

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 IPR2025-00531  
Patent 9,168,698

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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 14 ("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.

Patent Owner further seeks a third review of a now twice rejected assertion that the Petition improperly incorporated fact witness testimony by reference. Patent Owner initially lodged this complaint both in discretionary denial briefing and in its Preliminary Response. Neither former Acting Director Stewart nor the PTAB panel agreed with Patent Owner because the Petition does, indeed, detail the necessary information. Patent Owner’s third instance of this complaint should not yield a different outcome.

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 ’698 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 Warren, Eshed, Calderon, RepRap20208 and Napadensky references that form the basis of the Petition grounds would not be pursued in the district court. Additionally, systems described in any of Warren, Eshed, Calderon, RepRap20208 and Napadensky 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. 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. Stratasys, 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, now that the Petition *has been instituted*, Petitioner has *stipulated not to pursue* invalidity at the district court based on any “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 at issue in the district court require knowledge of not only three-dimensional printing but also:

- Remote control of a three-dimensional printer over a network including presentation of video images of the build process (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 printing layers of a purge tower between printing of successive layers of part material and support material (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).

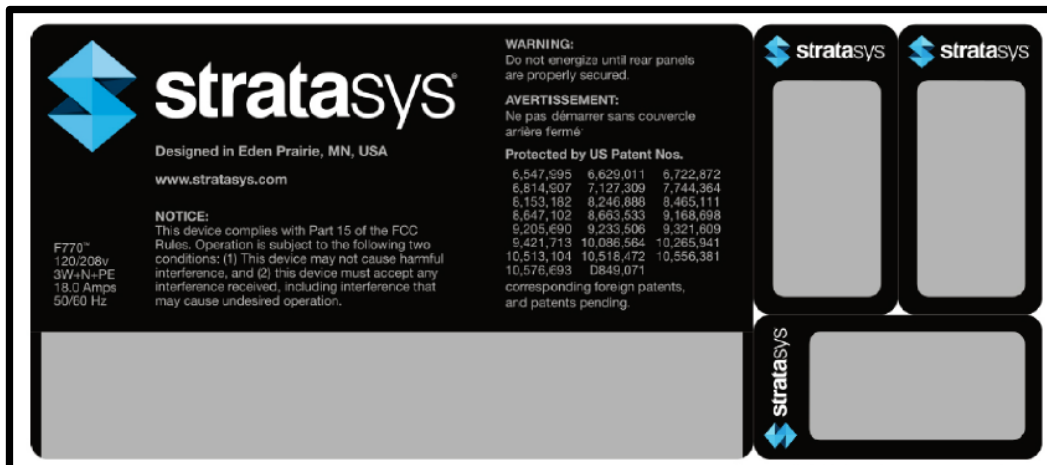
- Douglas, Mark, Dahlin, Batchelder, Pax, Hamilton, Evans, KISSlicer, Pettis, Wang (U.S. Pat. No. 11,886,774).
- Warren, Dunn, Calderon, RepRap20208 (U.S. Pat No. 10,556,381).
- Warren, Eshed, Calderon, RepRap20208, Napadensky (U.S. Pat. No. 9,168,698).
- Loughran, Dubois, Jazayeri, KISSlicer, Menchik, Dahlin, Devos (U.S. Pat. Nos. 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 REFERRAL DECISION CORRECTLY ANALYZED THE PARTIES’ SETTLED EXPECTATIONS**

Patent Owner’s argument that then Acting Director Stewart erred in analyzing the parties’ settled expectations is based on Patent Owner’s assertion that Petitioner misrepresented marking of the ’698 patent. However, Patent Owner’s assertion is, itself, a misrepresentation.

Patent Owner points to “patent marking labels” it had produced in the related litigation as evidence that the ’698 patent had been marked. These supposed “patent marking labels,” however, are not actual labels. Rather they are incomplete computer renderings of what a label might have looked like (*see*, SSYSBL000017117 and SSYSBL000017118 reproduced below). One is mostly blank. The other is missing critical information, such as the manufacturing date represented by “MMDD” and the serial number represented by “TU00XX.” Neither computer rendering evidences marking of the ’698 patent.



SSYSBL000017117



SSTSB000017118

Moreover, Patent Owner was asked multiple times – and refused multiple times – to provide discovery on marking and products practicing the patents. EX1040 (email exchange regarding Patent Owner’s discovery deficiencies on marking and products practicing the patents); EX1039, 38-39 (Stratasys’s refusal to answer interrogatory on marking). In fact, Patent Owner’s refusal was so vehement, it became the subject of a Motion to Compel. EX1036 (Motion to Compel discovery on practicing products). Because of Patent Owner’s obstinance, many questions remain unanswered. Were products *actually* marked? If so, when did marking begin (e.g., 2025? earlier?) and was the marking a single instance, sporadic, or consistent? Do products, whether or not marked, actually practice the listed patents? Patent Owner, knowing that settled expectations was about whether the patent was “commercialized, asserted, marked, licensed, or otherwise applied in a petitioner’s particular technology space,” withheld this information. *Intel Corp. v. Proxense LLC*, IPR2025-00327, Paper 12, at 2-3

The Patent Owner's refusals to answer discovery requests, the parties' emails concerning the computer renderings and Patent Owner's refusal to provide information on products practicing the patents, and the Motion to Compel were all provided with Petitioner's Opposition to Patent Owner's Discretionary Denial Brief. Paper 9, citing EX1039, EX1040 and EX1036. Former Acting Director Stewart made an informed decision to refer this patent to merits review, and her decision should stand. Patent Owner should not be allowed to withhold information about its use of the patent and now claim use and marking to support settled expectations.

**V. THE INSTITUTION DECISION DIRECTLY CONSIDERED AND DISAGREED WITH PATENT OWNER'S ASSERTIONS OF NON-COMPLIANCE WITH PTAB RULES**

Patent Owner argues that the PTAB failed to consider improper incorporation-by-reference of fact witness testimony in the Petition to support the public availability of non-patent publications. However, the PTAB expressly considered and directly addressed Patent Owner's complaint. The Petition has not improperly incorporated by reference.

Patent Owner complained of the supposed incorporation by reference in its Preliminary Patent Owner's Response. Paper 8, at 27-32. In addressing Patent Owner's complaint, the PTAB concluded "we have no concerns about the sufficiency of [the Petition's] showing." Institution Decision, Paper 11, at 13. The PTAB's conclusion is unsurprising because the Petition contained more than the

“zero argument” asserted by Patent Owner. The Petition explained how the prior art, a website, was “accessible to the public without requiring login,” how the content was “ordered by subject matter” and “keyword searchable,” and how a POSITA had actually found the website as evidenced by the Patent Owner having disclosed another page of the website as prior art during prosecution of the ’698 patent. Petition, Paper 2, at 2.

What is more, Patent Owner advanced the same argument to then Acting Director Stewart when arguing for discretionary denial. She chose to refer the petition to merits. Patent Owner’s Discretionary Denial Brief, Paper 7, at 29; Decision Referring the Petitions to the Board, Paper 10, at 3-4.

Thus, Patent Owner has twice complained of the supposed improper incorporation-by-reference, and both the PTAB and Acting Director Stewart disagreed. Patent Owner’s now third complaint about supposed incorporation-by-reference should also be denied.

## **VI. 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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