

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTRI-PLEX TECHNOLOGIES, INC. and MMI HOLDINGS, LTD.,
Petitioner

v.

SAINT-GOBAIN PERFORMANCE PLASTICS RENCOL LIMITED,
Patent Owner

Case IPR2014-00309
Patent 8,228,640 B2

Before MICHAEL W. KIM, WILLIAM A. CAPP, and
FRANCES L. IPPOLITO, *Administrative Patent Judges*.

CAPP, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

Petitioner Intri-Plex Technologies, Inc. and MMI Holdings, Ltd. (collectively, “Intri-Plex”) filed a Petition requesting *inter partes* review of claims 1–10 of U.S. Patent No. 8,228,640 B2 (Ex. 1001, “the ’640 patent”) pursuant to 35 U.S.C. §§ 311–319. Paper 1 (“Pet.”). On June 10, 2014, we instituted an *inter partes* review of claims 1–10 on certain grounds of unpatentability alleged in the Petition. Paper 15 (“Dec.”). After institution of trial, Patent Owner Saint-Gobain Performance Plastics Rencol Limited (“Saint-Gobain”) filed a Patent Owner Response (Paper 37, “PO Resp.”), and Intri-Plex filed a Reply (Paper 47, “Pet. Reply”). This case is before the Board for a Final Written Decision following an Oral Hearing on the merits conducted January 15, 2015, the transcript for which is entered as Paper 82 (“Tr.”). Also before the Board are the following matters:

1. Saint-Gobain’s Motion to Exclude [Papers 51–53, 55, 66, 74];¹
2. Intri-Plex’s Motion to Exclude Evidence [Papers 59, 65, and 73];
3. Motion to Seal Deposition Transcript of Ryan Schmidt [Paper 56]; and
4. Motion to Seal Deposition Transcripts of Woodhead and Slayne [Papers 77, 80, and 81].²

After considering the evidence and arguments of counsel and for the reasons set forth below, we determine that Intri-Plex has NOT met its burden of showing, by a preponderance of the evidence, that claims 1–10 of the

¹ In Paper 51, we directed the parties to file abbreviated lists of materials in the record related to Saint-Gobain’s objection that Intri-Plex’s Reply and supporting evidence exceeded the proper scope of a Reply. We will consider Saint-Gobain’s objection to the scope of Intri-Plex’s Reply together with Saint-Gobain’s Motion to Exclude.

² In rendering our decision, we also have considered Patent Owner’s Motion for Observation on the Cross-Examination of Mr. Ryan Schmidt and Dr. Michael McCarthy (Paper 54) and Petitioner’s response thereto (Paper 67) and have accorded the testimony the appropriate weight.

'640 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Admitted Prior Art and Wing. In addition we GRANT-IN-PART Saint-Gobain's Motion to Exclude; DENY Intri-Plex's Motion to Exclude; DENY the Motion to Seal the Schmidt Deposition Transcript; and GRANT the Motion to Seal the Woodhead and Slayne Deposition Transcripts.

1. BACKGROUND

A. Background of the Related Technology

The '640 patent is directed primarily to improving Winchester disc hard drives. Representative drawings of a Winchester disc drive and the key sub-components thereof that are of interest in this case are shown side-by-side below. Ex. 2001, Figs. 1, 2.

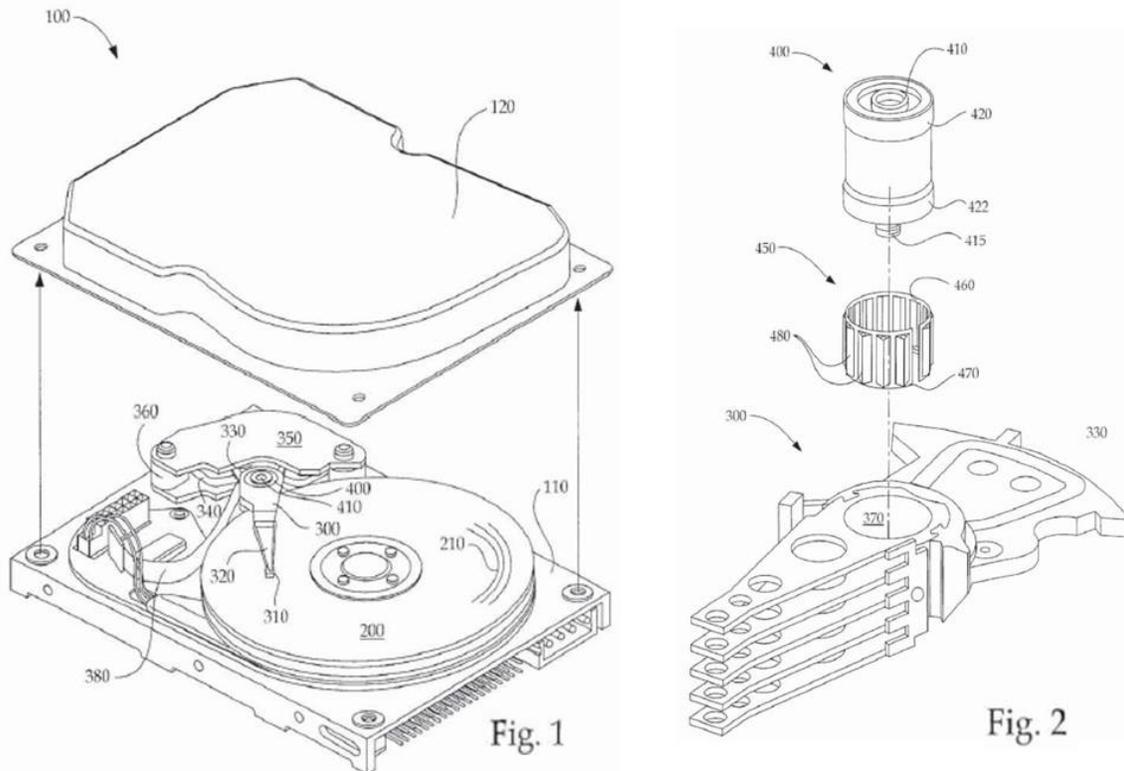


Figure 1 of Exhibit 2001, depicted above left, shows an exploded view of a typical disc drive. Disc drive 100 includes a plurality of discs 200 that are

mounted for rotation on a spindle motor. Ex. 2001, 3:43–44. Actuator 300 is mounted to bearing assembly 400, which includes stationary pivot shaft 410 about which actuator 300 rotates. *Id.* at 3:49–51. Figure 2 of Exhibit 2001, depicted above right, shows a partially exploded view of actuator 300. Actuator 300 has bore 370 that receives a bearing assembly. *Id.* at 4:1–2. The bearing assembly includes bearing cartridge 400 and tolerance ring 450 that is interposed between bearing cartridge 400 and bore 370. *Id.* at 4:3–10.

Of paramount interest in the instant dispute is the design of the tolerance ring that is interposed between the bearing cartridge and the bore. In certain instances, a tolerance ring is not formed into a continuous, unbroken circle. *See, e.g.*, Ex. 1021, Fig. 2. Rather, a gap is created that allows the tolerance ring to expand or contract radially. Ex. 2018, ¶ 34, Ex. 2008. Such radial expansion or contraction facilitates assembly of the tolerance ring onto the bearing or, alternatively, into the bore. *Id.* For purposes of this Decision, a “Shaft Variable” tolerance ring is first placed over the bearing assembly, and then the bearing assembly, with the Shaft Variable tolerance ring placed thereon, is inserted into the bore. A “Housing Variable” tolerance ring, for purposes of this Decision, is first placed inside the bore and then the bearing assembly is inserted into the tolerance ring and bore.

B. The '640 patent (Ex. 1001)

The '640 patent discloses and claims a hard disk drive with a pivot bearing assembly located in a bore of an actuator arm. Ex. 1001, claim 1. A tolerance ring is positioned between an interior surface of the bore and an

external surface of the pivot bearing assembly. *Id.* A funnel shaped guide portion is positioned at one axial end of the tolerance ring. *Id.* at Fig. 4.

The Specification describes problems that can occur during assembly of disk drive actuator arms that use tolerance rings. *Id.* at 2:5–6. As tolerance rings require a tight fit, abrasion between the tolerance ring and other parts of the apparatus during assembly may dislodge small fragments or “particles” from surfaces of the affected parts. *Id.* at 2:6–10. These particles can affect the function of hard disk drives adversely, where cleanliness is essential. *Id.* at 2:13–17.

Another issue relative to the design of tolerance rings is a phenomenon referred to as torque ripple. *Id.* at 2:30–36, 7:8–18. Contact points between the tolerance ring and the bearing assembly create micro-indentations that influence rolling elements in the bearing assembly as they pass over them. Ex. 2020 ¶ 29. This causes unwanted vibration and torque variations. *Id.* Torque variation is undesirable because it can cause errors in reading and writing data to and from the disc. *Id.*

According to Saint-Gobain’s expert, Dr. Slocum, a Shaft Variable ring, with outwardly facing protrusions and a smooth inner surface, distributes its load more evenly around the circumference of the bearing assembly than a Housing Variable tolerance ring. Ex. 2020 ¶ 29. For this reason, Shaft Variable tolerance rings outperform Housing Variable tolerance rings with respect to torque ripple. *Id.* Nevertheless, Housing Variable tolerance rings outperform Shaft Variable tolerance rings in terms of minimizing the generation of undesirable particles during assembly. *Id.* ¶¶ 27– 28.

According to Saint-Gobain, the patentable improvement in the '640 patent is the provision of a funnel shaped guide portion at an axial end of a tolerance ring with outwardly facing protrusions. PO Resp. 5.³ Flared tolerance rings possess the enhanced torque ripple performance of the Shaft Variable tolerance ring. Ex. 2020 ¶ 35. Also, the funnel shaped axial end of the Flared tolerance ring reduces particle generation when the bearing assembly is inserted into the ring axially. *Id.* Flared tolerance rings can be placed in the bore prior to inserting the bearing assembly into the tolerance rings. *Id.* This assembly method mimics the superior particle generation performance of the Housing Variable tolerance ring, while retaining the torque ripple benefits of the Shaft Variable tolerance ring. Figure 4 of the '640 patent is shown below adjacent to a perspective view of a Flared tolerance ring that Saint-Gobain prepared as a demonstrative illustration.

