

**IN THE UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

Willis Electric Co., Ltd.,)	
)	
Plaintiff)	Case No. 15-cv-3443- WMW-KMM
)	
v.)	
)	
)	ORDER
Polygroup Macau Limited (BVI), Polytree)	
(H.K.) Co. Ltd., Polygroup Trading)	
Limited)	
)	
Defendants.)	

This matter is before the Court on Defendants Polygroup Macau Limited (BVI), Polytree (H.K.) Co. Ltd., Polygroup Trading Limited (collectively, “Polygroup”)’s Motion to Amend Prior Art Statement (ECF No. 345.) Plaintiff Willis Electric Co., Ltd. (“Willis”) opposes Polygroup’s motion. After careful consideration, the Court determines that Polygroup’s motion should be **GRANTED IN PART AND DENIED IN PART**.

I. Factual Background

Willis filed this lawsuit on August 28, 2015 alleging that Polygroup’s “Quick Set” products infringe several of Willis’s patents, including: US Patent Nos. 8,454,186 (“the ‘186 patent”), 8,454,187 (“the ‘187 patent”), 9,044,056 (“the ‘056 patent”), 8,936,379 (“the ‘379 patent”), 8,974,072 (“the ‘072 patent”), and 9,066,617 (“the ‘617 patent”). (Compl., ECF No. 1; *see also* Amend. Compl., ECF No. 23.) In April 2016, Polygroup filed petitions for *inter partes* review (“IPR”) in front of the United States Patent Trial and Appeal Board (“PTAB”), seeking to invalidate Willis’s patents. (ECF No. 347 at 7.) In October of that year, the PTAB instituted IPR proceedings on three of those petitions. (*See* ECF No. 57.) Shortly thereafter, the parties stipulated to, and the Court granted, a stay in the litigation proceedings so that the IPR process could be completed. (*Id.*; *see also* ECF No. 61.)

Ultimately, the PTAB found that Polygroup failed to demonstrate that any claims in the ‘186, ‘187, ‘379, ‘056, or ‘072 patents were unpatentable. The PTAB did not institute a review of the ‘617 patent. Polygroup appealed the decision to the Federal Circuit. On January 28, 2019, the Federal Circuit largely upheld the PTAB’s decision not to invalidate any of Willis’s patents. *Polygroup Ltd., Co. v. Willis Electric Co., Ltd.*, 2018-1745, 2018-1746, 2018-1747, 758 F. App’x 943 (Fed. Cir. Jan. 28, 2019).¹ Following the Federal Circuit decision, this Court lifted the stay “for purposes of litigation surrounding amendment of the pleadings and for discovery, but not for all pretrial proceedings.” (ECF No. 277.) Willis then served its response to Polygroup’s Prior Art Statement, which Polygroup had served in 2016 shortly before the stay. (*See* ECF No. 347.)

II. Analysis

Polygroup now seeks to amend its Prior Art Statement to add eleven prior art references that Polygroup argues it discovered during the stay in this case. Specifically, Polygroup seeks to add the following references: Kohen, Levine, Mouser, Electric Connector Handbook (“ECH”), Geisthoff, Joining of Plastics (“Plastics”), Boto, Kao598, Willis One Plug Tree Sales (“OPT”), Polygroup Quick Set 1.0 tree sales (“QS1”) and Loomis443.² Additionally, Polygroup seeks to add new combinations to its Prior Art Statement based on claim construction positions taken by Willis in the IPR proceedings. Finally, Polygroup wants to “correct some typographical errors [and] to revise some combinations to add overlooked claims....” (ECF No. 347 at 8.) These proposed additions include significantly expanding the combinations of previously disclosed prior art as well as adding combinations for the new proposed references.

Willis opposes Polygroup’s motion, though does not devote any argument to the OPT and QS1 references. After careful consideration, the Court determines that Polygroup should only be permitted to amend its prior art statement to include the uncontested OPT reference. The remainder of Polygroup’s motion is denied.

