

No. 2024-1040

United States Court of Appeals
for the Federal Circuit

MARK SANDSTROM
Patent Owner, Appellant

v.

MICROSOFT CORPORATION
Petitioner, Appellee

Appeal from the United States Patent and Trademark Office
Patent Trial and Appeal PTAB Case No:s IPR2022-00528 and IPR2022-00527

**COMBINED INFORMAL PETITION FOR PANEL REHEARING AND REHEARING
EN BANC BY APPELLANT SANDSTROM**

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I. INTRODUCTION

Appellant herewith requests panel rehearing, and rehearing *en banc*, for this appeal, as reversal of PTAB's FWDs is necessary for maintaining uniformity of this Court's decisions, incl. in view of the precedential decisions quoted at the (denied) request for oral argument (Doc. 56), as well as due to that the question at the appeal – whether the patent owner should carry the burden of proving non-enablement in an IPR – is of exceptional importance in view of that the panel, violating the applicable precedent, placed such burden on the patentee, while relieving the patent challenger of any such burden, against 35 U.S.C. § 282 stating that the “burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.”

Specific errors and omissions in the panel's opinion, warranting rehearing, are identified at section II, and, at high level, include violations of the applicable law and logic per below:

- The evidence in the IPR petitions precluding obviousness were overlooked by the panel.
- Supposed obviousness of a broader claim was improperly relied on for obviousness holding of narrower claims, e.g., its dependent claims, and other independent claims.
- Supposed obviousness of one selected claimed feature was improperly relied on for obviousness holding of the claimed invention.
- Expectation of success in combining prior art teachings, to achieve combined properties thereof, was used for holding obvious a claimed invention though such prior art combination cannot achieve what the claimed invention does.
- The forfeiture arguments adopted from Appellees' memorandum, based on non-IPR caselaw, were applied for affirming the IPR FWDs that violate the applicable IPR caselaw precedent (as quoted at Docs. 56, 46).
- The reasons presented in the Appeal Brief (Doc. 43) for why reversal of the FWDs is warranted did not rely on any of the Appellant's supposed arguments the opinion disagreed with.
- The opinion avoided addressing any of Appellant's actual arguments for why reversal of the FWDs is necessary under the applicable law (summarized in the unexplainably denied request for oral argument, Doc. 56), e.g., that the Petitioner did not carry their burden of proving enablement, i.e., that their proposed prior art combinations could achieve, instead of properties of their combination, those of the inventions protected by the challenged claims.
- The opinion disregarded Appeal Brief Arg. III warranting remand under the precedent cited.
- The panel affirmed PTAB though the FWDs – cancelling each challenged claim – did not make even grammatic, much less other, sense.

II. POINTS OF LAW OR FACT THE PANEL OVERLOOKED OR MISAPPREHENDED

A. The IPR petitions evidence non-obviousness and non-achievability of the challenged claims

This appeal concerns 36 claimed inventions, including seven independent claims, of the US patents 9632833 and 9424090 (the ‘833 and ‘090 patents). The parties agree that none of these claimed inventions was anticipated, i.e., that no one had achieved any of the claimed inventions by their priority date. Yet the IPR petitions admit that the desire to achieve the benefits of the claimed inventions had existed for years before, motivating combining the IPR petitioner’s proposed art. (Appx. 326-327; Appx2955). However, despite the need to achieve the claimed inventions, while the proposed art publications had been available for several years, no one in the computer science or engineering fields (incl. Appellee) – having thousands of skilled artisans – had achieved the challenged claims until after the publications of the underlying application disclosures.

Achieving the inventions of the challenged claims could not thus have been *obvious* to POSITA, when it took years, and the intervening publication of the disclosures for the challenged patents, for even the PhD-level experts per Appeal Br. (p. 3) to produce specifications for initial 3rd party implementations reaching the challenged claims¹. As such, Appellee’s prior art, while being available for years e.g. for the YARN community, in fact, did not enable even such experts to achieve the challenged claims – though, relatively soon after the publication of the application for the challenged patents, a specification was released for YARN Capacity Scheduler with preemption. The reality thus is that the Appellee’s prior art combinations could achieve, instead of the claimed inventions, just the properties of their own teachings. Like the PTAB, the panel mistook the arguments for combinability of the Appellee’s prior art for achievability of the claimed inventions, disregarding the evidence of non-achievability at Appeal Br. Arg:s I and II (Doc. 43-2, pp. 5-25). This is readily seen where the panel’s opinion (p. 7) adopts the Appellee’s obviousness theory based on combinability of the primary reference Agrawal’s “two-level” scheduling with secondary references. **But none of the challenged claims recite two-level scheduling per the prior art. Instead, the claimed inventions (‘833 patent independent claims 1 and 19) recite the unrelated capability of two-tier allocation, shown to be non-achievable by the IPR petitioner’s art e.g. at Appeal Brief Arg I.B.2 (Doc. 43-2, pp. 13-16).**

¹ Namely, via adding pre-emptive, tiered scheduling from 2015 on to the YARN technology per Appeal Brief p. 3, fn. 4. The disclosures for the challenged patents had been published by 2014.