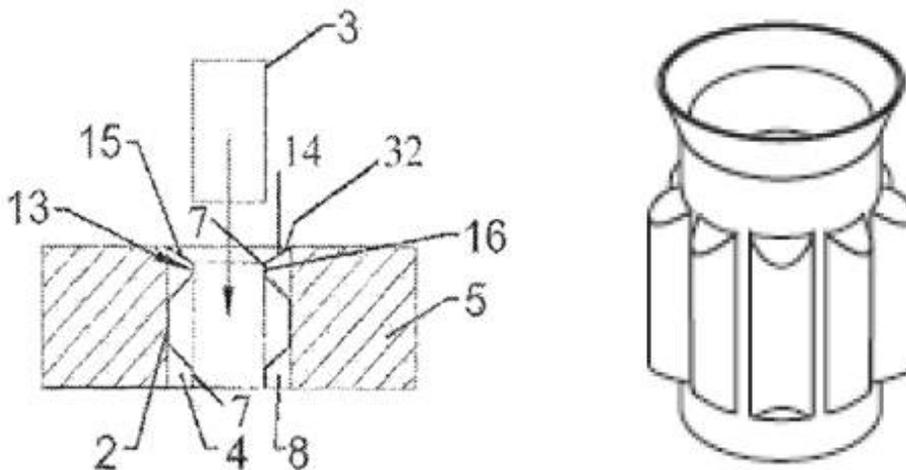


Fig. 4 of the '640 patent (left) and Saint-Gobain's demonstrative illustration of the invention (right). See PO Resp. 33.

³ For purposes of this Decision, tolerance rings that exhibit outwardly facing protrusions and a funnel shaped axial end shall be referred to as "Flared" tolerance rings.

As shown in Figure 4, the Specification teaches that guide surface 15 provides an enlarged entrance to band 16 of ring 13 for receiving the pivot bearing assembly, thereby eliminating foul on an edge of ring 13 and consequently reducing particle production. Ex. 1001, 7:45–53.

C. Related Matters

Neither party disclosed the fact that Saint-Gobain currently is prosecuting related patent applications before the Office. We take Official Notice of the fact that the '640 patent issued on a divisional application from non-provisional application number 10/552,875, which remains pending. Non-provisional applications numbered 12/870,984 and 14/600,758, which also claim benefit to the '875 application, remain pending as well.

D. Illustrative Claim And Asserted Grounds

We instituted *inter partes* review on claims 1–10 of the '640 patent on an obviousness challenge over the combination of Admitted Prior Art⁴ and Wing.⁵ Paper 15. Claim 1 is illustrative of the claims at issue:

1. A hard disk drive assembly, comprising:
 - an actuator arm having a bore with an axis, an interior surface and an axial length;
 - a pivot bearing assembly located in the bore and having an external surface; and
 - a tolerance ring positioned between the interior surface of the bore and the external surface of the pivot bearing assembly, the tolerance ring having a first axial end, a second axial end, and an axial length, the tolerance ring further having

⁴ Intri-Plex asserts that Figures 1, 2, and 3 of the '640 patent and portions of the Specification related thereto constitute admitted prior art. Pet. 7.

⁵ U.S. Patent No. 2,931,412, issued Apr. 5, 1960 (Ex. 1002).

(i) a band including corrugated protrusions extending radially outward from unformed annular portions thereof, the band having an internal diameter defined by the unformed annular portions and having an external diameter defined by the corrugated protrusions, and (ii) a guide portion extending from the band and defining the first axial end of the tolerance ring, the guide portion having a guide surface inclined relative to the axis of the of the band, wherein the first axial end of the tolerance ring defined by the guide portion has an opening having a diameter that is greater than the internal diameter of the band, and the tolerance ring is disposed such that the entire axial length of the tolerance ring is within the axial length of the bore.

E. Claim Interpretation

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Technologies, LLC*, No. 2014-1301, 2015 WL 448667, at *6 (Fed. Cir. Feb. 4, 2015) (“Congress implicitly adopted the broadest reasonable interpretation standard in enacting the AIA,” and “the standard was properly adopted by PTO regulation.”). Under the broadest reasonable interpretation standard, claim terms are given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).⁶

⁶ Citing *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

1. “unformed annular portions” (Claim 1)

Intri-Plex proposed construction: none.

Saint-Gobain proposed construction: portions of a tolerance ring that have no radial protrusions and which axially flank radial protrusions.

PO Resp. 6.

A claim construction analysis begins with, and is centered on, the claim language itself. *See Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001). Claim 1 includes a band that has corrugated protrusions extending radially outward from unformed annular portions of the band. Ex. 1001, claim 1. Thus, the “band” includes at least two portions, one portion with protrusions and one portion without protrusions. The portion without protrusions is an “unformed annular portion.” Ex. 1001, 1:60–63 (stating that annular portions that have no formations are known in the art as unformed regions of the tolerance ring).

Saint-Gobain’s proposed construction of unformed annular portion not only describes its shape, but also specifies its location vis-à-vis another element of the band, i.e., “flanking” radially protrusions on the band. Saint-Gobain relies on language from the Specification describing Figure 1 of the ’640 patent as depicting portions of a tolerance ring that have no radial protrusions and that axially flank outwardly facing protrusions. PO Resp. 6 (citing Ex. 1001, 6:18–20, Fig. 1). However, Saint-Gobain’s construction is ambiguous as it is unclear whether “flank” refers to residing on both sides or merely one side (above or below, but not both above and below) of the protrusions.

Claim terms generally are construed in accordance with the ordinary and customary meaning that they would have to one of ordinary skill in the

art in light of the specification and the prosecution history. *Aventis Pharma S.A. v. Hospira, Inc.*, 675 F.3d 1324, 1329 (Fed. Cir. 2012).⁷ Although Saint-Gobain directs our attention to embodiments that show unformed annular portions on both the upper and lower axial ends of the band, we are not inclined to import this specific configuration into the claim. *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 345 F.3d 1318, 1327 (Fed. Cir. 2003) (it is improper to read a limitation from the specification into the claims). Nothing in the specification indicates that unformed annular portions must be located both above and below the protrusions. *Id.* at 1331 (nothing in specification supported construction narrower than plain and ordinary meaning).

Under the circumstances, we are not inclined to read a limitation into the construction of “unformed annular portion” related to the location of adjacent structures, i.e., “flank.” Accordingly, we construe unformed annular portion as “a portion of a tolerance ring that has no radial protrusions.”

2. “a guide portion extending from the band” (Claim 1)

Intri-Plex proposed construction: none.

Saint-Gobain proposed construction: a separate element of the tolerance ring that extends from an unformed annular portion of the band.

Response, 8.

We are not inclined to adopt Saint-Gobain’s proposed construction. Claim 1 requires that the guide portion extend “from the band.” Ex. 1001,

⁷ The Federal Circuit imposes a stringent standard for narrowing a claim term beyond its plain and ordinary meaning. *Id.* (citing *Thorner v. Sony Computer Entm’t Am. L.L.C.*, 669 F.3d 1362 (Fed. Cir. 2012)).

claim 1. The band includes corrugated protrusions as well as unformed annular portion(s). *Id.* The Specification merely teaches that the guide portion is contiguous with, and extends axially from, the band. *Id.* at 3:1–13. The Specification is, thus, broad enough to encompass embodiments where the guide portion is immediately contiguous with either an unformed annular portion of the band or another portion that contains protrusions. We will, therefore, construe “a guide portion extending from the band” as broad enough to encompass guide portions that extend from, and are immediately contiguous with, any portion of the band.

II. OBJECTIONS AND MOTIONS TO EXCLUDE EVIDENCE

A. *Saint-Gobain’s Objection to Reply (Paper 52) and Motion to Exclude (Paper 55)*

1. *Saint-Gobain’s Objection to Intri-Plex’s Reply (Paper 52)*

Following a teleconference and in response to our Order, Saint-Gobain filed an objection to Intri-Plex’s Reply in the form of an itemized list of selected portions of Intri-Plex’s Reply that Saint-Gobain contends exceeds the proper scope of a Reply. Paper 51, 52. Intri-Plex filed an itemized list purportedly indicating where the subject matter of Paper 52 was first raised in the Petition or was replying to subject matter raised in the Patent Owner’s Response. Paper 53.

A Reply may respond only to arguments raised in the corresponding patent owner response. 37 C.F.R. § 42.23(b). Ordinarily, the Board will not attempt to sort proper from improper portions of the Reply. Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,767 (Aug. 14, 2012).

We have reviewed the itemized list submitted by Saint-Gobain (Paper 51) with particular regard to citations to Intri-Plex’s Reply

(Paper 47). We have reviewed the cited passages and are not persuaded that they contain any new arguments that exceed the proper scope of a reply. To the extent the arguments in the Reply rely, in whole or in part, for support on new evidence from Dr. McCarthy's Declaration, we will not consider the excluded portions of Dr. McCarthy's Declaration and exhibits cited therein for reasons that are further discussed below. Otherwise, we OVERRULE Saint-Gobain's Objection to Intri-Plex's Reply.

2. *McCarthy Declaration (Exhibit 1038)*

Saint-Gobain moves to exclude paragraphs 25, 26, and 50 of Dr. McCarthy's Declaration. Paper 55, 4–7. Saint-Gobain also objects to all or portions of paragraphs 6, 11, 13–58, and 62–66 as exceeding the proper scope of a Reply. Paper 52. Thus, paragraphs 25, 26, and 50 are included in both the Motion to Exclude and Saint-Gobain's objection to the scope of the Reply.