¹ The Federal Circuit also remanded one issue, not implicated by this motion, to the PTAB. The review of that issue is currently ongoing.

² Each proposed reference is described in detail in Polygroup’s memorandum supporting its motion (ECF No. 347).

A. Standard

Early prior art disclosure serves the Court's and the parties' interest in efficiency by requiring parties to develop their infringement theories early in the case.

Requiring parties to identify and commit to theories of liability early serves to focus discovery and to advance the efficient disposition of the case. The nature of a patent infringement claim or invalidity defense encourages strategies to delay producing information through discovery or otherwise until the opposing side has disclosed the basis for its claims, contributing to lengthy delays and high costs. One approach is for the court to require the parties to submit detailed statements of their claims and defenses early in the litigation either at the outset of the case, as part of a discovery scheduling order, or, where the accused product is unavailable or otherwise not subject to examination, following limited discovery.

BreathableBaby, LLC v. Crown Crafts, Inc., No. 12-cv-94 (PJS/TNL), 2014 WL 3928526 at *3 (D. Minn. Aug. 12, 2014) (quoting 26 Fed. Proc., L.Ed. § 60:1156 Pretrial Conferences and Orders). Because requiring early prior art statements is intended to crystallize parties' theories of the case, the courts' approach to motions to amend them is "decidedly conservative." *Id.*

In order to amend a prior art statement to add references, the proponent of the motion must demonstrate three things: (1) that the proposed additional references "were not, and could not reasonably have been, located earlier"; (2) the proposed references are not cumulative of prior art already included in the statement; and (3) the proponent's prejudice if leave is denied outweighs the prejudice that the non-moving party would face if the motion was granted. *Multi-Tech Systems, Inc. v. Dialpad.com, Inc.*, No. 00-1540 (ADM/RLE), 2002 WL 27141 at *3 (D. Minn. Jan 8, 2002); *see also* Pretrial Scheduling Order, ECF No. 34 (restating the elements and requiring them for amendment of a prior art statement). In this case, the Court also required the proponent of the motion to demonstrate good cause. Pretrial Scheduling Order, ECF No. 34; *see also Solutran, Inc. v. U.S. Bancorp*, No. 13-cv-2637 (SRN/BRT), 2016 WL 7377099 at *3 (D. Minn. Dec. 20, 2016) ("As a general matter, courts require a showing of 'good cause' before allowing late amendments to invalidity

contentions.”). Although the scheduling order did not specifically define good cause, courts generally consider five factors when determining if such a standard is met: (1) whether the moving party acted with diligence; (2) the importance and relevance of the proffered new prior art; (3) whether the motion is motivated by “gamesmanship”; (4) how difficult it is to locate the prior art; and (5) prejudice to the opposing party. *Id.*

B. Diligence

In order to amend its prior art statement, Polygroup must demonstrate that it did not and could not have located the references it seeks to add. *E.g.*, *BreathableBaby*, 2014 WL 3928526 at *5. In other words, Polygroup must establish diligence with respect to its prior art search. *See Solutran, Inc.*, 2016 WL 7377099 at *3. “The diligence inquiry has two sub-parts: (1) diligence in discovering the basis for amendment; and (2) diligence in seeking amendment once the basis for amendment has been discovered.” *Id.* Willis does not argue that Polygroup was not diligent in seeking its amendment once the bases for the amendment were discovered, but argues that Polygroup was not diligent in its original prior art search. After careful review, the Court finds that Polygroup has failed to demonstrate its diligence in discovering the Kohen, Geisthoff, Levine, Mouser, ECH, Plastics, Boto, Kao598, Loomis 443, and QS1 references.

