

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PRECISION PLANTING LLC,
Petitioner,

v.

MASCHIO GASPARDO S.p.A.,
Patent Owner

U.S. Patent No. 8,770,121
IPR Case No.: IPR2024-00008

**PATENT OWNER'S PRELIMINARY RESPONSE TO PETITION FOR
INTER PARTES REVIEW OF U.S. PATENT NO. 8,770,121**

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I. INTRODUCTION

Pursuant to 35 U.S.C. § 313 and 37 C.F.R. § 42.107, Patent Owner, MASCHIO GASPARDO S.p.A. (“Maschio”) submits the following Preliminary Response to the Petition for *Inter Partes* Review of claims 1-5, 7-14, and 16 (“the Challenged Claims”) of U.S. Patent No. 8,770,121 (“the ‘121 patent”) (Exhibit 1001 to the Petition) filed by Petitioner, PRECISION PLANTING LLC (“Precision”). Institution of *inter partes* review (“IPR”) is discretionary. *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 273 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (“[Section] 314(a) invests the Director with discretion on the question whether to institute review” (emphasis omitted)); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”). For the reasons stated below, Maschio asks the Board to exercise its discretion not to institute *inter partes* review.

The Board should exercise its discretion and deny institution under 35 U.S.C. § 314(a) and 37 C.F.R. § 42.108(a) to prevent duplicative IPR and litigation proceedings and to promote efficiency. As both parties have identified, there is a district court litigation proceeding in parallel to the IPR. *Maschio Gaspardo S.p.A. v. Precision Planting, LLC*, Case No. 1:22-cv-01394-RGA-JLH (D. Del. Filed 10/24/22) (Assigned to Judge Richard G. Andrews; Referred to Judge Jennifer L.

Hall). The district court trial is set for February 3, 2025, which is about two months before the Board's deadline to issue a final written decision in the IPR. Moreover, Petitioner has made identical invalidity arguments in the district court and in the IPR, and the district court has already issued a claim construction order. Institution of an IPR trial would be an inefficient use of the Board's time and resources and would create a second identical follow-on proceeding, which would not advance the Board's goal of efficiency.

The Board should further exercise its discretion and deny institution on a separate but related ground to parallel litigation invoking Section 314(a). Under 35 U.S.C. § 325(d), if an IPR is requested based on the same or substantially the same prior art that the PTO has already considered in the prosecution of the application, the PTO may, in its discretion, not institute the IPR trial.

The Board should still further deny institution because each of the grounds advanced in the Petition is flawed. Petitioner's analysis of the prior art references simply glosses over what is required in the claim limitations, and advances claim construction positions rejected by the district court. The Petition does not satisfy the threshold for instituting *inter partes* review because it does not show that there is a reasonable likelihood that Precision would prevail with respect to any claim challenged in the Petition.

Maschio does not point out every deficiency of the Petition, but instead reserves the right to make additional arguments and provide additional evidentiary support if required later. Maschio respectfully submits that the Petition should be denied in its entirety.

II. BACKGROUND FOR THE ‘121 PATENT

Precision and Maschio are competitors in the marketplace. Maschio is an international leader in the production of equipment for tillage, seeding and planting, fertilization, crop protection, green maintenance and haymaking, and has been since 1964. But Maschio’s roots in quality seeding equipment and haymaking equipment reach back to the 1800’s. In 1993, Maschio acquired Gaspardo Seminatrici S.p.A., a historic company founded in 1834 and known all over the world for the precision and reliability of its seeders. In 2014, Maschio acquired Feraboli, also founded in the 1800’s, specializing in the design and production of round balers, fundamental equipment in the haymaking sector. Today, Maschio has 1,900 employees worldwide, eight production plants and twelve commercial branches, all producing 70,000 pieces of equipment as of 2021. The ’121 patent was assigned to Maschio on July 23, 2012.

With reference to its Fig. 3, the ‘121 patent generally relates to agricultural seed drills (reference number 3) which include as one component sowing elements (2) which, in turn, include as one component seed distribution elements (1). The

focus of the claims of the '121 patent is on the seed distribution element illustrated in Fig. 1 which, via a pressure differential generated in the area of a sowing disc, separates and distributes seeds in a controlled manner. The operating principle is based on the fact that, as a result of a pressure differential between the opposed faces of the sowing disc (16), a seed (4) adheres to each of a plurality of selector holes (23) in the sowing disc and is then transported by the rotation of the sowing disc from the seed selection zone to the point at which the pressure differential ceases and the seed is released to drop through a sowing pipe into the furrow or sowing track in the ground. In practice, a strong air suction is exerted on one of the faces of the sowing disc which retains the seeds on the opposite face in the region of the respective holes. For the correct functioning of such seed distribution elements, it is necessary to ensure an effective pneumatic seal between the face of the sowing disc that is subjected to suction and a seal (24) which delimits the pneumatic suction chamber (17). The suction effect itself effects a substantial compression of the sowing disc against the seal. Although this ensures adequate adherence of the seal to the sowing disc surface which is subjected to negative pressure, it also creates abrasion of the seal, which limits the effective service life of the seal, and wear on the seal resulting from sliding against the disc. The '121 patent explains that prior art seed drills include a thrust-bearing element mounted on the fixed portion of the

housing to relieve the heavy load on the seal, but that this configuration creates its own problems:

In order to remedy this drawback, seed drills have been developed which are equipped with a thrust-bearing element which relieves the heavy load on the seal. In all cases, however, the thrust-bearing element, which must be rotated with the disc, is mounted on the fixed portion of the housing, that is to say, that portion which is fixed to the framework of the sowing elements.

This means that the disc must be attached to the thrust-bearing element; therefore an attachment system must be provided which in the stage of replacement of the disc must be removed, consequently lengthening the operation. This is inevitable in the known machines since it is obligatory to mount on the fixed portion the transmission which drives in rotation the motor-driven shaft which rotates the disc.

However, positioning the thrust-bearing element on the fixed portion entails the pneumatic suction chamber being provided on the fixed portion, or on the same side at which the thrust-bearing element is placed, while the seed collection chamber must be provided in the movable portion. This is the source of numerous

drawbacks, including the fact that the opening of the housing necessarily involves the removal of the portion containing the seed collection chamber from the hopper type store located above, which must necessarily be fixed to the framework of the sowing element.

See the ‘121 patent from column 1, line 53 to column 2, line 8 (emphasis added).

Important to the ‘121 patent is the distinction between two portions of the housing (10) as illustrated in Fig. 1: the fixed portion (11), which is fixed on the frame (6), and a movable portion (12) hinged to the fixed portion (11). *See* the ‘121 patent at column 2, lines 44-47. “The [seed distribution] element 1 itself comprises a housing 10 with a fixed portion 11 fixed in a stable manner on the frame 6 [of the seed drill 3 illustrated in Fig. 3] and a movable portion 12 hinged in the region of a hinge 12a on the fixed portion 11 by means of a removable hinge pin 13.” The two portions of the housing permit “opening of the housing,” *id.* at column 2, line 5, and facilitate access to, removal of, and replacement of the sowing disk (16) and the seal (24). *See, e.g., id.* at column 1, lines 46-49 and lines 60-62. In fact, the housing portions are sufficiently separate and distinct that “[t]he whole of the movable portion 12 complete with thrust-bearing element 26 and seal 24 lends itself advantageously to the production of a kit for the retrofitting of existing seed drills. It is sufficient in this case to separate the old type of movable portion by removing

the hinge pin 13 and replacing the old movable portion with the aforesaid kit.” *Id.* at column 3, lines 60-65.

The ‘121 patent not only recognizes but solves the problems associated with mounting a thrust-bearing element (26) on the fixed portion (11) of the housing. The ‘121 patent generally solves the problems by arranging the sowing disc (16) and the thrust-bearing element (26) in different housing sections, i.e., by mounting the sowing disc (16) with its drive shaft in the fixed housing portion (11) and by mounting the thrust-bearing element (26) in the other, movable housing portion (12) opposite to the sowing disc. Further, the ‘121 patent places the suction chamber (17) in the movable housing portion (12), i.e., the suction forces pull on the sowing disc in the direction of the movable housing portion.

More specifically, the specification of the ‘121 patent illustrates the seal in Fig. 1 and describes the seal at column 3, lines 6-10:

A seal 24 is fitted in the suction chamber 17 [of the movable portion 12 of the housing] and is placed in sliding contact with the facing surface [16a] of the disc 16, when the movable portion 11 is closed on the fixed portion 12, to delimit a circumferential segment in which the holes 23 are subjected to the aforesaid pressure differential.

The seal is recited in independent claim 1, column 4 at lines 29-32, and in independent claim 10, column 6 at lines 21-23 (“a seal which [i] is arranged on the movable portion and [ii] is capable of sliding contact with the facing surface of the disc when the fixed and movable portions are closed against one another”) (emphasis on two limitations added). Remember, problems solved by the claimed invention include the abrasion of the seal caused by compression of the sowing disc against the seal and wear on the seal resulting from friction as the seal slides against the disc. The thrust-bearing element (26) is important to solving those problems. The specification of the ‘121 patent illustrates the thrust-bearing element in Fig. 2 and describes the thrust-bearing element at column 3, lines 21-32:

In order to limit the wear on the seal 24 resulting from sliding against the surface of the disc 16, a thrust-bearing element indicated as a whole by 26 is mounted on the movable portion [12].