B. The panel, in their non-precedential opinion (Doc. 59), illogically tried to use supposed obviousness of the broadest (arbitrarily taken as the ‘representative’) claim of each patent as grounds for obviousness holding of the narrower claims, against 35 U.S.C. § 282 stating “Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims.”

Notably, the panel’s opinion avoided addressing in any manner the other claims at the appeal, even though the Appeal Brief included evidence of non-achievability of each of the challenged independent claims by the Petitioner’s prior art (Doc. 43-2 pp. 8-16). While panel’s affirmation thus violates 35 U.S.C. § 282 as quoted above, as a matter of logic, a broader claim could be held obvious by showing the invention of a narrower claim to be achieved by the proposed prior art, but not the other way around, as the panel did.

C. The panel illogically sought to equate supposed obviousness of an arbitrarily chosen single claimed feature (of multiple highlighted features) to achievability of the claimed invention.

Specifically:

- In case of the ‘090 patent, the panel’s ‘analysis’ for its supposed representative claim 1, was arbitrarily further limited a singular feature of that claim, though the Appeal Brief at Argument I.B.1 (Doc. 43-2 pp. 8-12) provided evidence of non-achievability of five separate recited features of the ‘090 patent claim 1 (whilst the patent validity challenger would have had the burden to prove achievability thereof).
- In case of the ‘833 patent, the opinion **did not at all address** achievability of the actual quoted feature of its ‘representative’ claim 15, by which “the selection of the selected instances is based, at least in part, on a respective capacity demand indication of each of the set of software programs, with said indication of a given program (a) being based at least in part on a number of its executable instances that presently have input data available for processing” (Appeal Br. Arg. I.B.2; Doc. 43-2 pp. 12-16).

That is contrary to 35 U.S.C. § 103, specifying the among requirements for obviousness holding that the claimed “invention as a whole would have been obvious before the effective filing date of the claimed invention”, and case law quoted in MPEP § 2141.02.I that “In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious”.

Naturally, a mere holding of a singular claimed feature as obvious in view of the proposed prior art – beyond which the opinion did not reach even for the broadest claims chosen as the ‘representative’ claims of the challenged patents – is not sufficient grounds for obviousness of any of the claimed inventions, or for affirming the PTAB, in particular in presence of evidence for non-achievability of multiple features of the representative claim (‘090 patent claim 1; Doc. 43-2 pp. 8-12), when the feature quoted as non-achievable is not even addressed (‘833 patent claim 15; Doc. 43-2 page 13) by the panel, and when there are multiple claims shown to be non-achievable with the Petitioner’s prior art teachings (see reasons for technical non-achievability of ‘833 patent challenged independent claims 10, 15, 19, 29 and 34; Doc. 43-2 pp. 12-16).

D. Unlike mischaracterized in the opinion, the FWDs did not evaluate whether “a relevant artisan would have been motivated to combine, and had a reasonable expectation of success in combining the teachings of [Petitioner’s] prior art ... to arrive at claims”² being challenged.

Unexplainably, while the opinion extensively adopts the Appellee’s mischaracterizations of the record (incl. from their memorandum in lieu of oral argument that was requested from the Appellee, despite the Federal Circuit rules disallowing such a surreply), the opinion avoids making any single reference to the Appellant’s Reply Brief (Doc. 46), which, among the other points critical for deciding the appeal in consistence with the applicable precedent, at its section II, contrasted the Petitioner’s major mischaracterizations against the applicable record. Among the points thus made at the Reply Brief (section II; Doc. 46-2; pp. 4-6), and left unexplainably unaddressed at the opinion, is that the FWDs, at best, discussed the combinability of the Petitioner’s proposed prior art as such, but failed to evaluate whether such hypothetical combinations could have produced the features of the inventions protected by the challenged claims, instead of just the combined features of the proposed prior art.