Intri-Plex did not file any declaration testimony of any kind with its Petition. Instead, Intri-Plex presented Dr. McCarthy's Declaration, for the first time, with Intri-Plex's Reply. Ex. 1038. Among other things, Dr. McCarthy's Declaration gives a general background discussion on tolerance ring technology. Ex. 10138 ¶¶ 13–17, 19–26. He offers an opinion as to the level of ordinary skill in the art. *Id.* ¶ 18. He makes general observations concerning the '640 patent. *Id.* ¶¶ 27–30. He offers a general narrative discussion of the Wing reference. *Id.* ¶¶ 31–32. He engages in claim construction and a claim-by-claim, element-by-element, obviousness analysis of each challenged claim, and then offers an opinion that each challenged claim is obvious over the prior art. *Id.* ¶¶ 33–58, 63–66.

A Reply to a Patent Owner's Response is authorized by our Rules. 37 C.F.R. § 42.23(b). However, "[a] reply may only respond to arguments raised in the corresponding . . . patent owner response." Office Patent Trial Practice Guide, 77 Fed. Reg. at 48,767. Under the rules governing *inter partes* review proceedings, a Petition must provide a full statement of the relief requested, including a detailed explanation of the significance of the evidence, including material facts. 37 C.F.R. § 22(a)(2). It is axiomatic that a Petition cannot provide a detailed explanation of the significance of evidence when that evidence is not presented until the Petitioner files its Reply. Among other things, one indication that a new issue has been raised in a Reply is "new evidence that could have been presented in a prior filing." Office Patent Trial Practice Guide, 77 Fed. Reg. at 48,767.

By waiting and filing its expert declaration after Saint-Gobain filed its Patent Owner Response (Paper 21), Intri-Plex effectively precluded Saint-Gobain from addressing Dr. McCarthy's Declaration in its Response. This also effectively precluded Saint-Gobain's expert, Dr. Slocum, from responding to Dr. McCarthy's observations and opinions in his Declaration that was filed in support of Saint-Gobain's Response. Ex. 2020. We will not countenance such tactics. *Murphy v. Village of Hoffman Estates*, 1999 U.S. Dist. LEXIS 3320, at *5–6 (N.D. Ill. 1999) ("[I]t is established beyond peradventure that it is improper to sandbag one's opponent by raising new matter in reply.").

A Reply that belatedly presents evidence will not be considered. Office Patent Trial Practice Guide, 77 Fed. Reg. at 48,767. We SUSTAIN Saint-Gobain's objection to paragraphs 6, 11, 13–58, and 62–66 of the

McCarthy Declaration, and such evidence is hereby EXCLUDED from evidence considered in rendering our final written decision.

3. *Dictionary Definitions (Exhibits 1045–1053)*

Saint-Gobain objects to, and moves to exclude, Exhibits 1045–1053. Paper 52; Paper 55, 1. These exhibits were first filed with Intri-Plex's Reply and consist of definitions taken from an on-line, common English language dictionary. They include definitions of bushing (Ex. 1045); bore (Ex. 1046); interior (Ex. 1047); surface (Ex. 1048); axial (Ex. 1049); external (Ex. 1050); cylinder (Ex. 1051); corrugate (Ex. 1052); and protrusion (Ex. 1053).

Intri-Plex does not cite directly to any of these Exhibits in its Reply. Instead, these Exhibits are cited in Dr. McCarthy's Declaration. Ex. 1038 ¶¶ 23, 33, 39. Specifically, they appear in portions of Dr. McCarthy's Declaration that we have excluded from evidence, as exceeding the permissible scope of a Reply. Essentially for the same reasons discussed above with respect to the McCarthy Declaration, we SUSTAIN Saint-Gobain's objections and GRANT Saint-Gobain's Motion to Exclude these exhibits.

5. *Saint-Gobain's Objection to Exhibits 1011–1014, 1016, 1019, 1020–1022, and 1039–1044 (Paper 52)*

These Exhibits are comprised of patents and printed publications that relate to either tolerance rings specifically (*e.g.*, Ex. 1011) or mechanical engineering and manufacturing principals generally (*e.g.*, Ex. 1040). We instituted a trial based on the combination of Admitted Prior Art and Wing only and, therefore, will NOT consider these Exhibits in connection with the scope and content of the prior art for purposes of our obviousness analysis. However, these Exhibits are probative of the background knowledge and

skill possessed by a person of ordinary skill at the time of the invention and will be considered for this limited purpose. *See Randall Mfg. v. Rea*, 733 F.3d 1355, 1363 (2013) (non-applied art should be considered as background information that could explain why an ordinarily skilled artisan would have been motivated to combine or modify the cited references to arrive at the claimed invention). In that regard, they are proper rebuttal evidence to submit with a Reply to rebut Saint-Gobain's arguments and evidence regarding the knowledge and capabilities of a person of ordinary skill in the art and whether such a skilled artisan would have been motivated to combine and/or modify the prior art. Accordingly, we OVERRULE Saint-Gobain's objections to Exhibits 1011–1014, 1016, 1019, 1020–1022, and 1039–1044.

5. *Woodhead Deposition (Ex. 1024, 154:8–10); Slayne Deposition (Ex. 1025, 190:3–17)*

Saint-Gobain moves to exclude cross-examination deposition testimony of its inventors. These portions of Mr. Woodhead and Mr. Slayne's depositions are directed to the scope of Admitted Prior Art in the '640 patent. Saint-Gobain argues that the questions posed are vague and ambiguous. Paper 55, 7–9.

The questions at issue cross-examine the inventors on their declaration testimony concerning Admitted Prior Art. We are not persuaded that they are so vague and ambiguous that the witnesses reasonably were unable to understand what was asked or were otherwise unable to formulate an answer that was responsive to the question. Saint-Gobain's Motion to Exclude this testimony is DENIED.

6. *Schmidt Declaration (Ex. 1033 ¶¶ 18, 22–28)*

Saint-Gobain moves to exclude portions of the Schmidt Declaration on the basis that Mr. Schmidt lacks personal knowledge concerning the matters upon which he testified, and on grounds of hearsay. Paper 55, 10. Mr. Schmidt's testimony in the challenged paragraphs relates to the motives and mental state of Intri-Plex's customers and potential customers, which are third-party commercial entities, in their making of complex business decisions. Ex. 1033 ¶¶ 18, 22–28.

Mr. Schmidt testified that he is responsible for new business at Intri-Plex and that, in such capacity, he regularly interfaces with customers who make hard disk drives. Ex. 1033 ¶ 6. As we understand his testimony, the information that Mr. Schmidt acquires in interfacing with customers is relied on by Intri-Plex in making business decisions to assist Intri-Plex in serving its customers. We determine that the information Mr. Schmidt has obtained, while it may be hearsay in character, contains circumstantial guarantees of trustworthiness and appears to be more probative on the point for which it is offered than any other evidence that Intri-Plex could have obtained through reasonable efforts. Under the circumstances, we will admit Mr. Schmidt's testimony under Fed. R. Evid. 807 as best serving the purposes of the Rules of Evidence. We will consider Saint-Gobain's objections to the reliability of this testimony as going to the weight, rather than the admissibility, of the evidence.

Saint-Gobain's Motion to Exclude portions of the Schmidt Declaration is DENIED.

B. Intri-Plex's Motion to Exclude (Paper 59)

1. Exhibit 2030

Intri-Plex moves to exclude Exhibit 2030. Saint-Gobain timely filed an opposition to the motion. Paper 65. Exhibit 2030 is a 194-page, single-spaced document that purports to make public disclosures related to a security offering of Intri-Plex. Intri-Plex moves to exclude Exhibit 2030 based on lack of authentication. Essentially, Intri-Plex reasons that the only company witness that it produced in this proceeding on business related matters, Mr. Schmidt, was unwilling to concede the authenticity of the document and, therefore, Saint-Gobain failed to lay a foundation for its admission into evidence. Paper 59, 2; Ex. 2038, 48:13–25. Saint-Gobain contends that Mr. Schmidt's testimony is not required to lay a foundation for the admissibility of the document. Paper 65, 5–6. Saint-Gobain contends that the document is essentially self-authenticating owing to its contents and its public availability on the internet. *Id.* Intri-Plex does not deny that Exhibit 2030 is publicly available, neither does Intri-Plex offer any affirmative evidence that the document is a fabrication or an alteration of the original. Thus, Intri-Plex does not refute Saint-Gobain's position that Exhibit 2030 was authored and published by Intri-Plex, as evidenced by its internal contents and public availability.

Saint-Gobain has established sufficiently the authenticity of the Exhibit under Fed. R. Evid. 901(b)(4). Intri-Plex's Motion to Exclude Exhibit 2030 is DENIED.

2. Exhibits 2032–2036

Exhibits 2032 through 2036 are annotated excerpts of Figures from the Wing reference. Ex. 1002. Saint-Gobain used Exhibits 2032–2036

during the deposition of Intri-Plex's expert, Dr. McCarthy. Ex. 2038, 42:17–67:22. Intri-Plex seeks exclusion under Rule 403 of the Federal Rules of Evidence. Paper 59, 2.

Under the Federal Rules of Evidence, “[t]he court may exclude relevant evidence if its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence.” Fed. R. Evid. 403. In this case, there is no jury. The excerpts and annotations are demonstrative in nature and may have been useful in focusing Dr. McCarthy's attention to specific features in Wing and, thus, facilitated oral examination of the witness. We discern little danger of unfair prejudice. Our Decision regarding patentability rests primarily on the actual teaching of Wing, which is already in the record as Exhibit 1002. We are able to differentiate between the actual figures in Exhibit 1002 and counsel's demonstrative annotations thereto. There is no indication that McCarthy was confused by these exhibits, and we discern no danger that we will be confused by them. Intri-Plex's Motion to Exclude Exhibits 2032–2036 is DENIED.

III. OBVIOUSNESS ANALYSIS

A patent is invalid for obviousness “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C. § 103. Obviousness is a question of law based on underlying factual findings: (1) the scope and content of the prior art;

(2) the differences between the claims and the prior art; (3) the level of ordinary skill in the art; and (4) objective indicia of nonobviousness.

Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17–18 (1966).

