

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMPHENOL CORP.,
Petitioner

v.

PPC BROADBAND, INC.,
Patent Owner

Case No. IPR2023-01363
Patent No. 9,008,483

**PETITIONER’S REPLY TO PATENT OWNER’S PRELIMINARY
RESPONSE**

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UPDATED APPENDIX OF EXHIBITS

Exhibit 1001	U.S. Patent No. 9,008,483 (“’483 Patent”)
Exhibit 1002	Prosecution History for the ’483 Patent (“’483 FH”)
Exhibit 1003	Declaration of Dr. Sayfe Kiaei (“Dec”)
Exhibit 1004	U.S. Patent Application Publication No. 2009/0202214 to Holmberg et al. (“Holmberg”)
Exhibit 1005	U.S. Patent Application Publication No. 2008/0112681 to Battey et al. (“Battey”)
Exhibit 1006	U.S. Patent No. 6,721,484 to Blankenship et al. (“Blankenship”)
Exhibit 1007	U.S. Patent No. 8,965,168 to Cowen et al. (“Cowen”)
Exhibit 1008	U.S. Patent No. 7,346,253 to Bloodworth et al. (“Bloodworth”)
Exhibit 1009	U.S. Patent No. 7,539,388 to Mertesdorf et al. (“Mertesdorf”)
Exhibit 1010	U.S. Patent Application Publication No. 2005/0276562 to Battey et al. (“Battey ’562”)
Exhibit 1011	U.S. Patent No. 8,121,458 to Barth et al. (“Barth”)
Exhibit 1012	U.S. Patent No. 8,009,954 to Bran de Leon et al. (“Bran de Leon”)
Exhibit 1013	U.S. Patent No. 4,792,203 to Nelson et al. (“Nelson”)
Exhibit 1014	International Publication No. WO 2010/040256 to Castonguay et al. (“Castonguay”)
Exhibit 1015	U.S. Patent No. 7,088,893 to Cooke et al. (“Cooke”)
Exhibit 1016	PPC’s Preliminary Infringement Contentions (“PPC Infringement Contentions”)
Exhibit 1017	PPC v. Times Fiber (D. Del.), Dkt. 43, Stipulation to Stay Litigation (“Stipulation”)
Exhibit 1018	“Trending at the PTAB: When to Ask Court for Litigation Stay,” March 30, 2023 (“Stay Article”)
Exhibit 1019	PPC v. Charles (D. Del.), Dkt. 22 (“Scheduling Order”)
Exhibit 1020	June 2023 District Court Time to Trial Statistics (“Trial Stats”)
Exhibit 1021	Joint <i>Markman</i> Brief
Exhibit 1022	Tech Tutorial

I. INTRODUCTION

Pursuant to the Board’s January 16, 2024 email, Petitioner submits this Reply to Patent Owner’s (“PO”) Preliminary Reply (Paper 6, “POPR”), addressing two issues. First, the POPR argues that Petitioner’s prior art fails to disclose a drop interface box that stores “three different *types*¹ of cables that are *coupled* to each other.” *POPR*, 24. In the district court, however, PO took the opposite view, arguing that the “type or construction” of the cables recited in the claims is “irrelevant.” Ex. 1021 (*Joint Markman Brief*), 40; *see also id.* at 25-26 (arguing no cables are required to infringe). Institution will prevent PO from advancing a narrow read to defeat invalidity and a broad read for infringement.

Second, the POPR asks the Board to deny institution under § 325(d), arguing that Battey (Ex. 1005) is cumulative of the Laporte reference discussed in a cited PCT search report and written opinion. However, the relevant features in Laporte were never discussed in the PCT search report, and neither Battey nor Laporte was discussed at all by the U.S. Examiner during the Challenged Patent’s prosecution.