² Verbatim language used by the FWDs is that “*one with ordinary skill in the art would have had a reasonable expectation of success in **combining the teachings***” – not “*to arrive at claims*” as phrased in the Appellee’s response brief, and as accordantly misstated in the opinion (emphasis added; Joint Appendix Doc. 47-1 pp. 30, 97). In any event, as shown at Appeal Brief Arguments I and II (Doc. 42-2 pp. 5-25), the combinations of the Petitioner’s art cannot even technically achieve any of the challenged claims, much less make them obvious.

E. While avoiding addressing the substance of the arguments warranting reversal of the FWDs, i.e., that the Petitioner failed to present any evidence that their prior art combinations would have enabled the inventions of any of the challenged claims (instead of just the properties of such combinations), and the applicable precedent cited (see e.g. Doc. 56), the opinion adopted Appellant's non-IPR caselaw for its forfeiture conclusions that are impossible in the context of IPRs.

Though the opinion unexplainably avoided any mention of the applicable patentability precedent (e.g. *FanDuel, Eli Lilly*, as quoted at Doc. 56) by which, in an IPR, "the petitioner's contentions ... define the scope of the litigation all the way from institution through to conclusion", it relied on the Appellant's caselaw (*In re Google Technology Holdings LLC*) outside IPRs (and validity challenges in general) for its forfeiture conclusion. However, the *Google Technology Holdings* case was an appeal from USPTO's examiner's rejection of a patent application, where the applicant (appellant) was the party with the burden of proof to overcome the examiner's rejection grounds, with unlimited arguments. The circumstances of that case – relied on for the affirmation FWDs that would cancel each of one of the thirty-two (32) challenged claims, incl. seven (7) independent claims, no less – are contrary to the present appeal from an IPR, where "a patent owner carries no obligation to raise any objection to the petitioner's challenges at all", and where "a patent owner's response, alone, does not define the universe of issues the Board may address in its final written decision". Please see relevant discussion at Reply Brief Document: 46-2, page 2 (bullet points 2nd through 4th discussing impacts of the *Alacritech, FanDuel* and *SAS Inst* precedent) and pp. 4-5 (Argument II.c, on the asymmetry of IPRs in view of the precedent cases). Rather than a matter of the patentee not addressing during the IPRs the (anticipated?) lack of enablement discussion in the FWDs (when the patentee expected denial by refuting the arguments IRP petitioner actually made), the exceptional issue here is that the opinion avoided, at all, addressing the substance of the disagreement between the parties at the appeal, summarized e.g. at the request for oral argument (Doc. 56) and Reply Brief (Doc. 46), concerning who has the burden to present evidence regarding whether the prior art combinations enable the inventions of the challenged claims.

F. The opinion throughout adopted Appellee's mischaracterizations of Appellant's positions, while avoiding addressing the actual arguments presented.

i. The reasons presented in the Appeal Brief for why reversal of FWDs is warranted did not rely on challenging "the Board's finding that a relevant artisan would have been motivated

to combine Agrawal and Brent in the '833 *Decision* or to combine Chen and Agrawal in the '090 *Decision*” or contending that “the stated goals of Chen and Agrawal would not have seemed compatible” to a relevant artisan` as misstated in the opinion.

Instead, the Appeal Brief Summary of Argument stated:

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SUMMARY OF ARGUMENT

PTAB’s conclusion of obviousness suffers from at least the below critical defects, any one of which provides an independent basis for reversal. First, PTAB committed a legal error in dissecting the challenged claims into individual recited elements for obviousness analysis, failing to consider the claimed invention as a whole. Second, PTAB resorted to impermissible hindsight mapping of disparate disclosures from the prior art to the dissected claimed elements, disregarding the requirement that, for a legally sufficient obviousness determination, the prior art must enable POSITA to make and use the invention. Still, PTAB made blatant factual errors in ignoring the differences between the (improperly dissected) claim elements – as actually recited vs. how they were mischaracterized in the Petition – and prior art disclosures mapped to them. The arguments here are presented in the context that, per 35 USC § 282, issued patent claims are presumed valid and that burden of establishing invalidity of any claim rests on the party asserting such invalidity. CAFC has explained that, while:

‘a patent owner carries no obligation to raise any objection to the petitioner’s challenges at all. Thus, a patent owner’s response, alone, does not define the universe of issues the Board may address in its final written decision. Rather, in an IPR, “the petitioner’s contentions . . . define the scope of the litigation all the way from institution through to conclusion”