Courts must consider all four Graham factors prior to reaching a conclusion regarding obviousness. *In re Cyclobenzaprine Hydrochloride Extended–Release Capsule Patent Litig.*, 676 F.3d 1063, 1076–77 (Fed. Cir. 2012).

As the party challenging the patentability of the claims at issue, Intri-Plex bears the burden of proving obviousness by a preponderance of the evidence. 35 U.S.C. § 316(e).

A. Scope and Content of the Prior Art

Saint-Gobain challenges both of Intri-Plex’s prior art references as falling outside the scope and content of the prior art.

1. Admitted Prior Art

Figures 1–3 and 5 of the ’640 patent are labeled “Prior Art.” Ex. 1001. The section of the ’640 patent under the heading “Brief Description of the Drawings,” furnishes the following descriptions of Figures 1–3:

FIG. 1 shows in cross section a bearing and a *known tolerance ring*, which are about to be inserted into a bore in a pivotable actuator arm of a hard disk drive;

FIG. 2 shows in cross section *another known tolerance ring* with outward protrusions located in a bore in an actuator arm, and a bearing ready to be inserted into the tolerance ring;

FIG. 3 shows in cross section *another known tolerance ring* with inward protrusions located in a bore in an actuator arm, and a bearing ready to be inserted into the tolerance ring; . . .

Ex. 1001, 5:52–65 (emphasis added). The Specification later states that: “FIGS 1 to 3 illustrate use of a *known tolerance ring* to mount a shaft in a bore.” *Id.* at 6:8–10 (emphasis added). The Specification further states:

Thus, as shown in FIG. 1, a *known tolerance ring* with outwardly facing protrusions 2 in the form of waves and is fitted around a bearing 3 or bearing assembly 3 (hereinafter referred to as the bearing 3). The bearing 3 and tolerance ring 1 comprise a subassembly, which is axially inserted into the bore 4 of a body which may be an actuator arm 5 of a hard disk drive, indicated in FIG. 1 by the arrow 6.

Id. at 6:12–18 (emphasis added). Finally, the Specification further states that:

An alternative *known assembly method* comprises inserting the tolerance ring 1 into the bore 4 so that the tolerance ring 1 sits concentrically in the bore 4. The bearing 3 is inserted into the bore 4 and slides into the tolerance ring 1, as shown by the arrow 9 in FIG. 2. The bearing 3 may foul on the edge 10 of the ring as the bearing 3 is axially inserted into the ring 1, causing fragments of the ring 1 and/ or bearing 3 to be removed. The fragments are known in the art as particles.

Id. at 6:49–56 (emphasis added).

Saint-Gobain raises two arguments in support of its contention that the above referenced Admitted Prior Art is, nevertheless, outside of the scope and content of the prior art for purposes of this IPR proceeding. First, Saint-Gobain argues that, because the Admitted Prior Art is not a patent or printed publication, it cannot form a basis for finding the claims unpatentable under 35 U.S.C. § 311(b). PO Resp. 47. Section 311(b) states as follows:

(b) Scope. A petitioner in an inter partes review may request to cancel as unpatentable 1 or more claims of a patent only on a ground that could be raised under section 102 or 103 and only on the basis of prior art consisting of patents or printed publications.

35 U.S.C. § 311(b). We are not persuaded by Saint-Gobain’s argument that Admitted Prior Art falls outside of the ambit of Section 311(b). Although not listed expressly as statutory prior art under 35 U.S.C. § 102, we have long treated a patent applicant’s admissions as prior art.⁸

We see no reason why appellants’ representations in their application should not be accepted at face value as admissions that Figs. 1 and 2 may be considered ‘prior art’ for any purpose, including use as evidence of obviousness under Section 103.

Application of Nomiya, 509 F.2d 566, 570-71 (CCPA 1975). “[A] statement by an applicant, whether in the application or in other papers submitted

⁸ Saint-Gobain’s challenge to Admitted Prior Art as beyond the scope of Section 311(b) appears to be a case of first impression since enactment of AIA. Our rationale for considering Admitted Prior Art in an IPR falls under at least one of three alternative lines of reasoning: (1) statements within the four corners of the challenged patent that constitute admissions may be considered “*prior art consisting of patents*” for purposes of Section 311(b); or, (2) Section 311(b) was intended to narrow the scope of statutory prior art listed under 35 U.S.C. § 102, but was not intended to restrict our ability to consider Admitted Prior Art, which is not listed expressly under Section 102, but has nevertheless traditionally been considered by the Office as prior art; or alternatively (3) even if Admitted Prior Art is not treated as a prior art reference *per se* for purposes of Section 311(b), Saint-Gobain’s admission nevertheless constitutes background knowledge that may be imputed to a hypothetical person of ordinary skill for purposes of an obviousness analysis. See *Randall Mfg. v. Rea*, 733 F.3d at 1363 (non-applied art may be considered as background information known to a person of ordinary skill in the art). Thus, under alternative (3), the Admitted Prior Art is considered as probative evidence under the *Graham* factor directed to the level of skill in the art rather than the *Graham* factor directed to scope and content of the prior art. We do not interpret 35 U.S.C. § 311(b) as constraining the scope of evidence that we may consider in analyzing the level of ordinary skill in the art. Furthermore, we also note that the current ground of unpatentability does include the Wing reference.

during prosecution, that certain matter is ‘prior art’ to him, is an admission that that matter is prior art for all purposes, whether or not a basis in § 102 can be found for its use as prior art.” *Id.* at 571. The fact that Saint-Gobain made admissions against its own interest in the public record within the four corners of its own patent is reliable evidence that the admitted prior art antedates the claimed invention.

Saint-Gobain next argues that its admissions in the ’640 patent were a mistake and consequently seeks, in this proceeding, to recant its admissions thereby nullifying any prior art evidentiary consequences thereof. PO Resp. 49. Saint-Gobain’s contentions are equivocal as to whether it seeks to recant all, or merely some, of the admissions stated in the Specification and drawings of the ’640 patent.^{9, 10} It is not clear to us whether Saint-Gobain seeks to recant only the “Prior Art” label on Figure 2, or the “Prior Art” label on Figure 2, together with passages in the Specification that explain and describe Figure 2.

Saint-Gobain relies on testimony of the inventors that the method of assembly of the embodiment depicted in Figure 2 of the ’640 patent represents the inventor’s own work. PO Resp. 51–54. Saint-Gobain also relies on documentary evidence, including Exhibits 2004, 2005, and 2007 that purport to corroborate the inventor’s testimony that the method of assembly depicted in Figure 2 represents the inventor’s own work. *Id.* This evidence is not legally effective to recant Saint-Gobain’s admissions.

⁹ The “Prior Art” labels on Figures 1-3 and 5 were added during prosecution in response to an objection from the Examiner. Ex. 2002.

¹⁰ Although Saint-Gobain’s presentation lacks clarity on the issue, we do not discern that Saint-Gobain seeks to recant its admissions regarding the embodiments depicted in Figures 1, 3, and 5.

The principal legal authority that Saint-Gobain relies on as supporting the proposition that a patentee may recant an admission is the case of *Riverwood Int'l Corp. v. R.A. Jones & Co., Inc.*, 324 F.3d 1346 (Fed. Cir. 2003).¹¹ However, *Riverwood* did not involve an admission on the face of an issued patent and is, thus, distinguishable on its facts. In *Riverwood*, the patent applicant filed an IDS listing the '806 patent as prior art. *Riverwood* offered evidence to the district court that only part of the '806 patent disclosure constituted prior art. *Riverwood*, 324 F.3d at 1352. *Riverwood* offered evidence that Ziegler was the sole inventor of the embodiment in the '806 patent that provided foundation for the inventions in the patent-in-suit and served as the basis for the patent challenger's obviousness arguments at trial. *Id.* *Riverwood* also offered evidence that Ziegler was the sole inventor of the claimed invention in the patent-in-suit. *Id.* In vacating the judgment of invalidity, the Federal Circuit reasoned that a patentee should not be punished for being overly inclusive in referencing his own work in an IDS. *Id.* at 1355. The *Riverwood* Court observed that: "The filing of an information disclosure statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in § 1.56(b)." *Riverwood*, 324 F.3d at 1355 (quoting 37 C.F.R. § 1.97(h)).

In the instant case, Saint-Gobain's admission was not made in an IDS. Here, the admissions are stated in the drawings and Specification of the '640

¹¹ Saint-Gobain also relies on *In re Ehrreich*, 590 F.2d 902, 910 (CCPA 1979) and *Reading & Bates Const. Co. v. Baker Energy Resources Corp.* 748 F.2d 645, 650 (Fed. Cir. 1984). These decisions are inapposite as they relate to the narrow issue of whether the preamble of a claim written in Jepsen format should be treated as admitted prior art.

patent itself.¹² We conclude that the rationale expressed in *Riverwood* relating to the inventor's own work is limited to references cited in an IDS and statements made by the applicant in connection with the filing of an IDS. *See Abbott Labs v. Baxter Pharma Prod., Inc.*, 334 F.3d 1274 (Fed. Cir. 2003).

While valid prior art may be created by the admissions of a party, these admissions are generally characterized by statements made during prosecution describing certain work as "prior art." *See In re Nomiya*, 509 F.2d 566, 571 n. 5 (CCPA 1975); *In re Fout*, 675 F.2d 297, 300–01 (CCPA 1982). Under certain circumstances, even an express representation that a reference cited in an IDS is prior art to pending claims is not sufficient to create prior art by admission. *Riverwood Int'l Corp. v. R.A. Jones & Co.*, 324 F.3d 1346 (Fed. Cir. 2003). Thus, with the mere listing of references in an IDS, the applicant has admitted no more than that references in the disclosure may be material to prosecution of the pending claims. 37 C.F.R. § 1.56(a) (2000); *see A.B. Dick Co. v. Burroughs Corp.*, 798 F.2d 1392 (Fed. Cir. 1986).

Id. at 1279. We determine that the applicable rule to be applied in the instant case is the one set forth in *Nomiya*.

