

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SHENZHEN TUOZHU TECHNOLOGY CO., LTD.,  
Petitioner,

v.

STRATASYS, INC.,  
Patent Owner.

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Case IPR2025-00438  
Patent 10,569,466

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**AUTHORIZED RESPONSE TO DIRECTOR REVIEW REQUEST**

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## I. INTRODUCTION

Respectfully, the Director should deny the Patent Owner's Director Review Request (Paper 13 ("Request")) as it fails to identify any appropriate basis for Director Review. Patent Owner essentially requests a redo of Acting Director Stewart's astute work, but never identifies any changed circumstances, abuse of discretion, important issue of law/policy, or erroneous facts/legal findings. The Director Review process should not be a vehicle for a *de novo* reassessment of a director's earlier conclusions from only a few months ago, but that is exactly what Patent Owner demands now.

Simply put, Acting Director Stewart was right. As detailed below, the Referral Decision correctly analyzed the *Fintiv* factors and the complexity and diverse technology scope of the asserted patents. The investment in the parallel proceedings still remains low, certainly with respect to investment from the parties regarding the merits of prior art/invalidity disputes. Petitioner's broad stipulation, which goes much further than a *Sotera* stipulation, avoids duplicative and parallel invalidity challenges between the IPR and district court. Because of this broad stipulation, this IPR proceeding is the only forum that will address any of the prior references cited in the Petition after institution. Further, the patents, while all nominally related to three-dimensional printing, are each directed to technologically distinct aspects of such systems, and as such "the Board is better suited to review

[the] large number of patents involving diverse subject matter.” Referral at 3. No errors exist in the Referral Decision that would warrant Director Review.

And after Acting Director Stewart’s astute analysis, the assigned judges were then right about the prior art grounds. There, the Institution Decision applied the correct standard for institution by properly allocating between Petitioner and Patent Owner the two distinct burdens of proof: a burden of persuasion and a burden of production. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378-1380 (Fed. Cir. 2015) and *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326-27, 1329 (Fed. Cir. 2008). In doing so, the Board fittingly determined that Petitioner satisfied its burden of persuasion and initial burden of production and that Patent Owner failed to satisfy its burden of production.

The assigned judges were reasonable and diligent at the institution stage. Acting Director Stewart’s referral was right and just. Patent Owner’s Request complains that they were all wrong. They were not.

## **II. THE REFERRAL DECISION CORRECTLY ANALYZED THE *FINTIV* FACTORS**

Even if Patent Owner’s demand for a *de novo* reassessment of Acting Director Stewart’s work was proper (which it is not), the Request assumes too much. The Referral Decision’s determination not to exercise discretion was “based on a holistic assessment of all of the evidence and arguments presented.” Paper 10 at 3.

Accordingly, the Referral Decision properly considered the consequences of the trial date in relation to the schedule of this IPR (factor 2), the investment by the parties in the district court proceedings (factor 3), and Petitioner’s stipulation not to pursue at the district court any combination of system art and the references that form the basis of any ground raised in IPR in addition to Petitioner’s stipulation not to pursue any ground that was raised or could have been reasonably raised in the IPR (factor 4).

**A. Factors 2 and 3**

Just as Acting Director Stewart properly assessed only a few month ago, regardless of whether the final written decision may not issue before the district court trial occurs, the investment in the parallel proceedings is (and remains) low. Paper 9 at 16-19. The related District Court proceeding remains in its early stages with much of the work yet to be done. Patent Owner argues that “discovery in the Related Litigation began in November 2024” (Request at 6), but there is no dispute that completion of fact discovery is not until January 12, 2026—months away even assuming the discovery schedule is not further extended (EX1020 at 4). And, similarly, expert discovery has yet to begin. *Id.* (expert discovery not to be completed until February 2026). Notable case milestones like a claim construction hearing have not been reached. EX1020, 5; *Sotera Wireless, Inc. v. Masimo Corporation*, IPR2020-01019, Paper 12 at 16-17 (Dec. 1, 2020) (designated “precedential” Dec.

17, 2020) (holding that Factor 3 weighs against discretionary denial when no Markman briefing has yet occurred as this indicates “relatively limited investment in the parallel proceeding”). Thus, the bulk of the district court milestones have yet to occur—and certainly little or no investment from the parties regarding the merits of prior art/invalidity disputes. Notably, Patent Owner’s assertion that “[c]laim construction is underway” and the parties have “begun briefing” (Request at 7) improperly invites the Director to evaluate Factor 3 from the present day rather than the proper inquiry of whether the Acting Director Stewart abused her discretion at the time of referral—over three months ago—which was prior to even the identification of terms for claim construction at the district court. The Director should decline this invitation.