(citations omitted) (*FanDuel, Inc. v. Interactive Games LLC*, 966 F.3d 1334, 1339 (Fed. Cir. 2020)),

“it [is], at all times, [petitioner’s] burden to show that the claims would have been obvious, including that a skilled artisan would have had a reasonable expectation of success in achieving the claimed invention” (*Eli Lilly & Co. v. Teva Pharm. Int’l GmbH*, 8 F.4th 1331, 1348 (Fed. Cir. 2021)). It was Petitioners’ burden to argue, and PTAB’s burden, for a legally sufficient obviousness determination, to explain in the FWDs with evidence how that and other applicable requirements for obviousness determination were met by the proposed grounds. Per below, PTAB did not meet that burden for any one of the challenged claims.

Unexplainably, the panel’s opinion avoided addressing any of the actual arguments thus summarized.

- ii. The arguments why reversal of FWDs is warranted did not rely on contentions “that there is no evidence of any real-world practical combination of Agrawal and Brent” or “that the obviousness showing requires identification of an existing real-world combination”.

Rather, though the burden of proving enablement belongs to the patent challenger, the patentee presented evidence that the recited features of none of the challenged claims (Appeal Br. Arg. I.B; Doc. 46-2 pp. 8-25) are achievable by any combination of the proposed prior art. The panel’s opinion (like Appellee’s response brief) avoided addressing such evidence of non-achievability of the claimed inventions.

G. The opinion misrepresents the arguments regarding non-enablement.

- i. The argument for lack of evidence of enablement of the (supposed representative) claim 15 of the ‘833 patent is not refuted by the associated statement in the opinion that:

The Board in its ‘833 *Decision* found that Agrawal, which itself discloses using “instantaneous parallelism,” *i.e.*, “the number of processors the job can effectively use at the current moment,” would have met claim 15’s limitation.

In contrast, the ‘833 patent ‘representative’ claim 15 feature actually highlighted (Appeal Br. Arg. I.B.2; Doc. 43-2 pp. 12-16) recites:

“the selection of the selected instances is based, at least in part, on a respective capacity demand indication of each of the set of software programs, with said indication of a given program (a) being based at least in part on a number of its executable instances that presently have input data available for processing”.

The opinion did not address the Appeal Brief Argument I at all, and omitted any discussion on the (non-existence of) evidence for enablement of the above highlighted feature. As noted at the Reply Brief (Doc. 46), Appellee’s response brief alike avoided responding to the lack of enablement evidence, incl. for the above quoted and other highlighted features at Appeal Brief Arg. I. As such, on the merits, what “fails on the record actually developed” is not the Appeal Brief, but the case for enablement – *i.e.* upholdability of obviousness determinations – of the challenged claims.

- ii. The argument for lack of evidence of enablement of the ‘090 patent ‘representative’ claim 1 is not refuted by the associated statement in the opinion that:

in its ‘090 *Decision*, the Board, with substantial support from Microsoft’s expert declaration and the prior art references themselves, determined that Agrawal’s disclosure of “scheduling quanta,” *i.e.*, scheduling tasks at regular time periods, and Chen’s disclosure of considering the processing needs of different applications in scheduling “to maximize FPGA utilization,” would have enabled the claim 1 limitation Mr. Sandstrom highlights.

First off, sentences such as the above reveal that the panel had not even read the Appeal Brief.³ The Appeal Brief does not support any notion for “the claim 1 limitation Mr. Sandstrom highlights” – as if there was a **singular** feature highlighted from that claim. Instead, the Appeal Br. Arg. I.B.1 (Doc. 43-2 pp. 8-12) provided evidence of non-achievability by the Petitioner’s art for **five** recited features of the ‘090 patent claim 1 – **none** of which were addressed in the opinion.

H. Unlike misstated in the opinion, the Appeal Brief contains no claim construction argument, but instead, the (unaddressed) argument that the IPR petitioner failed to show achievability of any of the inventions protected by the challenged claims by their prior art combinations.

There is no basis in the Appeal Brief for the opinion’s mischaracterization that, supposedly, Appellant “perceives collective optimality to be an intended benefit of his invention”. Instead, the Appeal Brief, e.g. at the Argument I (Doc. 43-2, pp. 5-16; with Arg. II at pp. 16-25 referring back to those claim recitations) which was not addressed in the opinion, provides evidence for non-achievability of verbatim recited features of the challenged claims. Even for the panel’s selected ‘representative’ claims, the opinion did not explain what would be the evidence for achievability for any of their features quoted at Appeal Br. Arg I.B.1 and I.B.2, specifically, for the ‘090 patent claim 1, at Doc. 43-2 pp. 8-12, and for the ‘833 patent claim 15, at Doc. 43-2 pp. 12-16.