The thrust-bearing element 26 comprises a shaft 27 rotatably mounted by means of bearings 28 in a seat 29 of the movable portion 12. The shaft 27 has flanging 30 by means of which it is fixed to a thrust-bearing plate 31 which can bear on that surface of the disc which faces the seal 24 in a zone radially inside the

ring of holes 23 in order to withstand at least some of the axial load produced by the disc 16 on the seal 24.

The thrust-bearing element is recited in independent claim 1, column 4 at lines 37-40, and in independent claim 10, column 6 at lines 2-6 (“a thrust-bearing element [i] of the sowing disc, which thrust-bearing element [ii] is supported rotatably in the movable portion [iii] in order to withstand at least some of the axial load produced by the disc on the seal”) (emphasis on three limitations added). By withstanding at least some of the axial load produced by the disc on the seal, the thrust-bearing element addresses both of the problems highlighted above. Specifically, the thrust-bearing element reduces substantially both the abrasion of the seal caused by compression of the sowing disc against the seal and the friction between the seal and the disc thereby reducing the power required to rotate the disc (such power reduction means that if the disc is driven by an electric motor, significant savings can be achieved which is essential in a planter whose electric power is generated only by the tractor’s alternator).

The importance of the seal and thrust-bearing element to the solution provided by the claimed invention is also summarized in the Abstract of the ‘121 patent: “A seed distribution element (1) includes . . . -- a seal (24) on the movable portion (12) capable of sliding contact with the facing surface (16a) of the disc (16) when the portions are closed against one another,--a thrust-bearing element (26) of the sowing

disc (16), supported rotatably in the movable portion (12), to withstand the axial load produced by the disc (16) on the seal (24).”

III. THE BOARD SHOULD EXERCISE ITS AUTHORITY AND DENY INSTITUTION IN VIEW OF *FINTIV* AND JUDICIAL ECONOMY.

The Board should exercise its discretion to deny institution under 35 U.S.C. § 314(a) “because institution of a trial at the PTAB would be an inefficient use of Board resources in light of the ‘advanced state’ of the parallel district court litigation in which the petitioner had raised the same invalidity challenges.” *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 dated March 20, 2020, at 2 (PTAB 2020) (precedential) (“*Fintiv*”) (citing *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB 2018) (precedential) (“*NHK*”)). *Fintiv* sets forth a non-exhaustive list of factors that balance system efficiency and fairness when considering discretionary denial:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and

6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Fintiv, Paper No. 11 at 5-6. In addition, the *Fintiv* factors should be considered in view of the guidance provided by PTO Director Kathi Vidal in the June 21, 2022 Memorandum titled “Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation” (“*Fintiv* Memorandum”). *See* Exhibit 2001.

Discretionary denial is warranted here because institution would be an inefficient duplication of a parallel district court litigation in which the same grounds of invalidity are being raised by Petitioner. Each *Fintiv* factor favors exercising discretion to deny institution and none of the countervailing circumstances presented in the *Fintiv* Memorandum are applicable because Petitioner did not present compelling evidence of unpatentability (see Section V below), there is no parallel ITC proceeding, and Petitioner has not submitted a *Sotera* stipulation.

A. Factor 1: Whether a Stay Exists or is Likely to be Granted.

Maschio filed the Complaint almost a year and a quarter ago, on October 24, 2022. As the attached Docket Report from the district court indicates, much activity has occurred since. *See* Exhibit 2002. Specifically, Petitioner served its first interrogatories and requests for production of documents on February 17, 2023, Exhibit 2002 (DKT # 24), and the parties have engaged in discovery throughout

2023. On November 27, 2023, the court issued its Memorandum Opinion on claim construction after full briefing by the parties and a Markman hearing. Exhibit 2003; *see also* Exhibit 2002 (DKT # 70). On November 29, 2023, the court issued its Claim Construction Order. Exhibit 2004; *see also* Exhibit 2002 (DKT # 72). The court has not instituted a stay, neither party has filed a motion to stay the litigation (nor does Maschio intend to request a stay and Petitioner would not be expected to request a stay given both the lack of a motion to date and the pendency of its own infringement claims as mentioned in the next paragraph), and, especially given the advanced progress of the litigation, it is unlikely that the court would grant a stay if this IPR proceeding were instituted. *See, e.g., Plastic Omnium Advanced Innovation and Research v. Donghee Am., Inc.*, Oral Order at Docket No. 278 in Case No. 1-16-cv-00187 (D. Del. Mar. 9, 2018) (denying motion for stay even after Board’s institution of *inter partes* review because the court “has construed the parties’ disputed claim terms, handled additional discovery-related disputes, begun reviewing the parties’ summary judgment and Daubert motions . . . and generally proceeded toward trial” and “[d]elaying the progress of this litigation . . . would risk wasting the Court’s resources”); *Fintiv*, Paper No. 11 at 7 (“proximity of the court’s trial date and investment of time are relevant to how much weight to give to the court’s willingness to reconsider a stay”).

The unlikelihood of a stay is further supported by a review of the issues pending before the court. Although all of the invalidity contentions raised by Petitioner in this IPR are also pending before the court, see Exhibit 2005 (Petitioner's Invalidity Contentions filed on May 19, 2023) and Exhibit 2002 (DKT # 36), the court must decide many issues that are not pending in this IPR. For example, Petitioner has asserted counterclaims (infringement of the claims of RE47,447) against Maschio in the litigation. Exhibit 2002 (DKT # 9, 11). Therefore, even if Petitioner were entirely successful in the IPR, the litigation would still have to proceed. Further, Petitioner's patent has not been subject to an IPR, and granting a district court stay on the '121 patent pending this IPR would be inequitable while Petitioner's counterclaims proceed. Still further, Petitioner has only raised a subset of its Invalidity Contentions in this IPR, leaving the court to address others regardless of what the Board rules.

Because a stay is unlikely, initiating an IPR here would result in two parallel proceedings each addressing the same challenges to the '121 patent claims, which would be inefficient and burdensome. This first factor weighs against institution of this IPR. *See, e.g., Samsung Electronics Co. Ltd. v. California Institute of Tech.*, No. IPR2023-00130, Paper 10 (PTAB 2023) ("we find that this factor weighs in favor of exercising authority to deny institution" when "the advanced stage of the underlying litigation disfavors a stay and that a stay is unlikely to simplify the issues in the

underlying litigation”). Even if the Board were to decline to infer how the court would rule should Petitioner unexpectedly request a stay in the parallel litigation, the first factor would be neutral. *Fintiv*, Paper 11 at 12.

B. Factor 2: Proximity of the District Court’s Trial Date.

The projected final written decision deadline for the Board in this IPR is April 4, 2025, which is one year after the projected date for the institution decision of April 4, 2024, which is three months after the deadline of January 4, 2024, for this Preliminary Response. The Court issued the following initial SCHEDULING ORDER:

The case will be referred to a magistrate judge to handle all discovery disputes. Joinder of Parties due by 7/21/2023. Amended Pleadings due by 7/21/2023. Fact Discovery completed by 1/31/2024. Dispositive Motions due by 6/21/2024. Joint Claim Construction Brief due by 8/18/2023. A Markman Hearing is set for 9/25/2023, at 9:00 AM in Courtroom 6A. A Pretrial Conference is set for 10/25/2024, at 8:30 AM in Courtroom 6A. A 5 day Jury Trial is set to start 11/4/2024, at 9:30 AM in Courtroom 6A (see Order for further details). Signed by Judge Richard G. Andrews on 1/17/2023. (nms) (Entered: 01/17/2023).

See Exhibit 2002 (DKT # 17) (emphasis added). On December 15, 2023, the parties stipulated to an Order, which Judge Andrews approved, extending the deadlines in the court’s January 17, 2023, Scheduling Order. *See* Exhibit 2006 and Exhibit 2002 (DKT # 73, 74) (rescheduling the trial date to February 3, 2025). It would certainly seem inequitable to institute an IPR against Maschio’s ‘121 patent based, even in part, on Petitioner’s request for an extension of time in the litigation. Regardless, the expected date of the Board’s final written decision (April 4, 2025) is still about two months after the scheduled trial date (February 3, 2025). These circumstances favor denial of institution. *See Fintiv*, IPR2020-00019, Paper 15 dated May 13, 2020, at 12-13 (denying institution where district court trial was scheduled two months before final decision deadline); *Duplo U.S.A. Corp. v. MGI Digital Technology S.A.*, IPR2023-00936, Paper 8 at 17 (PTAB 2023) (“Because the district court would address issues relating to the validity of the ‘806 patent well before we would issue a final written decision, we find that the second *Fintiv* factor weighs heavily in favor of discretionary denial of institution.”); *Samsung Electronics Co. Ltd.*, Paper 10 at 16 (“Regardless of whether we consider the scheduled trial date or the trial date expected based on time-to-trial statistics, the trial in the Underlying Litigation would commence several months before the expected date of our final written decision. Thus, we find that the second *Fintiv* factor favors exercising authority to deny institution.”); *International Business Machines Corporation v. Digital Doors, Inc.*,

No. IPR2023-00967, Paper 7 at 9-10 (PTAB 2023) (“We find that this factor favors exercising our discretion to deny institution.”). It would be inefficient to use the Board’s resources in light of the proximity of the court’s trial date.