**B. Factor 4 and Petitioner’s Stipulation**

This IPR proceeding is the most efficient and prompt forum for achieving appealable finality, and it is the only forum that would address *any* of the prior references cited in the Petition after institution. Specifically, in light of the recent *Tesla, Inc. v. Intellectual Ventures II LLC*, IPR2025-00217, Paper 9 at 2 (Jun. 13, 2025) decision, Petitioner served Patent Owner (and subsequently filed with the Board) a stipulation for this proceeding that includes all restrictions from the *Tesla* example and takes the stipulated restrictions even one step further. *See* EX1033. Petitioner has similarly submitted stipulations that are at least as restrictive as that

in *Tesla* for all of the other IPR proceedings involving Petitioner and Patent Owner. If the Board proceeds to review the '466 patent in a PTAB trial, there will be no overlap with the parallel litigation because the litigation defendants will not pursue in the district court any “ground that was raised or could have been reasonably raised”; ***any ground that uses any of “the references that form the basis of any ground” raised in the Petition***, whether alone or in combination; or ***any ground based on “system art corresponding to the references that form the basis of any ground raised” in the Petition. Id.***

To be clear, if the Board maintains the present IPR proceeding, arguments based on the Loughran, Dubouis, Jazayeri, KISSlicer, Menchik, Dahlin, and Devos references that form the basis of the Petition grounds would not be pursued in the district court. Additionally, systems described in any of Loughran, Dubouis, Jazayeri, KISSlicer, Menchik, Dahlin, and Devos would not be used in any invalidity ground going forward in the related litigations. The limited district court invalidity grounds that remain include system art alone or system art in combination with other prior art never presented in the IPR grounds, and in both scenarios, the relied upon system art is required to be distinct from systems described in any of the references relied upon in the grounds of the present Petition. *See EX2007, 77-89.* As such, there will be no overlap. None.

Moreover, the *Sotera* stipulation in IPR2025-00354, Paper 11 at 2 that Patent Owner observes was discretionarily denied (Request at 4-5, 8), was far less restrictive than the broad stipulation in effect in the present proceeding. To be clear, the broad stipulation in the present proceeding is broader than both the stipulation provided in the precedential *Sotera* case and the stipulation in the *Tesla* decisions, thus “ensur[ing] that an inter partes review is a ‘true alternative’ to the district court proceeding” and “mitigates any concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions.” *Sotera* at 18-19. This broad stipulation “address[es] any concerns about overlap between the issues presented in the two fora.” *Ocado Group PLC v. AutoStore Technology AS*, IPR2021-00311, Paper 11 at 17 (PTAB June 28, 2021). In contrast, the *Sotera* stipulations filed in *Shenzhen Tuozhu Technology Co., Ltd. v. Stratasy, Inc.*, IPR2025-00354, Paper 11 at 2 (PTAB June 12, 2025) and *Motorola Sols. v. Stellar, LLC*, IPR2024-01205, Paper 19 at 3-4 (PTAB Mar. 28, 2025) and addressed in the Guidance Memorandum ([https://www.uspto.gov/sites/default/files/documents/guidance\\_memo\\_on\\_interim\\_procedure\\_recission\\_20250324.pdf](https://www.uspto.gov/sites/default/files/documents/guidance_memo_on_interim_procedure_recission_20250324.pdf)), which Patent Owner relies on for requesting director review (Request at 4-5, 8), was not likely to moot invalidity arguments that “include combinations of ***the prior art asserted in these proceedings*** with unpublished system prior art” (*Shenzhen* at 2; *Motorola* at 3-4). That concern is not present here because, as stated above,

Petitioner’s stipulation forbids the litigation defendants from pursuing in the district court any “ground that was raised or could have been reasonably raised”; **any ground that uses any of “the references that form the basis of any ground” raised in the Petition**, whether alone or in combination; or **any ground based on “system art corresponding to the references that form the basis of any ground raised” in the Petition**. EX1033.

Patent Owner provides no basis for its argument that “Petitioner remains free to game the system with variations of its IPR grounds that repackage the same substantive arguments with system art known, used by others, on sale, or in public use.” Request at 9 (citing *Ingenico Inc. v. IOENGINE, LLC*, 136 F.4th 1354, 1367 (Fed. Cir. May 7, 2025); USPTO, Interim Director Discretion Process (“Discretionary Process”), Section I.D, available at <https://www.uspto.gov/patents/ptab/interim-director-discretionary-process>). As Patent Owner identified, Petitioner has identified various “system art” references in its District Court invalidity contentions. Request at 7-8. But that is where Patent Owner’s factual assertion ends and its error-riddled theories begin. There is no dispute these system art references are unavailable for consideration in this IPR. Furthermore, while earlier district court filings, submitted **prior to institution** of the current Petition, identified the KISSlicer system described in EX1018, now that the Petition **has been instituted**, Petitioner has **stipulated not to pursue** invalidity at the district court based

on KISSlicer or any other “system art corresponding to the references that form the basis of any ground raised” going forward, so long as the present IPR remains instituted. The broad stipulation offered by Petitioner in the present proceeding ensures that Petitioner is indeed “restrained from asserting very similar obviousness theories in the Related Litigation that include only minor differences from the Grounds raised in this Petition by including unpublished system art.” Paper 7 at 19.