For instance, evidence for enablement remains unidentified for the ‘090 patent claim 1 highlighted feature of “*selecting, from the set of processing tasks, specific **tasks**, referred to as **selected tasks**, for execution on the processor cores for a next CAP at least in part based on core capacity demand expressions associated with the processing tasks*”, given that, unlike the claimed operation making multiple optimization choices at once (therefore enabling **global** optimality for each allocation cycle), Appellee’s prior art teachings were limited to greedy i.e. one-choice-at-a-time schedulers (taking individual steps guided by **local** optimality), as documented at Doc. 43-2

³ This is seen already from the panel’s confusing of the Agrawal’s “**two-level**” scheduler in which a “job scheduler [] allots processors to jobs” and a “task scheduler [] schedules the tasks belonging to a given job onto the allotted processors” to the **two-tier** allocation per the ‘833 patent claims 1 and 19 – shown to be taught against by the Petitioners’ art per Appeal Br. Arg. I.B.2 (Doc. 43-2 pp. 13-16; see in particular the page 14 contrasting the two-tier allocation of the ‘833 patent claim 15 against the applicable quote from Agrawal outright ruling out same) – which critical distinction establishing non-obviousness of the challenged claims 19–22, 24, 25 and 27 was omitted from consideration by the panel, in favor of their adoption of the fundamental misapprehensions, such as this one, from Appellee’s response brief and their memo/sur-reply.

pp. 9-12. The opinion omitted any discussion on evidence of obviousness of this major distinction between Petitioner's art and e.g. the above quoted recitation of the '090 patent claim 1.

Similarly, for the panel's chosen 'representative' claim 15 of the '833 patent, no evidence exists for enablement of its highlighted feature whereby "*the selection of the selected instances is based, at least in part, on a respective capacity demand indication of each of the set of software programs, with said indication of a given program (a) being based at least in part on a number of its executable instances that presently have input data available for processing*" (Doc. 43-2 page 13). Instead, the opinion only stated that:

The Board in its '833 *Decision* found that Agrawal, which itself discloses using "instantaneous parallelism," *i.e.*, "the number of processors the job can effectively use at the current moment," would have met claim 15's limitation.

Thus, it is agreed between the parties that the primary reference Agrawal, when not modified by instantaneous parallelism (InPa), does not teach the above highlighted recitation (while there was no further reference cited for that feature). However, as documented at Doc. 43-2. pp. 15-16, per Agrawal instantaneous parallelism (InPa) is a simpler method that (instead of doing historical usage based profiling) merely periodically samples, out of the quota allotted to a job, "the number of processors the job can effectively use at the current moment, as the parallelism feedback to the job scheduler". As such, InPa, limited to mere periodic sampling of utilizations of the jobs' processor allotments, would only have lead the POSITA further away from the invention of this 'representative' claim, reciting the capability of assigning executable instances of programs to processor cores per their free-variable capacity demand indicators "*based at least in part on a number of its executable instances that presently have input data available for processing*". There is no evidence that (or even explanation how) the Appellee's art cited for this highlighted feature, where the Agrawal/InPa citations are limited to sampling or profiling utilizations of jobs' processor allotments to multiply/divide their allotments, would have led POSITA to the claimed capability of core assignments based on the programs' free-number demand expressions reflecting their **future** demand indicators (as recited in claim 15, based on as executable instances' availability of input data for processing), as opposed to improvements of profiling past or current usage of their allotments, as suggested at Agrawal's conclusion, e.g., "studying how the strategy of providing parallelism feedback based on the **history** of utilization can be applied to work-stealing schedulers" (emphasis added).

I. The panel unduly overlooked the Appeal Brief Argument III warranting at least remand under the precedent.

Though the panel cursorily claimed that they “have considered Mr. Sandstrom’s other arguments and find them unpersuasive”, the above points (e.g., A., D. and footnote 2, F., G.ii and footnote 3) establish that the panel had avoided reading (much less responding to) the actual arguments and evidence presented in the Appeal Brief, in favor of adopting the Appellee’s distortions thereof in their response brief and the memorandum in lieu of argument (that for some reason was requested from Appellee, as a de-facto surreply to distort the Reply Brief which the opinion does not even mention, though the Reply Brief, Doc. 46, shows reversal of the FWDs to be warranted under applicable law and the actual record of the case). As such, the panel’s statement that they would have considered Appellant’s “other arguments” itself is not persuasive. Given that the opinion makes no reference to the Appeal Brief Argument III (Doc. 43-2 pp. 25-26), in view of that the panel evidently had not read the Appeal Brief at least throughout, an actual consideration of the Argument III, warranting at the very least remand under the applicable precedent therein cited, is respectfully requested from the Court; the Patent Owner must at least be given the opportunity to argue against the obviousness ground not asserted in the IPR petition but used for obviousness determination by the PTAB.