Data summarizing many patent cases before Judge Andrews over a long period of time support the expectation that the trial will be conducted circa the rescheduled trial date. *See* Exhibit 2007 (Judge Andrews historically has an average time from filing to trial of about 29 months for patent cases, and the reschedule trial date is slightly under 28 months from filing). Although not as relevant as the court’s scheduling order and statistics relating to Judge Andrews, the median time from filing to trial in the District of Delaware is 36.7 months. *See* https://www.uscourts.gov/sites/default/files/data_tables/fcms_na_distprofile0630.2023.pdf at 14.

C. Factor 3: Investment in the Parallel Proceeding.

Under the third factor, the Board has “considered the amount and type of work already completed in the parallel litigation by the court and the parties at the time of the institution decision.” *Fintiv*, Paper 11 at 9; *see also Fintiv*, Paper 15 at 13-14. Here, in part because Petitioner filed its Petition late in the one-year statutory period, the court and the parties have already invested substantial resources in the litigation. Fact discovery has long been underway, with both parties having already exchanged multiple document requests, interrogatories, and responses, and is scheduled to

conclude by May 1, 2024, likely just after any institution decision in this matter. *See* Exhibit 2002, especially DKT 74. The parties have exchanged core technical documents. *Id.* at DKT 29, 31. Infringement and invalidity contentions have been exchanged. *Id.* at DKT 34, 36. And, as described above, the court issued its Memorandum Opinion on claim construction, after full briefing by the parties and a Markman hearing, and its Claim Construction Order in late November 2023. The substantial investment by the court and the parties in the litigation “heavily” favors denial of institution. *See, e.g., E-One, Inc. v. Oshkosh, Corp.*, IPR2019-00162, Paper 16 at 13, 20 (PTAB 2019) (denying institution where “district court ha[d] already expended substantial resources” by, among other things, “receiv[ing] briefing and hear[ing] oral argument on claim construction, and issu[ing] a claim construction ruling”); *Duplo U.S.A. Corp.*, IPR2023-00936, Paper 8 at 18 (“We agree with Patent Owner that there has been substantial investment by the parties and the district court in the parallel proceeding, including the completion of preliminary disclosures and claim construction, and the near-completion of discovery. Under the circumstances, we find that the third *Fintiv* factor weighs heavily in favor of discretionary denial of institution.”).

D. Factor 4: Overlap Between Issues Raised in the Petition.

Under the fourth factor, as the Board found in *Fintiv*, “if the petition includes the same or substantially the same claims, grounds, arguments, and evidence as

presented in the parallel proceeding, this fact has favored denial.” *See Fintiv*, Paper 11 at 12 (citing cases); *see also E-One, Inc.*, IPR2019-00162, Paper 16 at 6, 9-10 (denying institution under Section 314(a) based, in part, on “substantial overlap” between the grounds in the petition and the invalidity contentions).

This IPR and the litigation involve the same patent, same claims, same invalidity references, and nearly identical invalidity arguments. Petitioner asserts the same prior art references separately and in combination both here and in its invalidity contentions in the litigation. Although the issues on patentability here are more focused than the invalidity contentions in the litigation, the patentability issues here are nevertheless a subset of the issues in the litigation. Therefore, the overlap is extensive and institution of an IPR risks duplication of resources and conflicting outcomes.

Further, Petitioner has not mitigated concerns of potentially conflicting decisions and duplicative efforts because Petitioner has failed to submit a stipulation in the litigation per *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 (PTAB 2020) (precedential). In *Sotera*, the Board explained that if the petitioner stipulates not to pursue “any ground raised or that could have been reasonably raised” in the parallel district court case, then the fourth *Fintiv* factor weighs against denial of institution. *Id.* at 18-19. Petitioner has not so stipulated. These circumstances favor denial of institution.

E. Factor 5: Whether the Petitioner and the Defendant in the Parallel Proceeding are the Same Party.

Petitioner and the defendant-counterclaimant in the litigation are the same party. This factor weighs in favor of a discretionary denial. *See Fintiv*, Paper 11 at 13-14 and Paper 15 at 15; *Duplo U.S.A. Corp.*, IPR2023-00936, Paper 8 at 19 (“The parties in this proceeding are the same as the parties in the parallel District Court Proceeding. . . . Accordingly, the fifth *Fintiv* factor weighs against institution.”); *International Business Machines Corporation*, IPR2023-00967, Paper 7 at 12 (“We determine that this factor weighs in favor of a discretionary denial.”).

F. Factor 6: Other Circumstances that Impact the Board’s Exercise of Discretion, Including the Merits.

The Board is to consider the merits of a petitioner’s challenge when determining whether to institute an IPR in view of parallel district court litigation. As explained in more detail below in Section V, Petitioner has failed to meet its burden under 37 C.F.R. § 42.108(c) of establishing a reasonable likelihood of success that any of the challenged, pending claims are unpatentable, let alone a compelling case. *CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23, at 3 and 5 (PTAB 2023) (precedential *sua sponte* Director review of Board’s Decision Granting Institution of *Inter Partes* Review) (“As the Guidance Memo and my precedential decision in *OpenSky* make clear, the compelling merits standard is a higher standard than the standard for institution set by statute.”) (“[T]he

Board must provide reasoning sufficient to allow the parties to challenge that finding and sufficient to allow for review of the Board’s decision.”). Section V shows that an initial inspection of the merits on the record before the Board suggests some of Petitioner’s challenges contain certain weaknesses and, taken as a whole, the strengths of the merits do not outweigh other factors in favor of discretionary denial. *Fintiv*, Paper 15 at 16-17 (“a full analysis of the merits is not necessary to evaluate this factor”).

In summary, each of the *Fintiv* factors weigh in favor of denying institution, and the Board should exercise its discretion accordingly.

IV. THE BOARD SHOULD EXERCISE ITS AUTHORITY AND DENY INSTITUTION BECAUSE PETITIONER RELIES ON PREVIOUSLY CONSIDERED ART WITHOUT SHOWING A MATERIAL ERROR.

Under 35 U.S.C. § 325(d), if an IPR is requested based on the same or substantially the same prior art that the PTO has already considered in the prosecution of the application, the PTO may, in its discretion, not institute the IPR trial. The Board has not hesitated to deny institution under such circumstances, and should deny institution in this case. *See, e.g., Vital Connect, Inc. v. Bardy Diagnostics, Inc.*, IPR2023-00381, Paper 7 (PTAB 2023); and *Microsoft Corporation v. AlmondNet, Inc.*, IPR2022-01319, Paper 9 (PTAB 2023).

The application that issued as the ‘121 patent is a national phase of International Patent Application No. PCT/EP2011/069875. During prosecution of

the international patent application, the European Patent Office (EPO) as the International Search Authority (ISA) uncovered only two references in its search relating to the patentability of the claims: EP 0536543 (Fiorido) (EP 543) and US 7,228,807 (VenHuizen) (US 807). The ISA categorized each as an “A” reference, namely, a “document defining the general state of the art which is not considered to be of particular relevance.” *See* International Search Report dated February 17, 2012, copied in Exhibit 1002, pages 113-17, to the Petition. The ISA’s Written Opinion determined that all 11 claims under consideration met the three requirements of patentability and, in a “Reasoned statement,” summarized its analysis: “The distribution element of claim 1 differs from that of [VenHuizen] in comprising a thrust-bearing element 26 supported rotatably in movable housing portion 12 to withstand axial load produced by disk 16 on seal 24. In this way, wear on the seal due to its sliding against the disk is reduced (description, para. [0020], [0021]). As such solution is not derivable from the available prior art, it follows that the subject matter of claim 1 fulfills the requirements of novelty and inventive step, Article 33(2), (3) PCT.” *See* Written Opinion, copied in Exhibit 1002, pages 118-22, to the Petition. Independent claims 1 and 10 of the ‘121 patent each recite the “thrust-bearing element” which the EPO highlighted as distinguishing the prior art. Thus, the EPO carefully considered the subject matter recited in the claims of the ‘121

patent against the prior art asserted by the Petition and found that subject matter patentable.