First, Polygroup clearly had knowledge of the Kohen and Geisthoff references prior to the filing of its prior art statement, and therefore it cannot establish that it did not and could not have located the references by the deadline required by this Court’s scheduling order. Scheduling Order, ECF No. 34 at 3–4; *see also Breathable Baby*, 2014 WL 3928526 at *5. Polygroup’s own patent discloses Kohen as relevant art. (Alton Decl., Ex. A at 2.) Its patent, U.S. Patent No. 8,863,416, was issued on October 21, 2014—long before the prior art statement in this case was served. (July 2, 2019 Decl. of Larina A. Alton, Ex. A at 2.) Polygroup even asserts that the ‘416 patent is related to Willis’s patents. (ECF No. 347 at 12–13.) In a similar vein, Geisthoff was listed as relevant art on the face of two of Willis’s patents at issue in this case. (Alton Decl., Ex. B at 2, Ex. C at 2.)

Prior art is considered to have been locatable if it would be found by a “skilled searcher conducting a diligent search reasonably could have been expected to

discover.” *California Institute of Tech. v. Broadcom Ltd.*, No. CV16-3714, 2018 WL 7456042 at *6 (C.D. Cal. Dec. 28, 2018) (citing *Clearlamp, LLC v. LKQ Corp.*, No. 12-cv-2533, 2016 WL 473489 at *8 (N.D. Ill. Mar. 18, 2016)). This standard must certainly be met by prior art listed on the face of patents relevant to the litigation at hand. As such, Polygroup has not demonstrated its diligence in failing to discover Kohen, or Geisthoff.

Further, Polygroup has made no effort to demonstrate its previous diligence regarding its failure to discover Levine, Mouser, ECH, Loomis443, Plastics, Boto, Kao598, or QS1 before it filed its prior art statement. Kohen, discussed above, fails for this reason as well. Instead, it argues that it did not look for the references because it was unaware of their potential relevance. Specifically, Polygroup asserts that the development of claim-construction arguments during the IPR process made it aware of new approaches to be taken by Willis, and of the resulting inadequacy of its prior art statement. But this is not the standard for demonstrating diligence, and Polygroup has cited nothing to suggest otherwise. Furthermore, permitting amendment because of arguments developed through claim construction would undermine the very purpose of early prior art disclosure. Claim construction always follows the prior art statement—if “parties could always amend their prior art statements after” claim construction, the court would be unable “to prevent the parties from usurping the overarching purpose of requiring early disclosure of these charts.” *Breathable Baby*, 2014 WL 3928526 at *3–4. Even if Polygroup’s legal arguments were persuasive, the record demonstrates that their factual contentions are inaccurate.

Even if a new claim-construction theory could justify amending a prior art statement, that argument would not excuse failure to find either Kohen or Levine. A reasonably diligent searcher could have located Kohen and Levine before the prior art statement was served. Polygroup argues that it first learned of Willis’s claims regarding tree sections connected in discrete rotational alignments in 2017 during the IPR associated with this case, and it was this revelation that led them to finding Kohen and Levine. But Polygroup initiated an IPR in 2014 challenging two of the patents at issue here—‘186 and ‘187. In a response related to that proceeding sent on November 25, 2014, Willis made the “discrete rotation” argument that Polygroup now argues is new to it. (Alton Decl., Ex. D at 16.) Of particular note is that the

attorneys who received that response are counsel on this case. Polygroup was aware of Willis's "discrete rotation" argument far before its prior art statement was served, and therefore its assertion that it didn't know to search for discrete rotational alignments prior to its initial prior art statement is implausible. And Polygroup has made no other argument as to why it could not have found Kohen or Levine before now. Therefore, Polygroup has not demonstrated diligence with respect to Kohen or Levine.