J. The panel affirmed the PTAB’s claim cancellations that made no grammatic, much less other, sense.

This Court is to review agency decisions through the APA standard of review, 5 U.S.C. § 706, requiring agency determinations to be logical and based on evidence. The Appeal Brief (Doc. 43-2 at pp. 11-12, concerning the 2nd FWD quote at p. 11) pointed out that the FWD’s cancelation of each challenged claim of the ‘090 patent relied on ‘explanations’ that are illogical even at the grammatical level. That is, the PTAB’s claim cancellations rely on ‘reasons’ that no one but perhaps the author knows. The patentee’s claims were administratively canceled for ‘reasoning’ that not even the patentee, much less the public, can understand. As such, the PTAB’s cancelation of each challenged claim of the ‘090 patent, relying on reasoning that defies even basic grammatic, and definitely any other, logic, cannot be upheld by this Court under the APA. Instead, at the very least, a remand is warranted to resolve the points per Appeal Brief pp. 11-12.

K. Summary.

Per above, the panel overlooked and misapprehended the below reasons warranting reversal:

- Appellee’s prior art lack any disclosure corresponding to that of the challenged patents enabling the challenged claims (Appeal Br. pp. 2, 9, 22-23, 26).
- The inventions of the challenged claims thus are not variants, much less obvious ones, of Appellee’s prior art – which they would need to be for cancellation under 35 U.S.C. § 103:
 - Prior art’s “*two-level*” scheduler in which a “job scheduler [] allots processors to jobs” and a “task scheduler [] schedules the tasks belonging to a given job onto the allotted processors” does not reach to the claimed two-tier allocation, by which programs’ capacity demands are met starting, but not ending, with demands within the programs’ entitlements, per Appeal Brief pp. 13-16 (Doc. 43-2, in particular p. 14).
 - That the panel was misled to such a misapprehension of the prior art vs the claimed inventions are a grounds for remand, but not for cancelation of the challenged claims.
- While disregarding Appeal Br. Arg. I.B (pp. 8-16) showing each of the challenged claims reciting features not achievable with Appellee’s prior art, the panel, in holding dependent and other independent claims invalid merely by deeming one dissected feature of a ‘representative’ independent claim of each challenged patent to be obvious, violated 35 U.S.C. § 282 requiring that “Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims.”
- In favor of adopting the distortions of record from Appellee’s memorandum in lieu of oral argument, the panel disregarded altogether the Reply Brief (Doc. 46) that details why reversal of the FWDs is warranted under the applicable precedent (e.g. *Raytheon, Alacritech, FanDuel*).
- Not one of the Appellant’s supposed arguments that the panel disagreed with did the Appellee rely on for reversal of the FWDs.
- Not one of the Appellee’s actual arguments (Appeal Br. Args. I, II or III) for why the reversal is warranted under the applicable law, e.g. as summarized at Doc. 56, did the panel consider.

III. ARGUMENT

Per above, the panel’s opinion affirming PTAB, while seeking to rely on the Appellee’s non-IPR caselaw, violates the applicable precedent (see e.g. Docs. 56, 46) regarding burden of proof during IPRs and statutory requirements for obviousness holding. While the opinion was designated as

non-precedential, leaving this panel’s precedent-violating affirmation non-reversed would cause confusion and disarray regarding requirements for obviousness determinations and the parties’ burdens of proof during IPRs – and would itself present a consequential instance of inconsistency in administration of justice regarding the patent laws. As the Court charged for reviewing PTAB’s decisions for compliance with the APA (per the standard of review, 5 U.S.C. § 706), this Court cannot permit itself to be seen as engaging in judgments (Doc. 59, 60) that are “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law”.