By filing an application containing Figs. 1 and 2, labeled prior art, *ipsissimis verbis*, and statements explanatory thereof appellants have conceded what is to be considered as prior art in determining obviousness of their improvement.

Nomiya, 509 F.2d at 571.

¹² The '640 patent issued on June 24, 2012. Ex. 1001. Intri-Plex's Petition was filed December 27, 2013. Paper 1. Saint-Gobain first raised an issue concerning recanting an admission in its filing of August 11, 2014. Paper 21. Saint-Gobain has not apprised us, and we are not otherwise aware of, any procedural vehicle by which a patentee can amend a patent specification and drawings more than two years after it has issued and in the context of an IPR proceeding.

Statements by a patentee in a patent specification serve an important public notice function. *See Superior Fireplace Co. v. Majestic Products Co.*, 270 F.3d 1358, 1371–72 (Fed. Cir. 2001) (placing due weight on the public notice function of patent claims suggests allowing a broadening correction only where it is clear from the specification, drawings, and prosecution history how the error should be corrected). The written description can assist the public in understanding the notice given in the claims by explaining which portions of the relevant art the patent does not cover. *PSC Computer Prods., Inc. v. Foxconn Int’l, Inc.*, 355 F.3d 1353, 1359 (Fed. Cir. 2004).

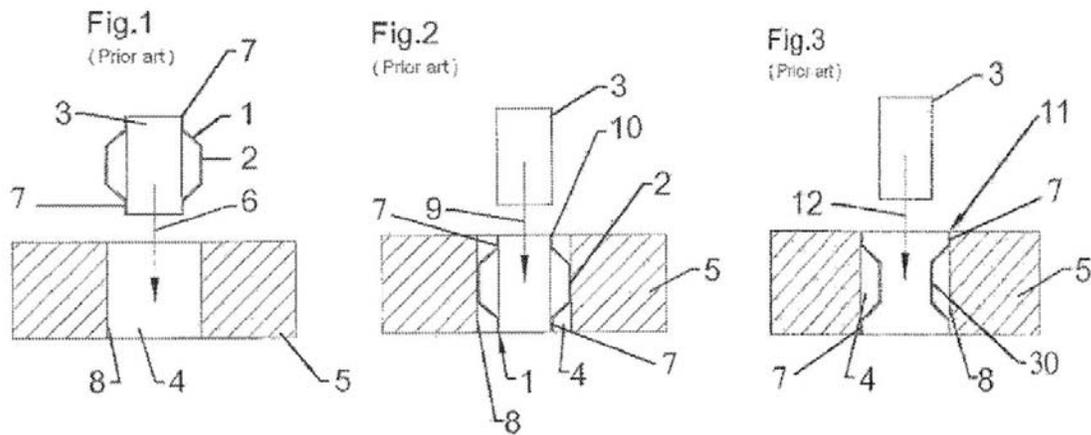
[O]ne of ordinary skill in the art should be able to read a patent, to discern which matter is disclosed and discussed in the written description, and to recognize which matter has been claimed. “The presumption is, and such is generally the fact, that what is not claimed was not invented by the patentee, but was known and used before he made his invention. But, whether so or not, his own act has made it public property if it was not so before.” *Mahn v. Harwood*, 112 U.S. 354, 5 S. Ct. 174361, 28 L.Ed. 665 (1884). The ability to discern both what has been disclosed and what has been claimed is the essence of public notice. It tells the public which products or processes would infringe the patent and which would not. Were the patentee allowed to reclaim some specifically disclosed but unclaimed matter under the doctrine of equivalents, the public would have no way of knowing which disclosed matter infringed and which did not. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359, 1369–70 (Fed. Cir. 2003) (en banc). Such a reclamation would eviscerate the public notice function of patents and create uncertainty in the law. *Id.*

PSC Computer Prods., 355 F.3d at 1359–60. *PSC* involved an attempt to reclaim disclosed but unclaimed subject matter under the doctrine of equivalents. The instant case involves an attempt to reclaim subject matter

that was admitted on the public record to be prior art. We think the instant case presents an even more compelling case than *PSC* for denying a patentee's attempt to reclaim subject matter as the inventor's own work.¹³ The public should be entitled to rely on Saint-Gobain's admissions. Accordingly, having made admissions on the public record of an issued patent, we are not persuaded that Saint-Gobain should be permitted to change its position and assert now that its admission was a "mistake" in order to gain an advantage over an adversary and competitor years after the patent has issued.

In any event, even if we were inclined to allow Saint-Gobain to recant the admissions regarding the "Prior Art" label of Figure 2 and the accompanying descriptions of Figure 2 in the Specification, the scope of such a recanted admission is so narrow that it would be immaterial to our analysis. Figures 1 and 3 still depict admitted prior art, even if Figure 2 does not. Figures 1–3 are depicted below.

¹³ Saint-Gobain's effort to transmute admissions regarding prior art in the Specification into a disclosure of the inventors' "own work" raises additional questions for which Saint-Gobain does not offer any satisfactory answer. For example, if the relevant portions of the Specification are considered as a teaching of the "inventor's own work" instead of admitted prior art, does this create subject matter that can support a claim and, if so, would the specification amendment and any claim based thereon constitute "new matter" under 35 U.S.C. § 132? These questions hold significance not only for the instant case, but also for Saint-Gobain's three pending related applications identified earlier in this Decision.



Depicted above, from left to right, are Figures 1–3 of the '640 patent. Figures 1 and 2 depict identical structures for a bore, a bearing assembly, and a Shaft Variable tolerance ring. Figures 2 and 3 depict identical assembly methods where the tolerance ring is first placed in the bore and then the shaft of the bearing assembly is inserted into the tolerance ring. Thus, the only distinguishing feature in Figure 2 that is not present in Figure 1 is that the Shaft Variable tolerance ring is inserted into the bore before assembly onto the bearing shaft. The only distinguishing feature in Figure 2 that is not present in Figure 3 is that the tolerance ring of Figure 2 is a Shaft Variable tolerance ring, whereas Figure 3 depicts a Housing Variable tolerance ring.

Thus, the only admission that Saint-Gobain seeks to recant that is supported by testimony from the inventors as to their “own work” relates to the order of assembly of otherwise known, prior art components depicted in Figure 2. This is confirmed from the following passages from Saint-Gobain’s Response.

FIG. 2 illustrates what the inventors called a “wrong way ‘round’” approach. *It shows a tolerance ring shaped as in FIG. 1 being assembled with the order of FIG. 3.* Though the '640 patent describes why the inventors thought assembling a hard

disk drive “the wrong way ‘round” may be useful, that is not shown in FIG. 2.

PO Resp. 18 (emphasis added).

The inventors created the drawing in the invention disclosure that FIG. 2 of the '640 patent is taken from. (Slayne Decl. ¶¶ 6–7, 23–25, 37–44; Woodhead Decl. ¶¶ 7–8, 24–26, 38–45; Ex. 2004 at 1.) The inventors created the drawing to show a hard disk drive assembly they had conceived and were considering as a solution to the particle generation and torque ripple problem they were studying. The inventors called this invention the “SV installed as HV” (or more informally, the “wrong way ‘round”) design because *they were reversing the conventional assembly method used with an SV tolerance ring and installing it as it would be in an HV design.* (Slayne Decl. ¶¶ 23–29, 39–40; Woodhead Decl. ¶¶ 24–30, 40–41.)

PO Resp. 51 (emphasis added).

All ten of the challenged claims in this proceeding are apparatus claims that are directed to a hard disk drive assembly comprising an actuator arm with a bore, a pivot bearing assembly, and a tolerance ring “positioned between the interior surface of the bore and the external surface of the pivot bearing assembly.” *E.g.*, Ex. 1001, claim 1. The “positioned between” language in the claim indicates a completed assembly with respect to the bearing, tolerance ring, and bore. There are no limitations in any of the claims directed to a method of assembly or that otherwise require the components to be assembled in any particular order.¹⁴ Thus, there is no structural difference between the embodiment depicted in Figure 1 and the embodiment depicted in Figure 2 after assembly of the hard disk drive of claim 1 is completed. Thus, for all practical purposes, Saint-Gobain’s

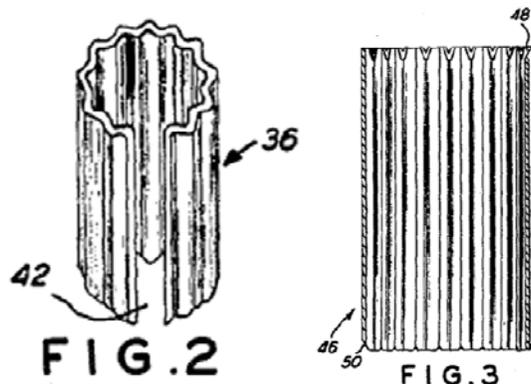
¹⁴ In other words, Saint-Gobain does not contend that any of the claims are “product-by-process” claims or that any of the limitations in any of the claims are “product-by-process” limitations.

contention that it should be allowed to recant the admission that Figure 2 is labeled “Prior Art,” and also should be allowed to recant the accompanying admission in the Specification, is not significant to our Decision. Ex. 1001, 2:49–56 (stating that alternative known assembly method is depicted in Figure 2). Stated differently, the difference between the scope of what Intri-Plex contends is Admitted Prior Art and the scope of what Saint-Gobain now and still concedes is Admitted Prior Art does not affect our determination as to what limitations in the claims are satisfied by Admitted Prior Art.

In summary, we determine that the scope and content of the prior art for purposes of this Decision includes Figures 1–3 and the following passages from the Specification of the ’640 patent: Col. 5, ll. 52–61; and Col. 6, ll. 7–67 (“Admitted Prior Art”).¹⁵

2. *Wing (Exhibit 1002)*

Wing discloses a corrugated bushing that fits between the central opening of a pulley and a shaft, such as the shaft on an automobile electric current generator. Ex. 1002, 2:43–62. See Figures 2 and 3 below:



¹⁵ Figure 5 is identified in the ’640 patent also is identified as “Prior Art,” but we do not need to consider it in reaching our Decision.