Polygroup has similarly failed to adequately explain why it could not have found the Mouser, ECH, Plastics, Boto, Kao598, or Loomis443 references. It explains that it first located Mouser based on the testimony of the sole named inventor of all asserted Willis patents, Johnny Chen. Polygroup asserts that it was during Mr. Chen's deposition in the IPR that it first learned that he sourced electrical connectors from third party sources when he reduced his invention to practice. (Hughey Decl., Ex. 19 at 79:11–80:9.) However, Mr. Chen could not recall where he sourced those parts. (*Id.*) Polygroup argues that Mr. Chen's testimony inspired it to search for supplier sources, which led to the Mouser reference. (Forstner Decl., ¶ 7.) Polygroup also explains that Willis's expert criticized Polygroup's expert for not providing a sales catalog to support a certain position, which also led to the search that located Mouser. (Hughey Decl., Ex. 20, ¶ 37.) The Court is not convinced by Polygroup's argument that it could not have known prior to his deposition that Mr. Chen used third-party sources to source electrical connectors. It would be unreasonable to believe that a manufacturer of Christmas trees would manufacture its own electrical components, rather than purchasing them from a third-party vendor. Indeed, catalogs for related components seem like a likely place for prior art searchers to explore. And Polygroup has made no other argument to explain why a skilled searcher could not have reasonably found the Mouser catalogue during a diligent search. Accordingly, Polygroup has not demonstrated its diligence with respect to the Mouser reference.

The ECH and Plastics references Polygroup seeks to add suffer from the same infirmity. Polygroup learned of the ECH reference after Willis introduced excerpts of it as an exhibit to a supplemental expert declaration in the '186 IPR. (Hughey Decl., Ex. at 20 ¶¶ 38–41, 43; Ex. 21.) While Polygroup asserts that it was unaware of ECH before the expert declaration, (Forstner Decl., ¶¶ 3, 5), it fails to explain why it could

not have reasonably found the reference during a diligent search. In fact, a simple Google search for “electronic connector guide” produces a link to purchase the ECH reference on the first page of results. Polygroup discovered the Plastics reference through a similar set of circumstances—it was unaware of the reference until Willis’s expert used it in their expert declaration. (Hughey Decl., Ex. 27 at ¶ 55.) Once again, Polygroup only asserts that it did not know about the reference—it offers no explanation as to why a diligent searcher could not have found it.³

Similarly, Polygroup explains that it discovered the Boto and Kao598 references when it was performing additional research in order to supplement an interrogatory response that it originally served prior to the 2016 stay. However, Polygroup does not explain why it was unable to find Boto or Kao598 while drafting the original interrogatory response despite diligence. Indeed, the fact that the references were located while supplementing an interrogatory would suggest that they could have been found during a diligent initial search.

The Loomis443 reference has a similar result. Polygroup learned of Loomis443 as a result of a motion filed by Willis during the IPR. (Forstner Decl. ¶¶ 9–12.) In that motion to amend, Willis claimed “tree portions with electrical connectors that included three terminals with additional elements,” and Polygroup found Loomis443 as a result of additional searches prompted by that motion. (ECF No. 347 at 20; Hughey Decl., Ex. 37 at 1–2; *id.* Ex. 38.) Though Polygroup does not explicitly say as much, its brief can be generously read as implying that—much like Kohen and Levine above—Polygroup did not know that Willis would be claiming connectors with three terminals. Even if Polygroup explicitly asserted this, the argument would still fail. The results of claim construction do not generally constitute a reason to amend a prior art statement, because doing so would contravene the intentions of early disclosure, and undermine the careful balanced schedule adopted in this case. *Breathable Baby*, 2014 WL 3928526 at *3–4.

³ Willis asserts that this document is easy to find via a Google search of the term “engineer guide interference fit joining”; however, the Court was unable to locate this reference using the same search terms. Regardless, it is Polygroup’s burden to demonstrate that a diligent searcher would not have reasonably located the reference, which it has not done so.

