argument for AAPA, even when such declarations describe prior art publications. If the printed publications on which experts rely are not themselves asserted as prior art references in the petition, the Board will not give weight to the expert declarations. *Kingbright Electronics Co. Ltd. v. Cree, Inc.*, IPR2015-00744, Paper 8, slip. op. at 5-6 (September 9, 2015) (finding that “applicant statements in the specification directly asserting that certain technology is prior art” and “later-dated statements of experts and inventors on behalf of the applicant/Patent Owner in other proceedings” are not an allowable basis to institute).
- **Reliance on a Patent From the Same Family as Prior Art.** Before a petitioner can rely on a reference as part of a combination for obviousness, they need to establish that the reference is prior art. This simple statement becomes tricky when the reference in question is a patent from the same family as the patent that is a subject of the petition. The test is whether the prior patent satisfies the written description requirement with respect to the accused claim of the patent in the petition. *TRW Automotive U.S. LLC v. Magna Electronics, Inc.*, IPR2015-00972, Paper 9, slip op. at 6 (September 16, 2015).

- **Getting Hurt by Your Own Expert.** Oftentimes, petitioners rely on expert testimony to support their argument. In such cases, testimony must not contain any statements that may be held against the petitioner. Otherwise, the Board is sure to latch on to such inconsistent statements. *Medtronic v. Mark A. Barry*, IPR2015-00782, Paper 6, slip op. at 17 (September 9, 2015) (“[I]n view of [petitioner’s expert’s] other testimony touting the ability of a surgeon to grasp each of the handles simultaneously and apply force appropriately, we are not persuaded by Petitioner’s argument concerning the combination of the ’349 Patent with the [prior art reference].”).

Obviousness Considerations Cited in Final Written Decisions

For patent owners, the best chance to defeat a ground of unpatentability is at the trial institution stage, where roughly half of all claims are denied. After institution, chances for patentability diminish significantly, because the PTAB has already decided that it is more likely than not that the petitioner will prevail.² Characteristically, out of 63 Final Written Decisions in September 2015, 58 decisions (92 percent) found at least some claims unpatentable, and only five decisions (8 percent) found all challenged claims patentable.³

In one decision finding claims patentable, the Board explained that the proposed combination of elements amounted to impermissible hindsight. *Endo Pharmaceuticals Inc. v. Depomed, Inc.*, IPR2014-00654, Paper 69, slip. op. at 27 (September 21, 2015). In another petition by the same petitioner against the same patent owner, the Board did not agree that the prior art references were combinable. *Endo Pharmaceuticals Inc. v. Depomed, Inc.*, IPR2014-00656, Paper 66, slip. op. at 25 (September 21, 2015). In yet another, the Board did not find a sufficient reason to combine the references. *Edmund Optics, Inc. v. Semrock, Inc.*, IPR2014-00599, Paper 72, slip op. at 46 (September 16, 2015).

² Since the beginning of the IPR proceedings, the claims for which the trial has been instituted were found unpatentable in about 80 percent of the cases. Docket Navigator, PTAB Institutions (as of Dec. 31, 2015).

³ *Id.*

As expected, at this late stage of the IPR proceedings, it is unlikely that the PTAB will find any elements or limitations missing outright. In the small number of cases where trial is instituted, yet none of the claims are found unpatentable by the Board, the most typical reason seems to be that the combination itself is scrutinized more than at the institution stage, typically due to arguments presented in a Patent Owner's response.

Conclusion

The PTAB generally applies the obviousness rules in IPR proceedings in a similar fashion to the United States Patent and Trademark Office during patent application examination. The "all elements rule," *Graham* factors, no hindsight, and other such rules of obviousness are familiar to patent prosecution practitioners and litigators alike.

Petitioners should plan out the grounds in the petition thoroughly, as there will be limited opportunity to bolster arguments made in the initial petition. This entails focusing on obviousness, explicitly identifying all elements and limitations of each claim in the asserted prior art publications, and clearly explaining the reasons for a combination.

Patent owners should be proactive with filing both a preliminary response before the decision on institution, and a detailed response if a trial is instituted. A preliminary response should attempt to identify at least one element or a limitation not expressly pointed out by a petitioner. A response at the trial stage should focus more on the weaknesses in combining the references. Patent owners would be well-advised to seek out objective evidence of nonobviousness as well.

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