During prosecution of the application that issued as the ‘121 patent, on July 12, 2012, the applicant filed an Information Disclosure Statement (“IDS”) identifying the Fiorido (EP 543) and VenHuizen (US 807) references, the International Search Report, and the Written Opinion. Exhibit 1002, pages 51-54, to the Petition. Examiner Christopher J. Novosad initialed the IDS indicating that he considered those documents on November 17, 2013. The two patent references (and the International Search Report and Written Opinion providing the EPO’s assessment of patentability in view of the references) were apparently the only references that Examiner Novosad considered during prosecution because the four documents are the only “References Cited” listed on the cover of the ‘121 patent; in other words, Examiner Novosad focused exclusively on the cited references and they were not buried among other references.

The prosecution history of the ‘121 patent further shows the care with which Examiner Novosad examined the application. For example, in the Office Action dated November 19, 2013, the Examiner required amendment of claims 1 and 10 to replace “it” with “the fixed portion” to clarify. Exhibit 1002, page 48, to the Petition. Later, the Notice of Allowance dated February 20, 2014, included an Examiner’s Amendment changing “means” to “structure” in the Abstract. Exhibit 1002, page 26,

to the Petition. Clearly, the Examiner paid careful attention to detail during the prosecution. He in no way erred; in fact, Examiner Novosad reached the same reasonable patentability conclusion as the EPO. Maschio respectfully disagrees with Petitioner's assessment of the prosecution history of the '121 patent, stated on page 15 of the Petition, as "not substantively pertinent."

What are "not substantively pertinent" are opposition proceedings that Petitioner filed against two of Maschio's European patents, EP2637492 and EP2848109, each of which claims the same priority as the '121 patent. Petitioner provides a copy of the first opposition as Exhibit 1005 and summarizes the opposition at pages 19-21 of its Petition. Petitioner misleadingly states on page 11 of its Petition that the EPO "invalidated" the claims of EP2637492. In truth, the EPO maintained the claims of both European patents in amended form despite Petitioner's oppositions. *See* Exhibit 1005 at pages 74-78 (the decision of the EPO Opposition Division dated January 7, 2022, maintaining EP2637492 in amended form); Exhibit 2008 (EPO dismissal dated November 20, 2023, of Precision's appeal of the Opposition Division's decision); and Exhibit 2009 (EPO dismissal dated January 19, 2022, of Precision's appeal of the decision of the EPO Opposition Division dated April 26, 2019, maintaining EP2848109 in amended form).

Regardless, three of the four prior art references that Petitioner relies on to support its grounds of unpatentability in this IPR -- namely, Fiorido, VenHuizen,

and Applicant Admitted Prior Art (“AAPA” recited in the Background section of the ‘121 patent) -- were presented previously to the PTO. Perhaps more important, even though Petitioner has the burden of establishing that the PTO “materially erred” when examining the ‘121 patent, Petitioner devoted three conclusory sentences bridging pages 15-16 of its Petition to the Section 325(d) issue. Petitioner argues that “neither the USPTO nor Maschio discussed either reference [Fiorido or VenHuizen; the AAPA is not mentioned] during prosecution. Rather, the examiner failed to appreciate both VenHuizen’s and Fiorido’s teachings -- as is evidenced at least in part by the EPO’s finding of anticipation of substantively identical claims by VenHuizen. Hence the ‘121 patent’s claims are effectively unexamined in light of their disclosures, and discretionary denial of this petition . . . is not appropriate.” Otherwise, Petitioner provides no substantive argument or analysis on the issue of discretionary denial under Section 325(d).

Petitioner’s statements that “the examiner failed to appreciate” the teachings of the prior art and that “the ‘121 patent’s claims are effectively unexamined” are unfounded. The cases are legion in which the U.S. Court of Appeals for the Federal Circuit has referred to “the deference that is due to a qualified government agency presumed to have properly done its job, which includes one or more examiners who are assumed to have some expertise in interpreting the references and to be familiar from their work with the level of skill in the art and whose duty it is to issue only

valid claims.” *See, e.g., Am Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359 (Fed. Cir. 1984), and its progeny. More generally, government officials are presumed to have “properly discharged their official duties.” *United States v. Chemical Found., Inc.*, 272 U.S. 1, 15 (1926).

V. MERITS ANALYSIS

The Guidance Memorandum directs that “compelling, meritorious challenges will be allowed to proceed at the PTAB even where district court litigation is proceeding in parallel.” Guidance Memorandum at 4. The Director defines “compelling, meritorious challenges [as] those in which the evidence, if unrebutted in trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.” *Id.* The Guidance Memorandum does not change the statutory standard for institution under 35 U.S.C. § 314(a). Instead, a determination of compelling merits may outweigh the other *Fintiv* factors, and such challenges may be allowed to proceed even if a district court litigation is proceeding in parallel. *Id.* Petitioner fails to present a “strong” challenge, let alone a “compelling, meritorious challenge,” because Petitioner’s grounds fail to teach every claim limitation of the independent claims, and rely on misinterpretation of the cited references.

A. Petitioner’s Proposed Claim Constructions Should Be Rejected.

Petitioner asks the Board to construe in its favor three, separate claim limitations: (1) “transmission drive shaft”; (2) “thrust-bearing element”; and (3) “supported rotatably in the movable portion.” The Petition was filed on October 4, 2023, well after November 13, 2018; therefore, the claim terms should be given their “ordinary and customary meaning” as understood by a person of ordinary skill in the art in question and in accordance with the prosecution history. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005), and 37 C.F.R. § 42.100(b).

The district court has already construed the claims of the ‘121 patent in the parallel litigation. The Table below summarizes, in column order from left to right, (1) each of the three claim terms that Petitioner asks the Board to construe; (2) Maschio’s proposed construction before the court; (3) Petitioner’s proposed construction before the court; (4) the court’s actual claim construction holding; and (5) Petitioner’s proposed construction before the Board. The court rejected Petitioner’s proposed construction for two of the three terms, and adopted a modified version of Petitioner’s proposed construction for the third term.

Claim Term	DCT (Patent Owner)	DCT (Petitioner)	DCT (Holding)	IPR Petitioner
Transmission drive shaft	A shaft which is driven by a motor. Exhibit 2003 at 7.	A drive shaft mounted on the fixed portion of the housing and centered relative to the sowing disc. Exhibit 2003 at 7.	Judge Andrews rejected Petitioner’s proposed construction and construed the term “to have its plain and ordinary meaning.” Exhibit 2003 at 7 and Exhibit 2004.	A drive shaft mounted on the fixed portion of the housing and centered relative to the sowing disc. Petition for IPR at 22.
Thrust-bearing element	A rolling bearing that supports against axial load. Exhibit 2003 at 12.	An element supporting against axial load, or “bearing thrust.” Exhibit 2003 at 12.	Judge Andrews interpreted the term to mean “an element that supports against axial load.” Exhibit 2003 at 12 and Exhibit 2004.	An element that provides support against an axial force. Petition for IPR at 22.
Supported rotatably in the movable portion . . .	Supported rotatably in the movable portion in a manner that	Located within the space defined by the movable	Judge Andrews rejected Petitioner’s proposed	Located in the movable portion, however the element may be rotatably

in order to withstand at least some of the axial load produced by the disc on the seal	allows the thrust bearing element to bear at least some of the axial load. Exhibit 2003 at 13.	portion, however supported. Exhibit 2003 at 13.	construction and construed the term “to have its plain and ordinary meaning.” Exhibit 2003 at 13 and Exhibit 2004.	supported. Petition for IPR at 22.
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Maschio respectfully suggests that, like the court, the Board should decline to adopt Petitioner’s proposed claim constructions. Maschio defers its own position on claim construction until such time as the Board decides to institute a trial. Meanwhile, Maschio suggests that the Board need not expressly construe any claim term for purposes of a decision to deny institution of a trial. *See, e.g., Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (*quoting Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))). Under the “ordinary and customary meaning” of the claim terms, the claims of the ‘121 patent are patentable over the applied references as correctly understood.

B. Person of Ordinary Skill in the Art (“POSA”).

Petitioner asserts that a “POSA as of November 12, 2010, would have had at least a bachelor’s degree in mechanical or agricultural engineering and 2–4 years

[of] experience in the design or manufacture of agricultural equipment. A POSA would have been familiar with the design and operation of known seed distribution meters and with the use of bearings and other plate-like technologies to receive and distribute axial loads by providing bearing surfaces for the transfer of forces.” Petition at 21. Patent Owner defers its position on this issue until such time as the Board decides to institute a trial.

C. The Petition Does Not Satisfy The Statutory Threshold For Instituting *Inter Partes* Review.

Petitioner asserts four grounds of unpatentability against the Challenged Claims of the '121 patent. Petitioner bears the burden of proving a proposition of unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e). A summary of those grounds is provided in the Table below.