Petitioner’s third stipulation was submitted as soon as practicable as it was submitted responsive to material changes in the application of the *Fintiv* Factors in Director Discretionary Denial Decisions that could not have been reasonably foreseen prior to the decisions in *Tesla* and *Shenzen Tuozhu Technology Co. LTD v. Stratasys, Inc.*, IPR2025-00354, Paper 11 (PTAB June 12, 2025). Upon becoming aware the Office had made this fundamental shift in application of the *Fintiv* factors, Petitioner promptly provided its new, broader stipulation. Acting Director Stewart accepted Petitioner’s third stipulation in finding that “these factors tip the balance against discretionary denial.” Referral at 3.

### **III. THE REFERRAL DECISION CORRECTLY ANALYZED THE COMPLEXITY AND DIVERSE TECHNOLOGY SCOPE OF THE ASSERTED PATENTS**

Patent Owner argues that “the patents are squarely directed to the same field of 3D printing” (Request at 1, 11-12), but as Acting Director Stewart accurately assessed, that is where the commonality ends. Referral at 3. A single, broad

technical field and a diverse range of claimed subject matter are not mutually exclusive. Patent Owner does not dispute that the patents span a “vast scope” of claim scopes and specific technologies within the broader classification of three-dimensional printing. *Id.*; Request at 11-12. For example, the various patents asserted by Patent Owner cover technologies as diverse as computing networks for remotely controlling rapid fabrication systems, specific techniques for operating a three-dimensional printer, determination of three-dimensional printing material properties, materials for plating a build plate of a three-dimensional printer, and determination and adaptation to a printer’s capabilities. The patents asserted by Patent Owner in the parallel district court proceeding claim details that require knowledge and understanding of not only three-dimensional printing to analyze but also require knowledge and understanding of:

- Remote control of a three-dimensional printer over a computing network including presentation of video images of the build process and a three-dimensional model of an object to be fabricated (U.S. Pat. No. 8,562,324).
- A heated build platform for a 3D printer including a thermally conductive build plate carrying a non-tape polymer coating (U.S. Pat. No. 9,592,660).

- Software instructions for operating a three-dimensional printer to print layers of a purge tower between printing of successive layers of part material and support material to purge a print head when switching from a stand-by mode to an operating mode (U.S. Pat. No. 9,421,713).
- Generating a fabrication profile based on querying a printer's capabilities in response to receiving a request to fabricate an object, and generating machine-ready code for the same (U.S. Pat. No. 11,886,774).
- Controlling an extruder of a three-dimensional printer based on sensed and calculated contact force between the extruder and a separate structure (U.S. Pat No. 10,556,381).
- Controlling a component of a three-dimensional printer while depositing material based on a detected current contact force (U.S. 9,168,698).
- Automatic detection and acquisition of three-dimensional printer build material characteristics and using such characteristics to determine operational parameters for the three-dimensional printer (U.S. Pat. Nos. 10,569,466 and 11,167,464).
- Automatic capturing and analyzing of a three-dimensional printing process using a three-dimensional scanner to determine a status of a

print job and identify flaws in an object being fabricated (U.S. Pat. No. 8,747,097).

Further, the patents asserted by Patent Owner in the parallel district court proceeding and facing IPR at the time of referral claim details that require challenges based on different prior art references and different prior art combinations in the IPR petitions:

- Mazumder, Mori, Tian, Hull, Seki, Waehner, Lan, Anderson, Kritchman, Tay, Henke (U.S. Pat. No. 8,562,324).
- Leavitt, RepRap Article, RepRap Video, Priedeman, KISSlicer, Boyer (U.S. Pat. No. 9,421,713).
- Cable, Naware, Kritchman, Comb, Tummala (U.S. Pat. No. 9,592,660).
- Douglas, Mark, Dahlin, Batchelder, Pax, Hamilton, Evans, KISSlicer, Pettis, Wang (U.S. Pat. No. 11,886,774).
- Warren, Dunn, Calderon, RepRap20208 (U.S. Pat No. 10,556,381).
- Warren, Eshed, Calderon, RepRap20208, Napadensky (U.S. Pat. No. 9,168,698).
- Loughran, Dubois, Jazayeri, KISSlicer, Menchik, Dahlin, Devos (U.S. Pat. No. 10,569,466).
- Dahlin, Menchik, Loughran, Toshiki (U.S. Pat. No. 11,167,464).