Finally, Polygroup has failed to demonstrate diligence in locating its own sales of QS1 trees, which it asserts would constitute prior art if sold before May 8, 2012. Polygroup explains that it was unable to previously locate evidence of these sales because it “maintained paper copies of purchase orders and lacked a centralized ERP system during the pre-2017 timeframe.” (ECF No. 347 at 19.) Indeed, it was not until Willis provided Polygroup with documents that indicated the *Willis* knew that Polygroup had sold the QS1 trees prior to May 8, 2012 that Polygroup was able to locate these documents. (Hughey Decl. Exs. 29, 35, 36.) It seems obvious that the originator of records should know about them and be reasonably expected to locate them in a diligent search, and that failure to do so demonstrates a lack of diligence.

Because Polygroup has not demonstrated its diligence in locating Kohen, Geisthoff, Levine, Mouser, ECH, Plastics, Boto, Kao598, Loomis443, and QS1 it has not met the first requirement for amending its prior art statement for these references. However, Polygroup has demonstrated that it acted diligently in relation to the OPT reference. Based on original discovery served in this lawsuit, Polygroup believed that no sales of Willis’s OPT, which could serve as invalidating prior art, existed before May 8, 2011. However, during the IPR, subsequent discovery revealed that while no actual sales had taken place before that date, Willis had offered to sell the OPT at least six months prior to that date. (Hughey Decl. Ex. 29, ¶¶ 22, 82–85.) Polygroup could not have known about these prior sales because they were discovered in Willis’s company documents—no diligent researcher could have reasonably been expected to locate them. This reference is appropriate for amendment.

C. Cumulativeness

Although lack of diligence could end the discussion, the Court also finds that amendment is improper in this case as to several proposed new references because they are redundant to references already properly disclosed. References may not be added by amendment if they are cumulative of the prior art already in the statement. *E.g., BreathableBaby*, 2014 WL 3928526 at *5. A new reference is cumulative if it attacks the same claims as the references already contained within the prior art statement. *FLOE Int’l, Inc. v. Newmans’ Mfg. Inc.*, No. 04-cv-5120, 2005 WL 6218040 at *3 (D. Minn. Nov. 9, 2005). By contrast, a new reference is non-cumulative if it “provides something the old references do not.” *Polaris Indus. Inc. v. CFMOTO Powersports, Inc.*, No. 10-cv-4362, 2012 WL 12028103 at *3 (D. Minn. Feb. 29, 2012).

Polygroup has not demonstrated that several of the references it seeks to add are non-cumulative.

With respect to Kohen, Polygroup argues that no other reference “teaches the use of interlocking, engaging teeth on the bodies of the male plug and female socket of a coaxial connector to maintain a mechanical and electrical connection in a fixed rotational position.” (ECF No. 347 at 14.) However, French Patent No. 1,215,214 (“Jumo”), already listed in Polygroup’s prior art statement, teaches this concept. Specifically, Jumo describes “interlocking slotted parts...located at the ends of tube components... enable[ing] angular positions in a number equal to that of the slots, and without risk of short-circuits.” (Alton Decl., Ex. E, Petition for *Inter Partes* Review, Case IPR2016-01612 at 28.) Additionally, Jumo teaches “tube portions...[that] can mechanically couple in six discrete rotational positions, and can electrically connect in any of those positions.” (*Id.*) Though Polygroup asserts that Kohen teaches interlocking “teeth” instead of interlocking “slotted parts,” the Court does not see a functional difference between the two. Thus, Kohen is cumulative of Jumo, and Polygroup may not add it to the prior art statement.

Other proposed new references also fail this analysis. The Levine reference is cumulative of the McLeish reference already in the prior art statement—both are connectors with a pin surrounded by a round electrical contact, and Polygroup has not distinguished how the two differ in any meaningful way. Similarly, Polygroup wishes to add Plastics because it “explicitly discloses that interference fits were well known” at time of invention. (ECF No. 347 at 15). However, several references already disclosed describe the use of interference fits; specifically, Polygroup Wesley Pine, Polygroup Madison Pine, Holiday Time Douglas Fir, GKI Bethlehem Lights Tree, Korengold, and Time Douglas Fir. Polygroup has not shown how Plastics provides something that these other references do not. Therefore, Plastics is cumulative.