GROUND	CLAIMS	BASIS FOR REJECTION	CITED REFERENCE(S)
1	1-3, 7-12, & 16	Section 102(b)	US 7,228,807 (VenHuizen)
2	1-5 & 10-14	Section 102(b)	EP 0536543 (Fiorido)
3	1-5, 7-14, & 16	Section 103(a)	Fiorido in view of VenHuizen and Applicant Admitted Prior Art (AAPA)
4	1-3, 7-12, & 16	Section 103(a)	Amazone Manual (Amazone) in view of

			Fiorido, VenHuizen, and AAPA
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Petitioner has not challenged the validity of dependent claims 6 or 15. Moreover, with respect to Petitioner’s challenges directed to independent claims 1 and 10, the four grounds really reduce to only two grounds, one relying entirely on VenHuizen and the other relying entirely on Fiorido (the two references evaluated and made of record during prosecution of the ‘121 patent). Specifically, Ground 1 asserts that the independent claims are anticipated by VenHuizen; Ground 2 asserts that the independent claims are anticipated by Fiorido; and Ground 3 asserts that independent claim 1 “is obvious over Fiorido by itself,” Petition at 72, and that independent claim 10 “is obvious over Fiorido by itself,” Petition at 73.

Ground 4 ostensibly asserts that independent claim 1 (and, similarly, independent claim 10) would have been obvious based on a combination of Amazone with Fiorido. A careful review of the Petition at pages 75-85, however, shows Petitioner’s true position: “Fiorido independently discloses” eight of the ten limitations of claim 1 (all but limitations “ii” and “x”) highlighted in the Petition, which are allegedly also disclosed by Amazone. With respect to the second limitation (“ii”), “It would be a simple substitution of the peripherally located gearing of Amazone with the centrally located mechanism of Fiorido on the fixed side” Petition at 76. With respect to the tenth limitation (“x”), “Fiorido discloses this limitation, and it would have been obvious to modify Amazone with the driving disk

of Fiorido.” Petition at 83. Thus, Ground 4 adds nothing to Ground 3. The citation of the only reference (Amazon) not before Examiner Novosad during prosecution of the ‘121 patent is really a “red herring,” adds nothing to the overall patentability analysis, and, therefore, is irrelevant to the patentability of the claims of the ‘121 patent.

As shown below, none of Petitioner’s four grounds establish a reasonable likelihood that Petitioner will prevail on any Challenged Claim. A trial therefore should not be instituted.

D. The Applicable Legal Principles.

A claim is anticipated if a single prior art reference either expressly or inherently discloses every limitation of the claim. *Orion IP, LLC v. Hyundai Motor Am.*, 605 F.3d 967, 975 (Fed. Cir. 2010). Although the elements must be arranged or combined in the same way as in the claim, “the reference need not satisfy an ipsissimis verbis test,” i.e., identity of terminology is not required. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009) (citing *In re Bond*, 910 F.2d 831, 832–33 (Fed. Cir. 1990)).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter 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. *KSR Int’l Co.*

v. Teleflex Inc., 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc.*, 815 F.3d at 1363 (citing 35 U.S.C. § 312(a)(3) and requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”). This burden of persuasion never shifts to Patent Owner. See *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

E. Ground 1 Should Not Be Instituted.

Petitioner asserts as Ground 1 that claims 1-3, 7-12, and 16 of the ‘121 patent are anticipated by the VenHuizen patent (US 807) (Exhibit 1006 to the Petition). As set forth below, however, the petition fails to establish a reasonable likelihood that VenHuizen anticipates the claims.

Titled “Device For Improving The Spacing Between Seeds Planted By A John Deere Vacuum Planter,” VenHuizen discloses: “A seed planter of the type having a metering unit with a seed chute that drops seeds into a seed tube for planting as

manufactured by John Deere is provided with a deflector in the metering unit. The deflector directs the path of the seeds as they fall away from the seed disk so as to free fall along a vertical centerline between the leading and trailing walls of the seed tube and between the opposing sides thereof.” US 807 Abstract. VenHuizen does not disclose at least the limitations “a thrust-bearing element of the sowing disc, which thrust-bearing element [i] is supported rotatably in the movable portion [ii] in order to withstand at least some of the axial load produced by the disc on the seal” recited in claims 1 and 10 of the ‘121 patent. Petitioner’s assertion that VenHuizen discloses these claim limitations is unsupported, regardless of its expert declaration in Exhibit 1003, because the VenHuizen document “speaks for itself.”

The purpose of the VenHuizen patent is “to provide an improvement to a [John Deere] vacuum seed planter that would improve the spacings between seeds planted without requiring that the machine be pulled at a slower rate of speed.” US 807 at column 3, lines 3-6. To achieve the stated purpose, VenHuizen identifies a problem: “Although the seeds falling away from a seed disk follow the same path as they move through the air, each seed follows a different path once it makes contact with the surface of the seed tube. Whereas one seed may slide along the surface and move smoothly down the length of the tube until it is expelled, a second seed following the first seed may be deflected from one surface to another of the seed chute and ricochet down its length causing it to be emitted into the trough after a

longer period of time than the first seed.” *Id.* at column 4, lines 1-10. VenHuizen solves this problem by providing a deflector: “To direct the path [168] of seeds [156] falling from the seed disk [60] so as to carry them near the center line [170] of the seed tube [48], a deflector [172] in accordance with the present invention is positioned on the outer wall [52] of the first cavity of the metering unit [36] immediately following the position at which the seed disk moves away from the vacuum. The deflector is configured so as to urge the path of seeds falling away from the seed disk away from the leading wall [144] of the seed tube, and toward a centerline between the side walls [140, 142] of the seed tube to thereby maximize the free fall of the seeds before engaging a surface of the seed tube.” *Id.* at column 4, lines 32-42; *see also* column 9, lines 20-32. The deflector is recited in every claim of the VenHuizen patent. VenHuizen has nothing to do with the problems of seal abrasion and seal wear and fails to disclose anything about a thrust-bearing element designed to solve those problems.

On pages 45-47 of the Petition, Petitioner equates the hub handle 58 disclosed by VenHuizen with the claimed thrust-bearing element. A careful review of the VenHuizen patent shows the fallacy of such attempted equation. Specifically, see column 5, line 59 through column 6, line 18 of the VenHuizen patent (emphasis added):

Referring to FIGS. 6 through 10, the metering unit 36 includes a first housing member 50, having a generally cylindrical outer wall 52 and a planar rear wall 54 thereby forming a cavity. Extending from the rear wall 54, axially with respect to the cylindrical outer wall 52, is a tubular retaining hub 56 at the distal end of which is a handle 58 which is rotatable between a first position for receiving or removing a seed disk 60 and a second position for removably retaining a seed disk 60 on the hub 56.

Referring to FIGS. 6, 7, and 8, the retaining hub 56 is threaded on a cylindrical drive shaft 55 at the distal end of which are a pair of flanges 57 for drivingly engaging a drive member, not shown, which in turn is drivingly connected by the gearing, also not shown, to the wheels 26. A removable spring locking pin, not shown, locks the tubular retaining hub 56 to the inner drive shaft 55. By removing the spring locking pin, the retaining hub 56 can be rotated with respect to the inner shaft to thereby axially move the retaining hub 56 with respect to the rear wall 54 of the [fixed] first housing member 50. Rotating the retaining hub 56 clockwise with respect to the drive shaft moves a seed disk 60 retained thereon toward the rear wall 54 and rotating the retaining hub 56

counterclockwise moves a seed disk 60 thereon away from the rear wall 54 of the first housing member 50. Adjusting the retaining hub 56 causes the axial adjustment of the seed disk 60, after which the parts are locked into their desired orientation by locking pin 59.

As shown in Fig. 6 of the VenHuizen patent, although the handle 58 is located within the physical confines of the movable second housing member 90, the handle 58 is rotatably supported by the retaining hub 56 in the fixed first housing member 50. *See also* column 7, lines 48-51 (emphasis added): “As shown in FIGS. 3, 5, and 7, when the two housing members 50, 90 are latched in assembled relationship, with a seed disk 60 retained on the retaining hub 56 of the housing member 50, the interior of the metering unit 36 will be divided into two chambers.” The Petition never argues otherwise, stating only: “As shown in Figure 6 of VenHuizen, when the movable portion of the housing is closed onto the fixed portion, the hub-mounted handle (*i.e.*, the thrust-bearing element) is positioned within the movable portion of the housing.” Petition at 46 (emphasis added). Thus, VenHuizen does not disclose or suggest a thrust-bearing element that is supported rotatably in the movable portion of the housing as recited in the claims of the ‘121 patent. Section II above describes the importance to the claimed invention of arranging the various components in different housing sections (fixed versus movable).

In addition, VenHuizen does not disclose or suggest a thrust-bearing element that functions “to withstand at least some of the axial load produced by the disc on the seal.” Neither the Petition (see pages 46-47) nor its expert declaration (see Exhibit 1003 at pages 69-70) argue otherwise. In fact, VenHuizen never mentions the words “thrust,” “load,” or “force.”