II. DIFFERENT TRIBUNALS, DIFFERENT POSITIONS

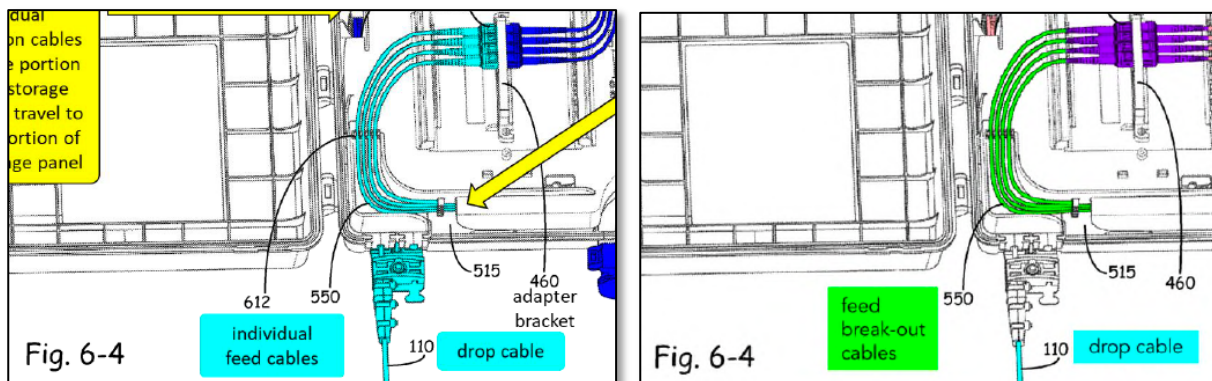
The POPR asks this Board to deny institution because the Proposed Grounds allegedly “fail to disclose or suggest the claimed drop interface box hardware to store

¹ All emphases added unless indicated otherwise.

three different types of fiber optic cables” that are “*coupleable*” to one another. *POPR*, 1. The *POPR* focuses on the claimed transition between a drop cable and feed break-out cables, insisting that a “feed break-out cable” must be “‘coupleable’ with the drop cable and therefore *cannot be part of the drop cable*.” *Id.* at 2.

But in the district court, PO argued that “[t]he type or construction” of the cables recited in the claims is “irrelevant.” Ex. 1021 (*Joint Markman Brief*), 40; *see also id.* at 28 (further arguing that three lengths of the exact same cable can be used). PO even told the district court that “the term ‘drop cable’ is *not* limiting and need not, and indeed should not, be construed by the Court.” *Id.* at 26, 27 (arguing that “‘drop cable’ is not a structural limitation [and] its precise definition is irrelevant”).

PO’s own annotations demonstrate the contradictory positions it advances before the two tribunals. In the district court, seeking the broadest scope, PO annotated the “drop cable” and “feed break-out” cables in Fig. 6-4 using the same color, implying they are (or can be) structurally related. But the *POPR* uses different colors and argues these cables must be distinct and unrelated.



Id. at 9 (left); *POPR*, 8 (right).

PO's contradictions demand institution, particularly here where the Petition asks the Board to adopt PO's interpretation of the claims. Paper 1, 9-16. Since the Petition was filed, the record has developed substantially, further demonstrating that the claims are invalid if interpreted as broadly as PO contends. Instituting review will prevent PO from treating the claims as a nose of wax, "twisted one way to avoid [invalidity] and another to find infringement." *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001).

A. PO's District Court Arguments Make Clear That the Proposed Grounds Render Obvious PO's Interpretation of the Claims

The Challenged Claims require three distinct mechanisms for retaining optical cables—(1) "drop cable retaining mechanisms," (2) "first spools positioned to store a plurality of feed break-out cables coupleable to the drop cable," and (3) "second spools positioned to store a plurality of distribution cables coupleable to the plurality of feed break-out cables." As set forth in the Petition, Holmberg discloses three distinct optical cable retaining mechanisms—(1) a "stripped portion of the cable" is retained by members 260/264 (*Petition*, 31), (2) "terminated fibers" are retained on "spool structure 298" (*Petition*, 47-49), and (3) distribution cable fibers are retained by "fiber storage walls 292" (*Petition*, 55-57).