Figures 2 (left) and 3 (right) of Wing show corrugations oriented axially lengthwise along the bushing. *Id.* at 2:58, Figs. 2–3. The corrugations extend radially away from the shaft for a distance that is greater than the space between the shaft and the pulley, so that the corrugations are compressed when the bushing is forced into place during assembly. *Id.* at 2:54–62. One embodiment of Wing is chamfered at its inner edge 48. *Id.* at 3:44–47. During assembly of this embodiment, the bushing is placed into the bore of the pulley, and then the shaft is forced into the bushing. *Id.* at 3:47–54. In this method of assembly, the axial end of the bushing with chamfered inner edge 48 receives the shaft. *Id.*

A reference qualifies as prior art for a determination under § 103 when it is analogous to the claimed invention. *In re Clay*, 966 F.2d 656, 658 (Fed. Cir. 1992). Saint-Gobain contends that Wing is non-analogous art to the '640 patent and, therefore, falls outside of the scope and content of the prior art for purposes of an obviousness analysis. PO Resp. 26.

“Two separate tests define the scope of analogous art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor’s endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.” *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). Saint-Gobain argues that Wing does not satisfy either test. PO Resp. 26.

Saint-Gobain argues that Wing is from the field of engine design for heavy machinery, whereas the '640 patent is from the field of hard disk drive assembly. PO Resp. 26. Intri-Plex argues for a broad field of endeavor based on language from column 8 of the '640 patent alluding to the

prospect that, apart from hard disk drives, there are “numerous other applications of the present invention, for example, any apparatus that uses the tolerance ring.” Pet. 13.

Saint-Gobain next argues that Wing is not reasonably pertinent to the particular problem that the '640 patent addresses. PO Resp. 26. Saint-Gobain defines the problem to be solved as “reducing particle generation without increasing torque ripple.” *Id.* Saint-Gobain argues that Wing does not mention particle generation or torque ripple. *Id.* Intri-Plex defines the problem to be solved more broadly than Saint-Gobain. Essentially, Intri-Plex defines the problem in terms of facilitating the insertion of a shaft into a tolerance ring or bushing. Pet. Reply 11.

We are persuaded that the problem to be solved should be defined more broadly than Saint-Gobain has presented. Prior to the invention, it was already known to reduce particle generation during assembly by first placing a Housing Variable tolerance ring in the bore and then inserting the bearing shaft into the tolerance ring. *See* Admitted Prior Art, Fig. 3. The problem to be solved then is facilitating the insertion of a bearing shaft into a Shaft Variable tolerance ring that has already been placed in the bore. This problem relates to the close tolerances between the diameter of the bearing shaft and diameter of the opening on the axial end of the tolerance ring.

The assembly of machine components where one mechanical component is inserted into another under tight machine tolerances poses a problem that is hardly unique to the hard disk drive industry. One commonly known and used means to facilitate the assembly of components is to chamfer the opening at the place of insertion of one component into

another. *See* Ex. 2001, Fig. 3 (element 370). Chamfering is pervasive throughout the mechanical disciplines. Ex. 1040, 4.

The Supreme Court directs us to construe the scope of analogous art broadly. *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 402 (2007) (“familiar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle”). Chamfering as a solution to the problem of inserting a shaft into a bushing is relatively simple both in its concept and its application. The idea is as simple as using a shoe horn to help insert a foot into a shoe. This warrants taking an expansive approach to the scope of analogous art. “We find it not unreasonable in cases such as this, involving relatively simple everyday-type mechanical concepts, to permit inquiry into other areas where one of even limited technical skill would be aware that similar problems exist.” *In re Heldt*, 433 F.2d 808, 812 (CCPA 1970).

In light of the foregoing reasoning, we find that Wing falls within the scope and content of the prior art for purposes of an obviousness analysis.

B. Differences Between the Prior Art and the Claimed Invention

The Admitted Prior Art discloses each and every limitation of all ten (10) challenged claims with the sole exception of limitations directed to the guide portion. Ex. 1001, Figs. 1–3. Wing discloses a chamfer at its inner edge 48. Ex. 1002, Fig. 3, 3:44–47. Intri-Plex relies on this chamfer as satisfying the guide portion limitations of the claims. Pet. 11.

Wing differs from the tolerance ring of the claimed invention in that it lacks unformed annular portions. Instead, Wing exhibits corrugations that run the full axial length of the bushing. Ex. 1002, Figs. 2, 3. Wing’s

corrugations are sinusoidal. *Id.* In contrast, claim 2 of the '640 patent requires that all of the corrugated protrusions extend radially outward. Ex. 1001, claim 2. Instead of a hard disk drive actuator arm with a bore, Wing has a pulley 32 with a central opening 34. *Id.* at 2:51–52. Instead of a pivot bearing assembly, Wing features a generator shaft 30. *Id.* at 2:46–47.

Wing also differs from the claimed invention in that its guide portion is formed as a chamfer on the axial end of its full length, sinusoidal corrugations. Ex. 1002, Figs. 2, 3. Saint-Gobain analogizes this configuration to a cheese grater. PO Resp. 30. In contrast, claims 8 and 10 of the '640 patent contain limitations that arguably require a circular shape for the outer circumference of the axial end of the guide portion that is more analogous to the smooth, continuous surface of a funnel.

C. Level of Ordinary Skill in the Art

Intri-Plex's Petition does not attempt expressly to define a level of ordinary skill in the art. Neither does Intri-Plex's Petition define the "art" in which the person of ordinary skill applies his or her skill.¹⁶ Saint-Gobain contends that the applicable field of endeavor is the field of hard disk drive assembly design. PO Resp. 26 (citing Ex. 2019 ¶¶ 12–13; Ex. 2020 ¶¶ 73–77). Saint-Gobain contends that the level of ordinary skill in the art is represented by an artisan with at least a Bachelor of Science degree in mechanical engineering and three to five years of experience in the design of systems that use high precision bearings such as those used in hard disk

¹⁶ Intri-Plex attempted to submit testimony regarding the field of invention and the level of ordinary skill in the art for the first time with its Reply. Ex. 1038 ¶ 18. However, for reasons explained above, we have excluded such testimony as evidence in this proceeding.

drives. PO Resp. 10 (citing Ex. 2020 ¶¶ 12–13). Neither party presents a detailed evidentiary showing under the factors recited in the case of *Environmental Designs, Ltd v Union Oil Co.*, 713 F.2d 693, 696–697 (Fed. Cir. 1983).¹⁷

Notwithstanding the scant evidence on skill level presented by the parties, the level of skill in the art can often be determined from a review of the prior art. See *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163–64 (Fed. Cir. 1985). Based on our review of the prior art and the other technology related exhibits of record that are contemporaneous with the date of the invention, the applicable art is hard disk drive assembly and similar precision machinery. The person of ordinary skill in this field would have been familiar with hard disk drive design and assembly in general and the use of tolerance rings in conjunction with actuator bearing cartridges in particular. Ex. 2001; Ex. 2016. The ordinarily skilled artisan would have been familiar with both Shaft Variable and Housing Variable tolerance rings and their manner of assembly with a bearing shaft and a bore. Ex. 1001, Admitted Prior Art. Such an artisan also would have been familiar with the problem of debris or particle generation during assembly of a hard disk drive. Ex. 2003; Ex. 1001, 2:5–17. Such a person would have

¹⁷ Factors pertinent to a determination of the level of ordinary skill in the art include: (1) educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology, and (6) educational level of workers active in the field. Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case. *Id.* These factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art. *Daiichi Sankyo Co. Ltd, Inc. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007).

been familiar with the use of chamfering as an aid to assembly of machine components. Ex. 1023, 128:21–132:1; Ex. 1040.¹⁸

D. Secondary Considerations of Non-Obviousness

Evidence showing objective indicia of nonobviousness constitutes “independent evidence of nonobviousness.” *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1378 (Fed. Cir. 2012) (quoting *Pressure Prods. Med. Supplies, Inc. v. Greatbatch Ltd.*, 599 F.3d 1308, 1319 (Fed. Cir. 2010)). Evidence of secondary considerations of non-obviousness, when present, must always be considered en route to a determination of obviousness. *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1075–76 (Fed. Cir. 2012); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538–39 (Fed. Cir. 1983). Whether before the Board or a court, consideration of objective indicia is part of the whole obviousness analysis, not just an afterthought. *See Leo Pharm. Prods., Ltd. v. Rea*, 726 F.3d 1346, 1358 (Fed. Cir. 2013).

Evidence of secondary considerations “may often be the most probative and cogent evidence of nonobviousness in the record.” *Ortho–McNeil Pharm. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1365 (Fed. Cir. 2008). Such evidence can establish that “an invention appearing to have been obvious in light of the prior art was not.” *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012) (quoting *Stratoflex*, at 1538). Consequently, a trial court should not “defer examination of the objective considerations until after the fact finder

¹⁸ “Assembly can be speeded up and less expensive tooling can be used if holes are chamfered and pins are slightly pointed and rounded.” Ex. 1040, 17–43.

makes an obviousness finding.” *Cyclobenzaprine*, 676 F.3d at 1075–76 (citing *Stratoflex* at 1538–39). Instead, fact finders must withhold judgment on an obviousness challenge until it considers all relevant evidence, including that relating to the objective considerations. *Id.* at 1079.

Saint-Gobain presents evidence of secondary considerations of nonobviousness in the form of commercial success and copying.

1. Commercial Success

Saint-Gobain’s flared tolerance rings became commercially available in 2003–2004. PO Resp. 11. At that time, there were predominately three technologies used for affixing bearing cartridges in actuator arm bores, namely: (1) adhesives, (2) set screws, and (3) tolerance rings. Ex. 2017 ¶¶ 15, 55. In the 2000–2003 time frame, adhesives and set screws held the dominant share in this market, with tolerance rings holding less than a 25 percent market share. Ex. 2017 ¶ 16.