Boto and Kao58 fail for a similar reason. Polygroup argues that no other reference teaches a design similar to these two references, which describe two male prongs configured to engage with ring-shaped female contacts around the central axis of the stand whilst maintain an electrical connection. (ECF No. 347 at 22.) But McCaslin, already in Polygroup’s prior art statement, describes electrical leads to a

diode extending along the length of a tube “downwardly to a pair of concentric contact rings...coupled to [the] tube for rotation therewith.” (McCaslin, 1:26–30.) Finally, Loomis443 is cumulative over the McLeish patent already in Polygroup’s prior art statement. Loomis443 contains a detailed depiction of pin terminals, which McLeish also contains. Polygroup has not explained how Loomis443 adds something that McLeish did not already have. Thus, Levine, Plastics, Boto, Kao58, and Loomis443 all fail for their cumulateness.

Polygroup asserts that Mouser and ECH are not cumulative because each shows a wider variety of electrical connectors available to inventors at the time than any other reference already cited. (ECF No. 347 at 17, 18.) But Polygroup has provided no comparison of the references cited versus the additional information apparently available in Mouser and ECH. Further, many of Polygroup’s prior art references describe a variety of electrical connectors, which were presumably available to inventors. Accordingly, it is unclear what additional information Mouser and ECH provide.

D. Additional Combinations of Claims and Correction of Typographical Errors

Polygroup seeks to amend its prior art statement to add new combinations involving both previously disclosed prior art references and the proposed amendments, and to correct typographical errors in the original. The Court finds that neither of these are an appropriate reason to amend the prior art statement in this case. Polygroup’s motion to add additional combinations fails squarely on the diligence inquiry—it openly admits that the additional combinations were “inadvertently overlooked” when Polygroup was preparing its original statement. Further, the Court denies the request to correct typographical errors because this should never be the type of request that requires judicial intervention. Counsel are instructed to work this issue out on their own. And of course, the correction of typos cannot act as a Trojan Horse for substantive changes.

E. Prejudice

Finally, Polygroup has failed to demonstrate that the prejudice it will suffer if it is not permitted to amend its prior art statement is outweighed by

the prejudice Willis will suffer if the motion is granted. Polygroup argues that it will be prejudiced if it is not allowed to amend its prior art statement to respond to the results of the IPR proceedings, but this argument fails for two reasons. First, as previously stated, it is not appropriate to permit amendment in response to the development of claim-construction arguments. *Breathable Baby*, 2014 WL 3928526 at *3–4. Second, Polygroup’s request essentially amounts to asking this Court to provide it with a “second bite at the apple” after it has already failed to prove its invalidity contentions at the PTAB. This is underscored by the fact that the references Polygroup seeks to add are so cumulative of references already contained within the prior art statement—since the references that Polygroup previously chose failed to support a finding of invalidity of Willis’s patents, it would like to try again with different references. Staying litigation proceedings in the trial court while IPR is pursued at the PTAB is intended to narrow and simplify issues before the court, not provide one side with a “sneak peek” of the arguments and references that may or may not be successful in litigation.

In contrast, to permit amendment of the prior art statement in these circumstances would cause meaningful prejudice to Willis, which has already spent significant time and money responding to the previously disclosed and voluminous prior art references. Additionally, this case is already four years old, yet is essentially in its infancy. Any more needless delay of the resolution of this litigation is against the interests of the Court and the parties.

III. Conclusion

Accordingly, IT IS HEREBY ORDERED that:

1. Polygroup’s Motion to Amend Its Prior Art Statement (ECF No. 345) is DENIED IN MOST PART AND GRANTED IN PART: Polygroup’s request to amend its prior art statement to add the OPT reference is GRANTED. All other requests in Polygroup’s Motion are DENIED.

Dated: October 28, 2019

s/ Katherine Menendez
Katherine Menendez
United States Magistrate Judge