The *POPR* does not dispute that Holmberg's apparatus includes three distinct

mechanisms for retaining optical fibers. Nor does it suggest they are configured in a manner inconsistent with the Challenged Claims. Instead, the POPR disputes that Holmberg’s “stripped portion of the cable” retained by members 260/264 is (1) distinct and separate from the “terminated fibers” retained by spool structure 298 and (2) physically coupleable to those terminated fibers. *POPR*, 1-2, 10-26. Neither argument aligns with PO’s interpretation of the claims in the district court.

First, PO argued in the district court that “drop cable”—and, by the same reasoning, all cables recited in the claims—imposes no structural limitation on the claims at all. Ex. 1021 (*Joint Markman Br.*), 1 (“drop cable . . . is not even a structural limitation”), 26 (“‘drop cable’ is ***not*** limiting and need not, and indeed should not, be construed by the Court”) (emphasis in original). PO also stressed that portions of identically structured cables could satisfy the other cable types of the claims. *Id.* at 28 (“[C]able cut from a spool could be used as a drop cable” and “cable cut from the ***same spool*** could be used as a distribution cable.”). Having specifically argued this claim language is not limiting, PO cannot now demand that Holmberg’s “stripped portion of the cable” retained by members 260/264 must be distinct and separate from the “terminated fibers” retained by spool structure 298.

Second, the district court record and the Challenged Patent itself dispute PO’s narrow view of “coupleable.” The POPR argues that Holmberg’s “terminated fibers” are simply fibers from Holmberg’s “stripped portion of the cable” (i.e., drop cable)

and, therefore, “cannot be considered to be coupleable to the drop cable.” *POPR*, 17-18. As an initial matter, PO never addresses the Challenged Patent’s express teaching that “‘coupled’ . . . encompass[es] both direct and indirect . . . couplings” and is “***not restricted*** to physical or mechanical connections or couplings.” ’483 *Patent*, 2:67-3:5. Further, PO confirmed in the district court that the couplings contemplated by the Challenged Patent are different, depending on the type of cable. For example, Plaintiff’s Technology Tutorial teaches that the “drop cable” is merely “***split*** into individual feed cables.” Ex. 1022 (*Tech Tutorial*), 14. But the “feed or break-out cables” are physically “connected to [an] adapter bracket” when coupled to “distribution cables.” *Id.* at 16 (annotating the drop and feed break-out cables with the same color and distribution cables with a different color). Thus, excluding Holmberg’s “terminated fibers” because they are *split from* the drop cable, rather than physically *coupled to* the drop cable, conflicts with PO’s own interpretation.

Finally, PO’s overbroad interpretation of the claims is responsible for any blurred lines between drop cable and feed break-out cables. The Challenged Patent exclusively describes a drop cable as a jacketed bundle of fibers, so splitting a drop cable into feed break-out cables involves transitioning from a jacketed bundle of fibers to individual fibers per the true read of the Patent. But the Proposed Grounds are based on PO’s insistence that a drop cable *need not* include a jacket. Paper 1, 9-16. Under PO’s overbroad interpretation, if the drop cable has no external jacket,

there is no physical distinction between a “drop cable” and “feed break-out cables.” Both are collections of fibers with no external protective jacket. Accordingly, even if there were no physical distinction between Holmberg’s drop cable and terminated fibers, the claims are satisfied as PO has interpreted them.

In sum, the Petition asks the PTAB to accept PO’s overbroad view of the Challenged Claims. Under PO’s read, as explained in the district court, the cables (and their couplings) do not structurally limit the claims. Therefore, claim language directed to these features cannot form the basis to distinguish Petitioner’s prior art. PO has not argued that the claims impose any specific physical requirement on the claimed apparatus relative to the claim language that requires a drop cable coupleable to feed break-out cables. If PO does advocate for a specific structure mandated by this claim language, institution is the appropriate means to permit the parties to develop the relevant record, i.e., for Petitioner to establish Homberg’s apparatus is so configured. “[W]here a [PO]. . . proposes a claim construction in a [PO] response, a petitioner must be given the opportunity in its reply to argue and present evidence of anticipation or obviousness under the new construction[.]” *Axonics, Inc. v. Medtronic, Inc.*, 75 F.4th 1374, 1384 (Fed. Cir. 2023).