After introduction of Saint-Gobain’s flared tolerance ring, two market trends emerged. First, within about three years after introduction to the market, sales of flared tolerance rings surpassed sales of all other tolerance ring designs. Ex. 2017 ¶ 57. Second, within about six years after introduction to the market, sales of flared tolerance rings surpassed the sales of adhesives, set screws, and non-flared tolerance rings combined. *Id.* In other words, flared tolerance rings achieved the dominant position in the relevant market in about six years. Aggregate sales of flared tolerance rings, to date, exceed one and one-half billion units. Ex. 2025 ¶¶ 56–58.

Intri-Plex concedes that flared tolerance rings have achieved a dominant position in the relevant market. Pet. Reply 1 (Saint-Gobain maintains a “monopoly position”). Intri-Plex admits that Saint-Gobain is

currently the sole supplier of tolerance rings to Western Digital and Seagate, which together comprise 85 percent of the market for hard disk drives. Pet. Reply 3.

Intri-Plex attributes Saint-Gobain's commercial success to factors other than the merits of the invention. Pet. Reply 4. Intri-Plex argues that factors such as pricing, manufacturing capacity, and coercing customers into sole source agreements brought about Saint-Gobain's market dominance.

Id.

A patentee demonstrates commercial success by showing significant sales of the patented product in a relevant market. *J.T. Eaton & Co. v. Atlantic Paste & Glue Co.*, 106 F.3d 1563 (Fed. Cir. 1997). However, evidence of commercial success is only significant if there is a nexus between the claimed invention and the commercial success. *Ormco Corp. v. Align Technology, Inc.*, 463 F.3d 1299, 1311–12 (Fed. Cir. 2006). In the instant case, Saint-Gobain produced evidence that adding a flared guide portion to a tolerance ring quickly caused sales of flared tolerance rings to supplant sales of non-flared tolerance rings. Saint-Gobain also produced evidence that adding a flared guide portion caused sales of tolerance rings to supplant the sales of other, competing technologies. This evidence indicates that market demand for the flared tolerance ring is attributable to the flared guide portion.

We are not persuaded by Intri-Plex's evidence and argument that the market dominance of flared tolerance rings is attributable to Saint-Gobain coercing customers into sole source agreements. During the period from 2003 to 2007, Saint-Gobain sold tolerance rings with and without a guide portion. We are persuaded that the rapid increase in sales of flared tolerance

rings vis-à-vis non-flared rings is more logically explained by customer preference than supplier coercion. Indeed, given the relatively easily discernable difference between the non-flared tolerance rings and the flared tolerance rings, we are hard pressed to come to a determination that the increase in sales of the flared tolerance rings is attributable to anything other than the flared guide portion.

In any event, Intri-Plex's arguments are belied by its own admissions. In response to Saint-Gobain's allegations of copying, Intri-Plex volunteered that the only reason Intri-Plex made tolerance rings with a flared guide portion is due to customer requests. Pet. Reply 4; Paper 67, 12. Intri-Plex further admitted that the reason that its customers requested flared tolerance rings is because they had set up their manufacturing operations to accommodate a flared tolerance ring to the exclusion of a non-flared ring. Tr. 31:416.¹⁹ These admissions constitute strong evidence that the commercial success is attributable to customer demand for the patented features.

In summary, the commercial success of flared tolerance rings, whether made and sold by Saint-Gobain or Intri-Plex, weighs heavily in favor of non-obviousness of the invention.

2. *Copying*

Saint-Gobain alleges that Intri-Plex copied its design for flared tolerance rings. PO Resp. 12. Saint-Gobain supports its allegations with

¹⁹ As previously discussed, adding a flared opening to the Shaft Variable tolerance ring facilitated modification to the assembly method because it allowed the tolerance ring to be inserted into the bore prior to inserting the bearing shaft into the tolerance ring.

evidence that Intri-Plex did not introduce its own flared tolerance ring until after Saint-Gobain had achieved substantial commercial sales of its patent pending tolerance ring. Ex. 2017. Nik Woodhead testified that by the time that Intri-Plex introduced its competing ring in 2009, Saint-Gobain had already placed approximately 500 million flared tolerance rings into the stream of commerce. Ex. 2017 ¶ 56.

Saint-Gobain obtained a purported sample of Intri-Plex's competing tolerance ring and compared it to the commercial embodiment of Saint-Gobain's patented invention. Ex. 2017 ¶¶ 50–54, Ex. 2011. A side-by-side visual inspection of the two products reveals that both tolerance rings possess the same number of protrusions, the shape of the protrusions are substantially the same, the size of the protrusions are substantially the same, the spacing between the protrusions is substantially the same, the placement of the protrusions on the ring is substantially the same, and thus the overall pattern made by the protrusions is substantially the same. Finally, the dimensions and orientation of the funnel shaped, guide portions appear to be substantially similar between the two products. Ex. 2011.²⁰ Intri-Plex attributes the similarity between its own commercial product and the commercial embodiment of Saint-Gobain's patented invention not to direct copying, but to responding to customer requests and specifications. Pet. Reply 4. Intri-Plex argues that its commercial product cannot be a copy,

²⁰ Intri-Plex does not admit that the product identified in Ex. 2011 is an example of its commercial product. However, Ex. 2011 is supported by the testimony of Mr. Woodhead (Ex. 2017 ¶¶ 50–54), and Intri-Plex failed to introduce any affirmative evidence that tended to show that its product differed, in any significant way, from the photographs shown in Ex. 2011.

because it is not identical to Saint-Gobain's product. Tr. 33:13–18. That is not the correct legal standard for copying.

A party may prove copying by showing that an accused copier had access to the patented product combined with substantial similarity to the patented product. *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010). Here, Intri-Plex denies direct copying of Saint-Gobain's product and asserts, instead, that its alleged copy was made in response to customer requests. However, Intri-Plex does not deny that its customers had access to Saint-Gobain's product.²¹ To the contrary, Ryan Schmidt admitted that all of the flared tolerance rings that Intri-Plex made and sold were the result of customers asking Intri-Plex to be a "second source" to Saint-Gobain. Ex. 1033 ¶¶ 20–23, 29; Ex. 1034. We are not persuaded that Intri-Plex can insulate itself from an accusation of copying, merely by interposing an intermediary between itself and Saint-Gobain's patented product.²² We determine that Intri-Plex's customers gave Intri-Plex detailed product specifications of a flared tolerance ring because they wanted a second source for Saint-Gobain's patented product. Whether information concerning Saint-Gobain's patented product was passed from Intri-Plex's customers to Intri-Plex in the form of detailed product specifications instead of an actual product sample does not, in our view, negate a finding that Intri-Plex had the

²¹ Tr. 71:13-15.

²² In the copyright context, courts have found access when the alleged infringer and an intermediary occupy positions such that it is natural that information possessed by one would be imparted to the other. *See, e.g., Meta-Film Associates, Inc. v. MCA, Inc.*, 586 F. Supp. 1346, 1356 (C.D. Cal. 1984); *Bevan v. Columbia Broadcasting System, Inc.*, 329 F. Supp. 601, 610 (S.D.N.Y. 1971).

requisite access to Saint-Gobain's patented product.²³ Ex. 1033 ¶ 21;
Ex. 1034.

On the basis of the facts that (1) Intri-Plex admits that its own commercial product included a flared guide portion and (2) that the flared guide portion was added in response to customer requests for a second source to Saint-Gobain's product, we are persuaded that Saint-Gobain has shown that Intri-Plex had access to the patented product and that there is substantial similarity between the parties' respective products, specifically, that both products included flared guide portions. Intri-Plex's evidence fails to persuade us that this similarity between the parties' respective products is either a coincidence or the result of independent creation. Consequently, Saint-Gobain's evidence of copying weighs in favor of a finding that the patented invention is non-obvious.

*E. Whether the Prior Art Could Have Been Combined
or Modified to Achieve the Claimed Invention.*

We agree with Intri-Plex that the Admitted Prior Art and Wing disclose all of the limitations of claim 1. In particular, we find that the chamfer on the inner edge of Wing satisfies the guide portion limitation of claim 1. *See* Ex. 1002, Fig. 3 (element 48). However, proper analysis under 35 U.S.C. § 103 requires not only that all of the elements of the claimed invention are taught or suggested by the prior art, but also: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed device; and (2) whether the prior art also would

²³ Indeed, obtaining product specifications from Saint-Gobain's customers arguably makes it easier to copy than by obtaining a product sample and then having to reverse engineer the sample to develop product specifications.

have revealed that in so making, those of ordinary skill would have a reasonable expectation of success. *See, e.g., Par Pharma, Inc. v. TWI Pharma, Inc.* 773 F.3d 1186, 1197 (Fed. Cir. 2014). While an analysis of any teaching, suggestion, or motivation to combine elements from different prior art references is useful in an obviousness analysis, the overall inquiry must be expansive and flexible. *InTouch Tech. Inc. v. VGO Comm, Inc.*, 751 F.3d 1327, 1347 (Fed. Cir. 2014).

Saint-Gobain argues that Intri-Plex's analysis is conclusory and not supported by articulated reasoning with rational underpinning. PO Resp. 1314. In particular, Saint-Gobain argues that Intri-Plex's obviousness conclusion is supported by nothing more than attorney argument. *Id.* at 14.²⁴

The existence of a reason for a person of ordinary skill in the art to combine references is a question of fact. *In re Constr. Equip. Co.*, 665 F.3d 1254, 1255 (Fed. Cir. 2011). A reason to combine may be found explicitly or implicitly. *See Wyers*, 616 F.3d at 1238. The Supreme Court instructs courts to take an expansive and flexible approach in determining whether a patented invention was obvious at the time it was made. *KSR*, 550 U.S. at 415. The Court also emphasized the role of using "common sense" in analyzing obviousness. *Id.* at 421; *see Wyers*, 616 F.3d at 1238.