Moreover, the matter of burden of proof for obviousness requirements holding is of paramount importance for the functioning of the patent system according to its Congressional intent, to incentivize investments in innovator enterprises. Where infringers perceive that IPRs, no matter how pretentious (as in the present case, where the Petitioner did not even argue the inventions protected by the challenged claims to be achievable with their prior art), can be used as a tool to avoid having to compensate the patentee, or to deter the enforcement of the given patent as an actual right to exclude unlicensed usage thereof, the US does not have de-facto patent protection.⁴ Instead, the unlicensed users of patented technologies will (as in the present case) seek to invalidate the patents that could be enforced against them as rights to exclude before such parties would ever consider licensing, acquiring, or refraining from usage of, the patented technologies.

This practice, besides particularly troublesome for independent inventors and startup enterprises (as in the present case), is causing major damage to the US. Without functioning protection of inventions via patents (or otherwise), there is no case for making high-risk investments in the critical research and development, and pioneering startup enterprises, as the established competitors will be able to misappropriate their inventions, in particular as the patent applications are published and have to provide fully enabling disclosures. (Note the Appeal Brief Statement of the case, Doc. 43-2 page 3, on how it took the intervening publication of the applications for the patents at the appeal before the industry started adopting the patented techniques e.g. to the widely-used open-source technologies.) As a consequence, the US will have less and less of the critically needed innovation-driven startup enterprise.

The consequence of leaving the PTAB’s FWDs unreversed include that infringers of US patents will be able to invalidate the patents with prior art that do not enable the inventions

⁴ [wjta.com/2022/01/10/so-you-want-to-invalidate-a-patent-the-ptab-may-be-your-friend/](https://www.wjta.com/2022/01/10/so-you-want-to-invalidate-a-patent-the-ptab-may-be-your-friend/): “PTAB has risen in popularity as a **tool** to challenge the validity of patents.” (emphasis added)

protected by challenged claims. All that such patent challengers will have to present in IPR petitions is that for the individual claim phrases of their designated ‘representative’ (broadest) claim, dissected as fit for the petitioner’s purposes (as was done in the present case), there are disparate prior art publications with some corresponding pieces of disclosure. Such an argument for obviousness of any patent claim e.g. in digital technologies (such as the present case) is by definition trivial to make, as digital inventions are made of known constructs (ports, memories, (de)multiplexers etc.) – while the inventiveness is in what the digital system is *designed to achieve*. Overruling⁵ the requirement (e.g. per the *Magnum Oil* precedent cited in the FWDs) to provide evidence of achievability of the claimed invention, i.e., enablement of its designed operation, will leave no US patent in at least the digital arts (computing, networking, AI etc.) enforceable, i.e., worth licensing, acquiring, or investing in the commercialization thereof, as all US patent claims in digital electronics arts, being made of known elements, will be automatically invalid upon any IPR challenge. While disregarded by the PTAB, applicable to the invention of a patent claim in digital arts being in the utility produced by the *design* thereof rather than in the individual dissected limitations, MPEP § 2141.02 (V) cites precedent caselaw to the effect that:

In determining whether the invention as a whole would have been obvious under 35 U.S.C. 103, we must first delineate the invention as a whole. In delineating the invention as a whole, we look not only to the subject matter which is literally recited in the claim in question... but also to those properties of the subject matter which are inherent in the subject matter and are disclosed in the specification... Just as we look to a chemical and its properties when we examine the obviousness of a composition of matter claim, it is this invention as a whole, and not some part of it, which must be obvious under 35 U.S.C. 103.⁶

Moreover, even letting the PTAB to invalidate patent claims without requiring all criteria (incl. enablement) for obviousness to be met by the IPR petition *so long as the patent owner did not proactively make arguments on topics outside the petitioner’s contentions*, besides violating the precedent (e.g. as quoted at Doc. 56), will expose in particular underfunded and/or non-litigious patent owners unduly exposed to loss of their patent protection via IPR petitions (like those underlying the present appeal) that would not even try to meet the statutory requirements for

⁵ Though the panel’s opinion is not designated as precedential, inaction by this Court with respect to the violation of the applicable precedent, incl. per Docs. 56 and 46, will operate as overriding of the principles set in such precedent, and the letter of law (35 U.S.C. §§ 103, 282), concerning the requirements for obviousness grounds to reach the challenged claims and for the patent challenger to prove achievability of the claimed inventions by their proposed art.

⁶ Compare with Appellee’s art, having no disclosure corresponding to that of challenged patents.

obviousness determinations. Ironically, such a risk will be particularly real for individual inventors or non-institutionally funded startup enterprises whose patented inventions are, besides actually novel and non-obvious, extraordinarily valuable, e.g. in terms of utility over non-infringing alternatives and/or through massive royalty base due to wide-spread adoption via standards or open-source technologies. In such cases, where there are no actual obviousness grounds for invalidating the given high-utility patent, the proprietor may end up losing the patent protection for the critical invention due to what were in fact deficient IPR petitions, such as those underlying the present appeal where the Petitioner could not argue that their prior art would have made the claimed inventions even technically achievable – much less obvious to achieve for POSITA.