III. THE RECORD DOES NOT SUPPORT A § 325(d) DENIAL

As set forth in the Petition, the U.S. Examiner (“Examiner”) rejected the originally presented claims based on Holmberg. Paper 1, 4-5. The applicant did not

dispute that Holmberg taught the original scope of the claims, including the optical cable arrangement PO now disputes. *Id.* To obtain allowance, the applicant amended the claims to require the fiber storage panel be fixed with a hinge on the opposite side of the main body hinge (the “Opposing Hinge” limitation). *Id.* A notice of allowance issued after the amendment, with no further office actions addressing this new limitation. *Id.* The Petition relies on Battey for its Opposing Hinge teaching—a reference not cited or considered by the Examiner. PO insists that discretionary denial is nonetheless warranted, arguing that Battey is cumulative of Laporte discussed in a cited PCT search report and written opinion (“SRWO”). Critically, Laporte’s allegedly cumulative Opposing Hinge teachings were never discussed in any materials of record. The SRWO never mapped Laporte to an Opposing Hinge limitation, and the U.S. Examiner did not discuss Laporte at all.

The fact that Battey was never applied in a rejection weighs strongly against denying institution. *Navistar, Inc. v. Fatigue Fracture Tech., LLC*, IPR2018-00853, Paper 13 at 16-17 (PTAB Sept. 12, 2018) (“[T]he fact that [references] were of record, but not applied in any rejection by the Examiner . . . provides little impetus for us to exercise our discretion to deny institution under § 325(d).”); *Vudu, Inc., v. Ideahub, Inc.*, IPR2020-01689, Paper 16 at 17-20 (PTAB Apr. 19, 2021) (same); *Amazon.com, Inc. v. M2M Sols. LLC*, IPR2019-01205, Paper 14 at 15 (PTAB Jan. 27, 2020) (same). Accordingly, the Board need not accept PO’s invitation to

speculate about the Examiner's undocumented process. It can simply decline to exercise its discretion because the Examiner never discussed Battey (or Laporte).

A recent Board decision is instructive. In *CrowdStrike v. Webroot*, IPR2023-00126, PO sought discretionary denial on the basis that a cited SRWO mapped an allegedly cumulative reference—a reference that, like here, included overlapping inventors with the reference advanced in the Petition. IPR2023-00126, Paper 6 at 25-38. The Board declined to exercise its discretion. Although it acknowledged that the references were indeed similar, the Board “[could not] determine the extent to which [the allegedly cumulative reference] was evaluated during the examination because it was never used in a rejection.” IPR2023-00126, Paper 9 at 14. It also noted differences existed between the U.S. claims and the then-pending EPO claims. On that record, it declined to move to the second prong of the *Advanced Bionics* framework, but importantly noted that, even if the first prong were satisfied, the merits set forth in the Petition demonstrate that the Examiner would have erred by not rejecting the claims. *Id.* The same analysis applies here. As in *CrowdStrike*, Laporte was exclusively discussed in an SRWO and was never compared to the Challenged Claims. Indeed, the SRWO did not compare any prior art to the Opposing Hinge limitation or discuss Laporte's teachings that are allegedly cumulative of Battey's Opposing Hinge feature. Thus, the Board should follow the precedent of *CrowdStrike* and decline to exercise its discretion.

Dated: January 26, 2024

Respectfully submitted,

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COUNSEL FOR PETITIONER

CERTIFICATE OF SERVICE ON PATENT OWNER
UNDER 37 C.F.R. § 42.6

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on January 26, 2024, the foregoing *Petitioner's Reply To Patent Owner's Preliminary Response* was served via electronic filing with the Board and via Electronic Mail on the following practitioners of record for Patent Owner:

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