Saint-Gobain argues that a person of ordinary skill in the art would not have modified the Admitted Prior Art with the guide portion of Wing so as to achieve the claimed invention. PO Resp. 1832. The issue of whether a skilled artisan would have been motivated to combine certain prior art

²⁴ As previously discussed above, Intri-Plex's expert testimony on combinability of the references and a reason to combine submitted for the first time with its Reply has been excluded as evidence.

references focuses on the first and third *Graham* factors. *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1290 (Fed. Cir. 2006) (the motivation to combine requirement entails consideration of the scope and content of the prior art and the level of ordinary skill in the art). A motivation to combine may be found explicitly or implicitly in market forces; design incentives; the “interrelated teachings of multiple patents”; “any need or problem known in the field of endeavor at the time of invention and addressed by the patent”; and the background knowledge, creativity, and common sense of the person of ordinary skill. *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1328–29 (Fed. Cir. 2009) (quoting *KSR*, 550 U.S. at 418–21).

Here, the Admitted Prior Art discloses the entire invention except for the guide portion, and Wing shows that it was known to chamfer one end of a bushing to facilitate insertion of a shaft. In addition, the ’640 patent reveals and acknowledges a known problem that the tight machine tolerances between the external diameter of a bearing shaft and the internal diameter of a Shaft Variable tolerance ring generated problems during assembly. Finally, the background knowledge of a person of ordinary skill in the mechanical arts would have included an understanding of the benefits of chamfering an opening to facilitate the assembly of components. Ex. 1040, 1743. Figure 17.7.3 of MARKS’ STANDARD HANDBOOK FOR MECHANICAL ENGINEERS, 10th ed., is shown below. *Id.*

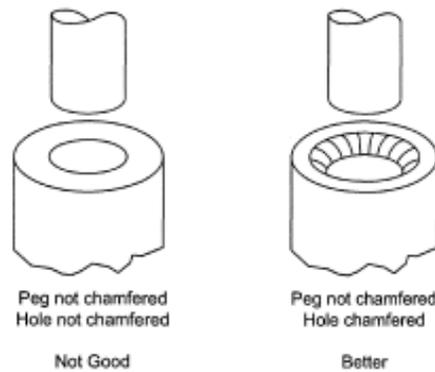


Figure 17.7.3 depicts two drawings juxtaposed side-by-side. The left drawing depicts a peg that is to be inserted into a hole that is not chamfered. This assembly method is labeled – “Not Good.” *Id.* The drawing on the right depicts a peg that is to be inserted into a hole that is chamfered. This assembly method is labeled – “Better.” *Id.*

These factors, taken together, support an inference that a person of ordinary skill in the art would have been motivated to alleviate the known problem of inserting a shaft into a circular opening by chamfering the insertion end of the opening. We view Wing as but one practical example of applying the general principles and benefits of chamfering to mechanical assembly. We are persuaded that Wing demonstrates that a person of ordinary skill in the art would have been able to take those general principles of chamfering and apply them to assembly of a shaft into a bore, with a bushing or tolerance ring interposed between the shaft and the bore.

Saint-Gobain argues that a person of ordinary skill in the art would not have modified Admitted Prior Art with Wing because chamfering the sinusoidal corrugations of Wing would have produced an undesirable “cheese grater” effect on the bearing shaft when it is inserted into the bore. PO Resp. 18-32. This argument is not persuasive. Essentially, Saint-Gobain is arguing against a literal physical combination of Admitted Prior Art and

Wing. However, this is not the relevant inquiry. The obviousness inquiry does not ask “whether the references could be physically combined but whether the claimed inventions are rendered obvious by the teachings of the prior art as a whole.” *In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985) (en banc). “The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference” *In re Keller*, 642 F.2d 413, 425 (CCPA 1981); *In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012). Regardless of its “cheese grater” aspects, Wing effectively discloses how chamfering can assist the assembly of a shaft into a bore, with a bushing or tolerance ring interposed between the two. Specifically with respect to the “cheese grater” problem, “we do not ignore the modifications that one skilled in the art would make to a device borrowed from the prior art.” *In re Icon Health & Fitness, Inc.*, 496 F.3d 1374, 1382 (Fed. Cir. 2007).²⁵ We agree with Intri-Plex that a person of ordinary skill in the art would have been able to shape a guide portion into a smooth, funnel shape using common, well-known methods of sheet metal fabrication techniques such as flaring or swaging. Pet. Reply 12.

F. Ultimate Conclusion of Obviousness

After considering all of the underlying factual considerations, the ultimate conclusion of obviousness is a question of law. *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1359 (Fed. Cir. 2007). Apart from consideration of the objective indicia of nonobviousness, we determine that

²⁵ As the Supreme Court recognized in *KSR*, the nature of the mechanical arts is such that “identified, predictable solutions” to known problems may be within the technical grasp of a skilled artisan. 550 U.S. at 421.

the first three Graham factors favor a determination that the challenged claims are obvious.

However, a proper obviousness determination requires a consideration of all factors, and we determine that Saint-Gobain's case for non-obviousness based on secondary considerations is particularly strong, and outweighs the other three factors. In particular, we are persuaded that our finding of commercial success is particularly strong, as Saint-Gobain's patented invention has not only achieved significant sales in its relevant market, it rapidly ascended to the dominant position in the relevant market, eclipsing not only other tolerance rings, but all other competing technologies as well. Indeed, we determine that commercial success alone sufficiently outweighs the other three factors, and that our finding of copying merely strengthens further our finding that secondary considerations weigh in favor of Saint-Gobain.

“Importantly, the great challenge of the obviousness judgment is proceeding without any hint of hindsight.” *Star Scientific, Inc., v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1375 (Fed. Cir. 2011). The objective considerations protect against the prejudice of hindsight bias, which often overlooks that “[t]he genius of invention is often a combination of known elements which in hindsight seems preordained.” *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351 (Fed. Cir. 2001). At first blush, Saint-Gobain's invention may seem simple. However, simplicity is not inimical to patentability. *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992). The patent system is not foreclosed to those who make simple inventions. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1572, (Fed. Cir. 1987), *cert. denied*, 481 U.S. 1052 (1987). We are admonished that “[t]hat which

may be made clear and thus 'obvious' to a court, with the invention fully diagrammed and aided . . . may have been a breakthrough of substantial dimension when first unveiled." *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138 (Fed. Cir. 1985).

All things considered, it is our opinion that Intri-Plex has failed to carry its burden of proof that claim 1 of the '640 patent is unpatentable as obvious over Admitted Prior Art and Wing. It necessarily follows that Intri-Plex has failed to establish that dependent claims 2–10 are unpatentable as obvious. *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) (dependent claims are nonobvious if the independent claims from which they depend are nonobvious).

IV. MOTIONS TO SEAL

A. *Schmidt Deposition*

Saint-Gobain filed a motion to seal the deposition transcript of Ryan Schmidt (Ex. 2038) in response to an oral request from counsel for Intri-Plex. Paper 56, 2. During the deposition, counsel for Intri-Plex indicated that he would designate the entire transcript provisionally confidential and then later identify selected portions that should be redacted. Ex. 2038, 15:4–7. Subsequently, Intri-Plex has made no effort to identify select portions of the Schmidt transcript that need to be redacted, neither has Intri-Plex shown good cause to justify why the entirety of Mr. Schmidt's testimony should be concealed from the public. *See* 36 C.F.R. §§ 42.14, 42.20(c). Saint-Gobain's Motion to Seal (paper 56) is DENIED, and the Schmidt transcript (Ex. 2038) shall forthwith be made available in the public record of this proceeding.

B. Woodhead and Slayne Depositions

Saint-Gobain filed a motion to seal selected portions of the depositions of the Woodhead deposition transcript (Ex. 1024) and selected portions of the Slayne deposition transcript (Ex. 1025). Papers 77, 80, 81. After considering all arguments, we determine that Saint Gobain's position is more persuasive. For good cause shown, that motion is hereby GRANTED.

C. Exhibits 2007 and 2011

In a previous Order, we granted Saint-Gobain's Motion to Seal Exhibits 2007 and 2011. Paper 68, 6. However, because we relied on these exhibits, including the redacted portions thereof, in reaching our Decision, we now consider that the public interest in these exhibits outweighs Saint-Gobain's interest in maintaining confidentiality thereof.

Accordingly, we order Exhibits 2007 and 2011 to be UNSEALED forty-five (45) days after the entry date of this decision.

D. Exhibits 2025, 2026, and Paper 37

In a previous Order, we provisionally granted Saint-Gobain's Motion to Seal Exhibits 2025, 2026 and Saint-Gobain's Amended Patent Owner's Response (Paper 37). Paper 68, 7-8. However, because we relied on these exhibits, including the redacted portions thereof, in reaching our Decision, we now consider that the public interest in these exhibits and the Patent Owner Response outweighs Saint-Gobain's interest in maintaining confidentiality thereof.

Accordingly, we order Exhibits 2025, 2026, and Paper 37 to be UNSEALED forty-five (45) days after the entry date of this decision.

V. CONCLUSION

Based on the evidence and arguments, Intri-Plex has not demonstrated by a preponderance of the evidence that claims 1–10 are unpatentable under 35 U.S.C. § 103(a) as obvious over Admitted Prior Art and Wing.

VI. ORDER

In view of the foregoing, it is:

ORDERED that claims 1–10 of U.S. Patent No. 8,228,640 B2 have not been shown to be unpatentable;

FURTHER ORDERED that Exhibits 2007, 2011, 2025, 2026, and Paper 37 shall be UNSEALED forty-five (45) days after the entry date of this decision;

FURTHER ORDERED that the Motion to Seal Exhibit 2038 is DENIED;

FURTHER ORDERED that the Motion to Seal Exhibits 1024 and 1025 is GRANTED.

This is a final decision. Parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2014-00309
Patent 8,228,640 B2

FOR PETITIONER:

Albin H. Gess
Sina S. Aria
SNELL & WILMER L.L.P.
agess@swlaw.com
saria@swlaw.com

FOR PATENT OWNER:

Edmund J. Walsh
Gerald B. Hrycyszyn
WOLF, GREENFIELD & SACKS, P.C.
ewalsh-PTAB@wolfgreenfield.com
GHrycyszyn-PTAB@wolfgreenfield.com