To prevent such injustice, as well as to not shift the burden of proving patentability to the patentee against 35 U.S.C. § 282, the PTAB must not be allowed find patent claims obvious where the petitioner failed to present evidence covering all requirements for obviousness determination, irrespective of the arguments that the patentee was alert enough to make, in order to not violate the precedent cited e.g. at Doc. 56 – or to not cause invalidation of claims that are novel and non-obvious, including not achievable by prior art, such as the 36 claims at this appeal, by defective IPR petitions that did not even argue for enablement.

Conversely, affirmation of PTAB’s obviousness determinations despite absence of evidence for achievability of the claimed inventions will invite well-capitalized unlicensed users of US patent protected inventions, instead of licensing (or bidding to acquire) patents that they know were not obvious, to harass in particular under-capitalized owners of high-utility US patents with IPR petitions (such as those underlying the present appeal) made in bad faith, where the petitioner knew that their prior art to did not enable, much less make obvious to POSITA, how to make and use the claimed invention. This reality is evident from that, while their proposed prior art publications had been available for the Appellee for years earlier, Appellee did not combine their prior art teachings (to pursue, much less achieve, the benefits of the challenged claims), but instead the Appellee started adopting the claimed inventions via YARN⁷ that incorporated e.g. the

⁷ www.microsoft.com/en-us/research/wp-content/uploads/2016/10/Cloud-Scale-Acceleration-Architecture.pdf “While a complete overview of the management of our hardware fabric is beyond the scope of this paper, we provide a short overview of the Hardware-as-a-Service (HaaS) platform here. HaaS manages FPGAs in a manner similar to Yarn”.
<https://www.microsoft.com/en-us/research/uploads/prod/2018/09/Feniks-APSys17.pdf>: “Feniks manages FPGAs in a manner similar to Yarn”.

‘833 patent challenged claim 19 via the introduction of tiered, preemptive scheduling⁸ to address the challenges quoted at Appeal Brief (Doc. 43-2 p. 3, fn. 4). It is utterly incredible for the Appellee to argue that achieving the challenged claims would have been *obvious* to POSITA as of their priority date, when the Appellee themselves, with their thousands of skilled computer scientists and engineers (such as the PhD level experts authoring the publications at fn. 7), only was able to achieve the claimed inventions after the publication of the underlying application disclosures⁹.

IV. CONCLUSION

The law (35 U.S.C. § 282, in view of the applicable precedent cited e.g. at Doc. 56) places the burden of establishing invalidity of a patent claim, including for achievability of the claimed recitations, e.g. the highlighted ones from the representative claims, on the party asserting such invalidity. The patent owner cannot be faulted for that the IPR petitioner failed to carry its burden of proving enablement, or for that the PTAB chose to find the claims obvious against the applicable law (see Doc. 56), despite the absence of evidence that the claimed inventions were achievable by the Petitioner’s art. For context, the present Appellant was not the patent owner during the IPRs, and thus not a party to the IPRs and therefore not in a position to make any arguments during the IPRs – which to begin with were to be guided throughout by the IPR petitioner’s contentions that did not even include that their prior art combinations would enable POSITA to achieve the claimed inventions. At any rate, though the burden of proof by law belongs to the patent validity challenger, the evidence (Doc. 43-2, e.g. at Arguments I and II) shows none of the challenged claims to be even technically achievable, much less obvious, based on the Petitioner’s art. As such, the FWDs must be reversed under the applicable law, e.g., as quoted at Docs. 56 and 46.

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Respectfully submitted



 Mark Sandstrom, inventor

⁸ https://hadoop.apache.org/docs/r3.1.1/hadoop-yarn/hadoop-yarn-site/CapacityScheduler.html#Capacity_Scheduler_container_preemption;

Appellee proceeded to more in-depth utilization of Appellant’s IP e.g. per <https://www.microsoft.com/en-us/research/uploads/prod/2018/09/Feniks-APSys17.pdf> – compare with e.g. with http://program.fpgaworld.com/more_info/Hardware_implemented.pdf.

⁹ <https://learn.microsoft.com/en-us/sql/big-data-cluster/spark-yarn-capacity-scheduler?view=sql-server-ver15>