The functions of the hub handle 58 disclosed by VenHuizen, which Petitioner equates with the claimed thrust-bearing element, are to permit replacement of a seed disk 60 and, after the seed disk is installed, to retain the seed disk on the hub 56. See the VenHuizen patent at column 5, lines 62-67: “Extending from the rear wall 54, axially with respect to the cylindrical outer wall 52 [of the fixed housing 50], is a tubular retaining hub 56 at the distal end of which is a handle 58 which is rotatable between a first [open] position for receiving or removing a seed disk 60 and a second [locked] position for removably retaining a seed disk 60 on the hub 56.” VenHuizen discloses nothing about an axial load produced by the disc on the seal, and neither Petitioner nor Petitioner’s expert Dr. Fleming argues that it does. *Compare* Petition at 46-47 *with* Exhibit 1003 at ¶ 87. The absence of any teaching in VenHuizen of this express limitation of claim 1 is fatal to Ground 1 of the Petition. *See Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983) (“Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim.”); *Tf3 Ltd. v. Tre Milano, LLC*, 894 F.3d 1366, 1374 (Fed.

Cir. 2018) (“Claims cannot be ‘anticipated’ by devices that are not the same. Invalidity for anticipation requires that ‘[t]he identical invention must be shown in as complete detail as contained in the patent claim.’”) (internal citation omitted).

Therefore, the Petition does not establish a reasonable likelihood of prevailing on Ground 1 and institution on this ground should be denied.

F. Ground 2 Should Not Be Instituted.

Petitioner asserts as Ground 2 that claims 1-5 and 10-14 of the ‘121 patent are anticipated by European Patent Application Publication No. 0536543 filed by Fiorido (EP 543) (Exhibit 1007 to the Petition). As set forth below, however, the petition fails to establish a reasonable likelihood that Fiorido anticipates the claims.

Fiorido discloses a pneumatic precision seed drill that ostensibly provides two improvements: “The perforations (34) in the disk (13) have an elongated shape and a reduced cross-section. A selector element (14) is arranged to co-operate with the disk (13) by throttling the air suction area of the perforations. An optimum seed separation and single-seed distribution effect is thereby achieved, regardless of the size and the shape of the seeds.” EP 543 Abstract. Fiorido does not disclose a housing having a movable portion. Therefore, Fiorido does not disclose at least the limitations “a housing with a fixed portion and a portion which is movable relative to the fixed portion and can be closed against the fixed portion” recited in claims 1 and 10 of the ‘121 patent. Fiorido further does not disclose any of the many

limitations that require components to be located in or on the movable portion of the housing (e.g., “a pneumatic suction chamber being defined in the movable portion,” “a seal which is arranged on the movable portion,” and “a thrust-bearing element . . . supported rotatably in the movable portion”) or between the fixed and movable portions of the housing (“the sowing disc being interposed between the fixed and movable portions”). Fiorido still further not disclose the separate components of “a motor-driven transmission drive shaft” and “a thrust-bearing element.” Finally, Fiorido does not disclose or suggest a thrust-bearing element that functions to withstand at least some of the axial load produced by the disc on the seal. Petitioner’s assertion that Fiorido discloses all these claim limitations is unsupported, regardless of its expert declaration in Exhibit 1003, because the Fiorido publication “speaks for itself.”

The Fiorido publication expressly states its purpose. “It is the purpose of the present invention to provide an improved type of pneumatically operated, precision-type, single-seed planter which is simpler in construction [i.e., the housing has no movable portion] as compared with the currently known machines of the same category, and which is such as to ensure individual selection of single seeds in a really effective way, whichever the size and the shape of the seeds may also be within certain reasonable limits. In particular, the advantage is in this way achieved of being able to use the same disk and the same adjustment thereof to individually

sow or plant single seeds having different grain sizes.” EP 543 at column 4, lines 31-

43 (emphasis added). To achieve the stated purpose, Fiorido identifies a problem:

In single-seed planters of the known type, in which the perforations of said disk are generally circular in their shape, it is rather difficult to succeed in having a single seed in correspondence of each perforation of the disk, particularly in those cases in which the seeds have no regular shape and/or have differing sizes. . . .

It therefore ensues that precision-type single-seed planters have to be provided with several sets of perforated disks having perforations drilled to different diameter sizes, which must therefore be changed quite often according to the average size and shape of the seeds to be planted, so as to reduce the extent of the above described drawbacks.

Id. at column 1, lines 38-44 and column 2, lines 4-11.

Fiorido solves this problem by providing the two improvements highlighted above. First, “[a]ccording to the main feature of the present invention, said disk 13 is provided with a ring of perforations 34, which are preferably arranged according to an equally spaced pattern along a circumferential circle near the outer periphery of the same disk. Said perforations 34 have an elongated shape and a reduced cross-

section, so as to prevent seeds with a smaller size from passing therethrough, while at the same time ensuring the passage of a suction air flow which is sufficient to keep seeds with a larger size adhering to the perforations during the rotation of the disk 13.” *Id.* from column 5, line 56 to column 6, line 9. Second, “[t]he selector element 14, the profile of which is situated in front of the perforations 34, co-operates with that surface of the disk 13 which is facing the seed container 11.” *Id.* at column 6, lines 14-17. The perforations having an elongated shape and a reduced cross-section and the selector element are both recited in the only independent claim of the Fiorido publication, most notably after the transition phrase “characterized in that” to highlight them as the claimed improvements over the prior art. Fiorido has nothing to do with the problems of seal abrasion or seal wear or a thrust-bearing element designed to solve those problems. Fiorido also fails to disclose anything about a movable housing portion. In fact, Fiorido avoids the need to access and replace disks, which is the purpose of splitting the housing into movable and fixed portions, thereby teaching away from a housing having both fixed and movable portions.

To be sure, Fiorido teaches “[t]he single-seed distributor means 10 is essentially formed by a seed container 11 and a box-like casing 12, with a perforated disk 13, associated with a selector element 14, arranged therebetween.” *Id.* at column 5, lines 10-13. The two housing components, namely the seed container 11 and the casing 12, are illustrated in each figure of the Fiorido publication. But neither

housing component is movable relative to the other (fixed) housing component. Instead, Fiorido teaches: “Said seed container 11 is further provided with projections 18, 19 that are adapted to co-operate with respective projections 181 and 191 of the casing 12 to effect the connection and the closure (by means of holes, pins and bolts) of the container 11 with the casing 12.” *Id.* at column 5, lines 22-27. Unlike the ‘121 patent and the VenHuizen patent, each of which teach a hinge and a removable hinge pin connecting the housing components so that one component moves (i.e., pivots) relative to the other component (see the hinge 12a and removable hinge pin 13 illustrated in Fig. 1 and described at column 2, lines 44-47 of the ‘121 patent and the hinge and pivot pin 92 illustrated in Fig. 8 and described at column 7, lines 19-21 of the VenHuizen patent), Fiorido bolts the housing components together into a fixed position. Both housing components are fixed relative to each other per Fiorido. See the bolt heads illustrated in Fig. 1 of the Fiorido publication.

Because neither of the housing components in Fiorido is movable relative to the other, Petitioner is able to “cherry pick” and inconsistently (and improperly) define both of the housing components as “movable” in different portions of its analysis. The Petition on pages 56-57 quotes column 5, lines 49-55 of the Fiorido publication (“The casing 12 is also provided with a perforated hub 27 (Figure 2) through which passes, as supported by bearings 28, a shaft 29 that may for instance be driven through a cog-wheel 30 to rotatably drive the disk 13, to which it is

connected by means of a driving disk 31, a centering dowel 32 and a driving pin 33 (Figures 2 and 3).”) and, from that disclosure, concludes: “The driveshaft is on the fixed portion of the housing . . . and therefore constitutes a transmission drive shaft.” Thus, the Petition equates the casing 12 with the fixed portion of the housing while characterizing the shaft 29 (and its related components including the hub 27, the bearings 28, the cog-wheel 30, the driving disk 31, the centering dowel 32, and the driving pin 33 -- all of which combine to rotatably drive the disk 13) as the transmission drive shaft.

In contrast, the Petition quotes the same disclosure (namely, column 5, lines 49-55 of the Fiorido publication) on page 64 and, from that disclosure, equates the driving disk 31 (which the Petition already argued is part of the transmission drive shaft) with the claimed thrust-bearing element. Thus, the Petition would have the same components constitute both of the separately claimed transmission drive shaft and thrust-bearing element. In addition, the very first line on page 65 of the Petition states: “Fiorido’s shaft [29], bearings [28], and driving disk [31] are rotatably supported by bearings in the casing [12] (moveable portion of the housing).” (Emphasis added.) *See also, e.g.*, Petition at 62 (“Fiorido discloses a hollow sealing ring arranged on the movable portion between the casing (movable portion) and the disk.”). In summary, the Petition has separately equated the same casing (12) both (i) with the fixed portion of the housing in connection with the transmission drive

shaft, and (ii) with the moveable portion of the housing in connection with the seal and the thrust-bearing element. Such confusion follows because the Petition ignores a basic premise of Fiorido, namely, that both housing components are fixed relative to each and neither housing component is movable relative to the other housing component.