- Knighton, Luo, Anderson, Mamoto, Crampton, Chandhoke, Ridley, Mazumder, Biton, Bakhadyrov, Bonassar (U.S. Pat. No. 8,747,097).

Acting Director Stewart was correct in concluding that the Board is best suited to handle this “complex and diverse litigation proceeding” involving a wide array of technologies relating to diverse areas of software, robotics, video imaging, computer networks, material science, control systems, and various sensor technologies spanning nine patents across six distinct patent families involving different prior art references and combinations, just as was the case in *Tesla, Inc. v. Intellectual Ventures II LLC*, IPR2025-00217, Paper 9 at 2-3 (PTAB Jun. 13, 2025). Referral, 3.

#### **IV. THE INSTITUTION DECISION APPLIED THE CORRECT STANDARD FOR INSTITUTION**

Patent Owner assumed that the Institution Decision applied “the wrong standard on institution” because “the Institution Decision effectively places the burden on Patent Owner to clearly show non-obviousness” rather than “requiring Petitioner to show a reasonable likelihood of success that each claim element is obvious.” Request, 12. Fatally, Patent Owner’s assumption ignores “the established concept that there are two distinct burdens of proof: a burden of persuasion and a burden of production,” as articulated in *Dynamic Drinkware, LLC v. Nat’l Graphics*,

*Inc.*, 800 F.3d 1375, 1378-1380 (Fed. Cir. 2015) and *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326-27, 1329 (Fed. Cir. 2008).

For institution, the burden of persuasion is on Petitioner to show a reasonable likelihood that at least one of the challenged claims is unpatentable. *Dynamic Drinkware*, F.3d at 1378 (“In an *inter partes* review, the burden of persuasion is on the petitioner...”). Petitioner also had the initial burden of production that was satisfied by the arguments and evidence presented in the Petition. *Id.* at 1379. While the burden of persuasion never shifts to Patent Owner, the burden of production is a shifting burden that then shifted to Patent Owner to produce “additional evidence and present persuasive argument based on new evidence or evidence already of record” that the claims are not unpatentable. *Tech. Licensing*, 545 F.3d at 1327, 1329 (“the patentee has the burden of going forward with evidence and argument to the contrary”); *Dynamic Drinkware*, F.3d at 1379-80.

Here, the Board correctly determined that Petitioner satisfied its burden of persuasion and initial burden of production and that Patent Owner failed to satisfy its burden of production. For example, with respect to whether Jazayeri is analogous art, the Board stated that “Patent Owner cites various passages of Jazayeri” but “these cited passages do not exclude three-dimensional printers.” Institution Decision at 22; Request at 12. The Board also soundly rejected Patent Owner’s argument that Jazayeri is not pertinent to the problem faced by the inventor because

Petitioner’s definition of the ordinary skill includes ‘experience in 3D printing’ (Prelim. Resp. 30), finding it “unpersuasive.” Institution Decision at 22-23. Here, the Board properly found that Patent Owner failed to satisfy its burden of production to argue or produce evidence that Jazayeri is not analogous prior art. *Dynamic Drinkware*, F.3d at 1380; *Tech. Licensing*, 545 F.3d at 1327. Because “[a] petitioner is not required to anticipate and raise analogous art arguments in its petition” but rather may properly address such arguments in “its reply,” the Board’s determination that Patent Owner did not satisfy its burden of production to support its arguments that Jazayeri is not analogous art to the ’466 patent is proper, especially at this preliminary stage. *Corephotonics v. Apple Inc.*, 84 F.4th 990, 1009 (Fed. Cir. 2023).

As another example, with respect to element 19[e], the Board concluded that “evidence in the record before us supports Petitioner’s argument that Devos teaches or suggests element 1e” and “Patent Owner does not clearly explain why the recited ‘requirement’ excludes a support made from the same material as that of the build object or a layer that performs a supporting functionality.” Both of these statements illustrate the proper application of the burden of persuasion on Petitioner and the shifting burden of production on both Petitioner and Patent Owner. Institution Decision at 27-28; Request at 12. The Board did not shift the burden of persuasion to Patent Owner, rather, the Board reasonably articulated that Patent Owner’s conclusory assertions are not supported by the underlying factual record.

**V. CONCLUSION**

For the reasons discussed above, the Director should deny Patent Owner's Request for Director Review.

Respectfully submitted,

Dated: October 28, 2025

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**CERTIFICATE OF SERVICE**

Pursuant to 37 CFR §§ 42.6(e)(1) and 42.6(e)(4)(iii), the undersigned certifies that on October 28, 2025, a complete and entire copy of this Authorized Response to Director Review Request is provided to the Patent Owner by electronic mail on Patent Owner's lead and backup counsel listed below at the following email address:

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