That premise leads to another reason why the Petition's attempt to equate the driving disk 31 with the claimed thrust-bearing element must fail. Fiorido does not disclose or suggest a thrust-bearing element that is supported rotatably in the movable portion of the housing as recited in the claims of the '121 patent. Section II above describes the importance to the claimed invention of arranging the various components in different housing sections (fixed versus movable). Fiorido does not disclose or suggest any movable housing portion.

Moreover, Fiorido does not disclose or suggest a thrust-bearing element that functions "to withstand at least some of the axial load produced by the disc on the seal." The function of the driving disk 31 (assisted by the related components of a perforated hub 27, bearings 28, a shaft 29, a cog-wheel 30, a centering dowel 32, and a driving pin 33) is expressly taught by Fiorido and is "to rotatably drive the disk 13." *See* column 5, lines 49-55 of the Fiorido publication. Fiorido discloses nothing about an axial load produced by the disk on the seal or that the driving disk (which the Petition equates with the claimed thrust-bearing element) functions to

withstand such a load. In fact, Fiorido never mentions the words “thrust” or “load,” or the word “force” absent two references (column 3, lines 4-5 and column 4, line 6) to the “centrifugal force” that acts on the seeds when the disk rotates.

To be clear, Petitioner cites to no evidence supporting its position that Fiorido’s driving disk 31 actually withstands axial load, other than its expert Dr. Fleming’s conclusory testimony. *See* Petition at 65, citing Exhibit 1003 at ¶ 100. Dr. Fleming’s statement that “[t]he driving disk mounts . . . withstanding some of the load applied to the seal by the disk when a vacuum is applied” (Exhibit 1003 at ¶ 99) is devoid of any citation to Fiorido itself. The Board should disregard this argument entirely. *See, e.g. Koito Mfg. Co. v. Turn-Key-Tech, LLC*, 381 F.3d 1142, 1152 (Fed. Cir. 2004) (“General and conclusory testimony, such as that provided by Dr. Kazmer in this case, does not suffice as substantial evidence of invalidity.”). The absence of a thrust-bearing element in Fiorido is fatal to Ground 2 of the Petition.

Finally, as noted above, the Petition refers to the EPO opposition against the European counterpart to the ‘121 patent. To the extent that Petitioner wants to rely on that opposition, it is noteworthy that Petitioner cited both the VenHuizen patent (Reference D1) and the Fiorido publication (Reference D2) as “Documents relied upon” to support its opposition. *See* Notice of Opposition dated September 2, 2015, at 2 (Exhibit 1005 at 1596) (noting that D1 and D2 “were also cited in the examination procedure up to grant”). Yet none of the grounds asserted by Petitioner

to support its assertions that the counterpart European claims lack either novelty or inventive step relied upon the Fiorido publication. *See* Notice of Opposition, Exhibit 1005 at 866-903. *See also* Petitioner’s “Observations” submitted July 15, 2016 (Exhibit 1005 at 642-60) and Petitioner’s “Observations” submitted August 22, 2017 (Exhibit 1005 at 617-23) -- neither of which even mention the Fiorido publication. In fact, beyond Petitioner’s initial citation, Petitioner never relied upon the Fiorido publication during the European opposition. That fact begs the question: “Why not?” A reasonable answer is that Petitioner long ago understood that the Fiorido publication does not affect the patentability of the claims of the ‘121 patent or its European counterpart.

Therefore, the Petition does not establish a reasonable likelihood of prevailing on Ground 2 and institution on this ground should be denied.

G. Ground 3 Should Not Be Instituted.

Ground 3 asserts that independent claims 1 and 10, and dependent claims 2-5 and 11-14, would have been obvious based on Fiorido alone. Petition at 72, 73. The nonobvious differences between the invention recited in independent claims 1 and 10 and the Fiorido publication have been discussed above in Section V.F. Ground 3 also asserts that dependent claims 7-9 and 16 would have been obvious based on Fiorido in view of VenHuizen and AAPA. Because claims 2-5, 7-9, 11-14, and 16 directly or indirectly depend from patentable independent claims 1 or 10, they are

also patentable. *See, e.g., In re McCarn*, 101 USPQ 411, 413 (CCPA 1954) (“sound law” requires allowance of dependent claims when their antecedent claims are allowed).

On page 72, the Petition points out that Fiorido discloses the drive element may be introduced into either side of the seed distributor housing, i.e., into the casing (12) as illustrated in the figures or (alternatively) into the seed container (11). *See also* Petition at 33 (referring to Fiorido at column 8, lines 1-6) and 65. At column 8, lines 1-6, Fiorido teaches: “Furthermore, the seed container 11 may be provided with a central opening 40 (Figures 1 and 2) to possibly introduce the support and driving elements for the disk 13 from the opposite side of the device, as opposed to the arrangement shown in the accompanying drawing.” Thus, Fiorido expressly teaches that it does not matter whether the support and driving elements for the disk 13 (namely, the perforated hub 27, bearings 28, shaft 29, cog-wheel 30, driving disk 31, centering dowel 32, and driving pin 33) are located in or on the casing (12) or the seed container (11). This teaching makes sense because both housing components are fixed. And Fiorido expressly teaches away from the importance (to the claimed invention of the ‘121 patent) of arranging the various components in different housing sections (fixed versus movable).

The Federal Circuit has indicated that it is error to disregard disclosures that teach away from the invention at hand: *W.L. Gore & Associates, Inc. v. Garlock*,

Inc., 721 F.2d 1540, 1550 (Fed. Cir. 1983) (“the district court erred . . . in disregarding disclosures in the references that diverge from and teach away from the invention at hand”), *cert. denied*, 469 U.S. 851 (1984). As “a useful general rule,” “a reference that ‘teaches away’ can not create a *prima facie* case of obviousness.” *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). In *KSR Int’l Co.*, 550 U.S. at 416, the U.S. Supreme Court relied upon “the corollary principle that when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious.”

The totality of the Fiorido disclosure teaches away from the claimed invention. The teaching is to be viewed as it would have been viewed by one of ordinary skill in the art. When so viewed, the Fiorido publication teaches away from a seed distribution element having both fixed and movable housing sections and, more specifically, away from the importance of arranging the various components of the element in different housing sections. The inventor of the claimed invention, Enrico Bragatto, proceeded contrary to the teaching of Fiorido.

In addition, as stated above for Ground 2, Fiorido does not teach a thrust-bearing element able “to withstand at least some of the axial load produced by the disc on the seal.” Ground 3 fails for this additional, independent reason.

The Petition fails to establish a reasonable likelihood that the asserted reference would have rendered the challenged claims obvious.

H. Ground 4 Should Not Be Instituted.

Petitioner asserts as Ground 4 that independent claim 1 (and, similarly, independent claim 10) would have been obvious based on a combination of Amazone with Fiorido. The table below summarizes Petitioner's analysis.

Claim 1 Limitation	Petition Page(s)	Reference(s) Applied
i	75	Amazone and Fiorido “independently”
ii (“a sowing disc which is rotated by a motor-driven transmission drive shaft at controlled speed”)	75-77	“It would be a simple substitution of the peripherally located gearing of Amazone with the centrally located mechanism of Fiorido on the fixed side”
iii	77-78	Amazone and Fiorido “independently”
iv	78	Amazone and Fiorido “independently”
v	78-79	Amazone and Fiorido “independently”
vi	79-80	Amazone and Fiorido “independently”
vii	80-81	Amazone and Fiorido “independently”
viii	81-82	Amazone and Fiorido “independently”
ix	82-83	Amazone and Fiorido “independently”
x (“wherein the seed distribution element further comprises a thrust-bearing element of	83-85	“Fiorido discloses this limitation, and it would be obvious to modify Amazone with the driving disk of Fiorido.”

the sowing disc, which thrust-bearing element is supported rotatably in the movable portion in order to withstand at least some of the axial load produced by the disc on the seal”)		
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Clearly, Petitioner’s analysis in Ground 4 simply repeats Ground 3 with two additions. First, Petitioner asserts that, like Fiorido, Amazone discloses limitations “i” and “iii” through “ix.” Second, Petitioner asserts that Fiorido discloses limitation “ii” and the Fiorido disclosure could be substituted into Amazone, and Fiorido discloses limitation “x” and it would have been obvious to modify Amazone with the Fiorido disclosure. In summary, per Petitioner’s analysis, Amazone adds nothing to Fiorido other than independently disclosing limitations “i” and “iii” through “ix.” For the reasons provided above in Section V.F, the Fiorido publication fails to disclose or suggest limitation “x.” For that reason alone, the subject matter recited in independent claim 1 (and, similarly, independent claim 10) would not have been obvious in view of Amazone and Fiorido, independently or if combined. A more detailed analysis of the Amazone manual follows.

Maschio agrees with Petitioner’s apparent understanding, because Petitioner relied on Fiorido to fill the void, that Amazone fails to suggest or disclose either

limitation “ii” (“a sowing disc which is rotated by a motor-driven transmission drive shaft at controlled speed”) or limitation “x” (“wherein the seed distribution element further comprises a thrust-bearing element of the sowing disc, which thrust-bearing element is supported rotatably in the movable portion in order to withstand at least some of the axial load produced by the disc on the seal”) recited in independent claim 1 (and independent claim 10) of the ‘121 patent. Turning first to limitation “ii,” the Petition refers on its page 77 to Fig. 39 on page 53 of the Amazone manual (Exhibit 1011 to the Petition), which is copied below:

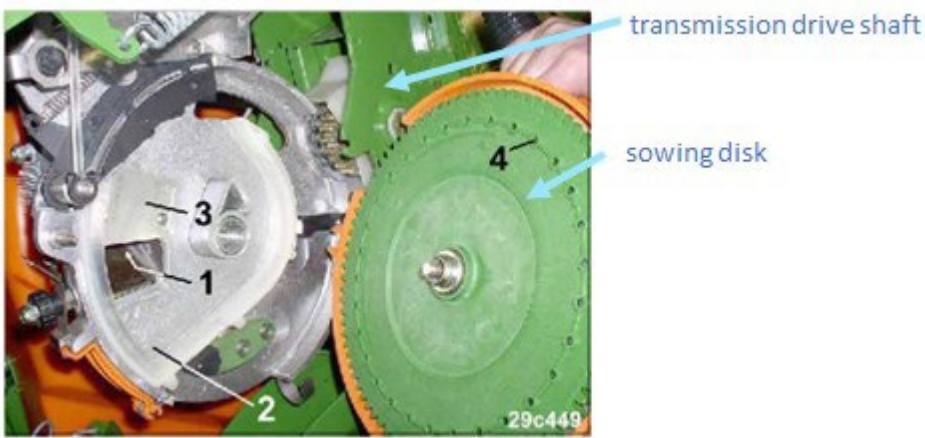


Fig. 39

Fig. 39 illustrates an opening (1) through which seeds slip out of a seed hopper; a seed store area (2); a reduction flap (3) which corrects the size of the opening; and holes (4) in the rotating sowing disk. The Petition annotated Fig. 39 with the blue lead lines and the labels “sowing disk” (correct) and “transmission drive shaft” (incorrect).

The independent claims recite “a sowing disc which is rotated by a motor-driven transmission drive shaft at controlled speed.” The ‘121 patent illustrates that limitation in Fig. 1 and describes the limitation in the specification at column 2, lines 60-63: “The sowing disc 16 is removably mounted on a motor-driven drive shaft 20, supported in the fixed portion 11 and driven in rotation at predetermined adjustable speeds by a transmission which is not shown.” As illustrated, described, and claimed, the sowing disc is mounted on and rotated by the motor-driven transmission drive shaft at controlled speed. In contrast, as can be clearly seen from Fig. 39 of the Amazone manual, the sowing disc taught by the manual is toothed and is driven by a substantially flat, rectangular, toothed gear. The Petition incorrectly labels and therefore equates the disclosed gear with the claimed transmission drive shaft.

Turning to limitation “x,” the Petition refers on its page 83 to Fig. 227 on page 166 of the Amazone manual (Exhibit 1011 to the Petition), which is copied below:



Fig. 227

Fig. 227 illustrates a green sowing disk (1); a grey foam seal (2); and a white suction lid with a suction kidney (3). The Petition incorrectly annotated Fig. 227 with the blue lead line and the label “thrust bearing element” (no hyphen).

What the Petition labels as the claimed “thrust bearing element” is a silver-colored circular metal hub that has a projection extending from its center toward the sowing disk with the projection surrounded by a recessed portion that defines a raised rim around the outer periphery of the hub. The raised rim is recessed slightly relative to the surface of the suction lid (3) and the projection runs through the central hole of the disk (1) when the components are assembled. Provided below are Images A, B, C, D, and E, which are photographs illustrating the assembly of some of the components.



Image A



Image B



Image C



Image D



Image E

The silver-colored metal hub is attached to the white suction lid (3) which is a plastic support for the grey foam seal (2). The suction lid (3) has a central recess that receives the hub so that the raised rim of the hub is recessed slightly relative to the surface of the suction lid (3). *See* Image D. The hub functions to retain the suction lid (3). The metal hub, the suction lid (3), and the foam seal (2) are all fixed in a stationary red plastic cover.

Nothing in the Amazone manual indicates, as the Petition contends, that the hub meets limitation “x” of the independent claims of the ‘121 patent reciting “a thrust-bearing element of the sowing disc, which thrust-bearing element is supported rotatably in the movable portion in order to withstand at least some of the axial load produced by the disc on the seal.” As a matter of fact, the hub does not meet the

claim limitation. First, because the hub is fixed in the stationary cover, the hub is not a thrust-bearing element “supported rotatably in the movable portion.”

Moreover, as clearly illustrated in Figs. 39 and 227 above, the sowing disc has a central hole defining a cylindrical surface that receives the projection of the hub. The central hole of the sowing disk and the projection of the hub are devoid of any locking element (such as a seat for a key) which might engage the sowing disk with the hub. A person skilled in the art would understand that the sowing disk is supported on the projection of the hub, but that the sowing disk can freely rotate around and slide on the projection of the fixed hub.

In addition, the hub is recessed slightly relative to the surface of the suction lid in order to avoid any contact between the surface of the hub and the surface of the sowing disk (i.e., there is a gap between the hub and the sowing disk when those components are assembled). Rather, the surface of the sowing disk contacts only the raised seal as the sowing disk rotates around the projection of and relative to the hub. *See Image D* (which shows the grey foam seal as forming the highest horizontal raised surface positioned to contact the surface of the sowing disk upon assembly of the sowing disk). The person skilled in the art would have no doubt that the surface of the sowing disk does not contact the surface of the hub because the sowing disk must rotate with respect to the hub. The allowance of any load-bearing action between the hub and the sowing disk would create friction -- which is exactly what

should be avoided. Therefore, the seal (and not the hub) withstands the entirety of the axial load produced by the disk on the seal. The hub disclosed by Amazone is not a thrust-bearing element able “to withstand at least some of the axial load produced by the disc on the seal.”

Petitioner’s reliance on Amazone and Fiorido to assert that the challenged independent claims would have been obvious is therefore unsupported. Further, as stated above for Grounds 2 and 3, Fiorido itself does not disclose a thrust-bearing element able “to withstand at least some of the axial load produced by the disc on the seal.” Therefore, it is incorrect to argue, as Dr. Fleming does, that “[a] POSA would understand that Fiorido’s driving disk structure could be adapted for use in Amazone’s disclosed structure to provide a rotating thrust-bearing element.” Exhibit 1003 at ¶ 119.

Ground 4 also asserts that dependent claims 2 and 11 (Fiorido alone), 3 and 12 (Amazone as modified by Fiorido or Fiorido independently), 7 and 16 (Amazone in view of VenHuizen and AAPA), 8 (Amazone alone), and 9 (Amazone alone) would have been obvious. Because claims 2, 3, 7-9, 11, 12, and 16 directly or indirectly depend from patentable independent claims 1 or 10, they are also patentable.

The Petition fails to establish a reasonable likelihood that the asserted references would have rendered the challenged claims obvious.

VI. MANDATORY DISCLOSURES

At this time, the parties have not reached an agreement on mandatory discovery of the initial disclosures set forth in the Office Patent Trial Practice Guide. *See* 37 C.F.R. § 42.51(a)(2).

VII. CONCLUSION

The Petition fails to demonstrate a reasonable likelihood that the Petitioner will prevail as to any of the challenged claims. Further, the Board should exercise its discretion to deny institution under 35 U.S.C. § 314(a). Still further, the Board should exercise its discretion to deny institution under 35 U.S.C. § 325(a). Therefore, *inter partes* review of the ‘121 patent should be denied in its entirety.

Respectfully submitted,

Date: December 29, 2023

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ATTORNEYS FOR PATENT OWNER

ATTACHMENT A: CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on December 29, 2023 a copy of this PATENT OWNER PRELIMINARY RESPONSE is being served via electronic mail, as agreed to by counsel, upon the following counsel of record for Petitioner:

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ATTACHMENT B: CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), Patent Owner hereby certifies that the present paper contains 13,272 (as counted by the “Word Count” feature of Microsoft WordTM). This word count excludes the table of contents, table of authorities, table of exhibits, certificate of word count, and certificate of service.

/Kevin R. Casey/
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**ATTACHMENT C: LIST OF EVIDENCE AND EXHIBITS
RELIED UPON IN PRELIMINARY RESPONSE**

Exhibit 2001: Fintiv Memorandum

Exhibit 2002: District Court Docket Report

Exhibit 2003: District Court Memorandum Opinion on Claim Construction

Exhibit 2004: District Court Claim Construction Order

Exhibit 2005: Petitioner's Invalidity Contentions in District Court

Exhibit 2006: Stipulated . . . Order Extending Case Deadlines

Exhibit 2007: Historical Statistics on District Court Patent Cases
Before Judge Richard G. Andrews

Exhibit 2008: EPO Dismissal dated November 20, 2023, of Precision's Appeal

Exhibit 2009: EPO Dismissal dated January 19, 2022, of Precision's Appeal