

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CYBERSECURE IPS, LLC
Petitioner

v.

NETWORK INTEGRITY SYSTEMS, INC.
Patent Owner

IPR2025-01441
Patent 7,706,641

PATENT OWNER'S PRELIMINARY RESPONSE

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Network Integrity Systems, Inc. (“Patent Owner” or “NIS”) submits this Preliminary Response to the Petition of Cybersecure IPS, LLC (“Petitioner” or “CS”) seeking *inter partes* review of U.S. Patent No. 7,706,641 (“the ’641 Patent”).

I. Introduction

As set forth in Patent Owner’s Request for Discretionary Denial of Institution (Paper 11, filed on Oct. 27, 2025),¹ discretionary denial of the Petition under 35 U.S.C. § 314(a) is appropriate. Thus, institution should be denied without the need to consider the Petition on its merits. Furthermore, even if the Petition is considered, institution should still be denied because the grounds offered by the Petitioner are meritless.

¹ As addressed therein, discretionary denial is appropriate for at least three reasons. First, the parties’ settled expectations strongly favor denial, given the patent’s longevity and CS’s decade-long awareness without challenge. Second, equitable considerations support denial, as CS profited from the patent’s validity during the partnership between NIS and CS. Third, the *Fintiv* factors, on balance, weigh against institution due to trial proximity, issue overlap, identical parties, and other circumstances such as CS’s over reliance on conclusory expert testimony.

The Petition includes **five** different grounds, which rely on **eight** different references. Each of these grounds lack merit. Notably, the Petition does not present a single ground that is solely based on alleged anticipation under 35 U.S.C. § 102. The grounds are listed below:

Ground #	Challenged Claims	Ground	Section(s)
1	1-2, 8-16	Maycock	§§102/103
2	1-2 and 8	Evans	§§102/103
3	8 and 12	Tomita with Jezwinski and Vobian	§103
4	1, 9-10, and 12	Anderson with Jezwinski	§103
5	3-5	Evans with Pope	§103

Petition, 1.² The Maycock and Evans references presented in Grounds 1 and 2 are of the same type as the reference relied on by the examiner during prosecution of the '641 Patent. This type of reference was distinguished by the applicants in obtaining allowance of the issued claims. The Petition, however, does not (and cannot) claim the examiner erred in allowing the claims over such a reference.

² The Petition's **five** grounds do not even address all 16 of the '641 Patent's duly issued claims. The Petition, thus, acknowledges the validity of unchallenged claims 6 and 7. As stated in Patent Owner's Request for Discretionary Denial of Institution (Paper 11, filed on Oct. 27, 2025, at 13), Patent Owner intends to assert infringement of dependent claims 6 and 7 by CS in the parallel district court case.

The Petition's three alleged obviousness grounds are also flawed, because these three grounds rely on improper reasoning. As with the references cited in “§§ 102/103” grounds, the references relied upon in Grounds 3-5 are fundamentally different than the patented invention. Thus, each of the grounds require a conceptual leap to allegedly arrive at the patented invention. This conceptual leap, however, clearly results from using the disclosure of the '641 Patent as a roadmap, which constitutes impermissible hindsight reasoning. Even if hindsight reasoning were appropriate, the grounds still fail because the references fail to disclose or render obvious all the limitations of the claims including, for example, the claimed limitation of “detecting movement” of a monitored optical fiber.

Petitioner's obviousness grounds are also deficient for failing to present any reasoned basis for why a person of ordinary skill in the art (“POSA”) would have had any motivation to combine any of the references. The Petition's only basis as to *why* a POSA would have been motivated to combine alleged teachings of the prior art is the conclusory statements of the Petitioner's alleged expert declarant. The declarant provides no evidence to support his conclusory assertions.

The Petition also ignores extensive evidence of secondary considerations of non-obviousness. This evidence demonstrates that the “patented hub and spoke” technology of the '641 Patent satisfied a long-felt need upon its release, received extensive industry praise, and enjoys tremendous commercial success to this day.

The evidence stands in stark contrast to Petitioner’s conclusory arguments that a POSA would have been motivated to manipulate the disclosures of the cited references to arrive at the claimed invention.

In sum, none of the grounds presented is likely to succeed on its merits.

II. The ’641 Patent’s New Technology for Monitoring Individual Fibers of an Optical Cable for Intrusion

A. Overview of the ’641 Patent

The ’641 patent is entitled “MONITORING INDIVIDUAL FIBERS OF AN OPTICAL CABLE FOR INTRUSION” and was duly and legally issued by the United States Patent and Trademark Office (“the Office”) on April 27, 2010. Ex. 1001, ’641 Patent, 1. The ’641 Patent includes method claims related to, *inter alia*, detecting movement of a monitored optical fiber of an optical fiber cable and generating an alarm indicating the movement. The ’641 Patent is valid and enforceable.

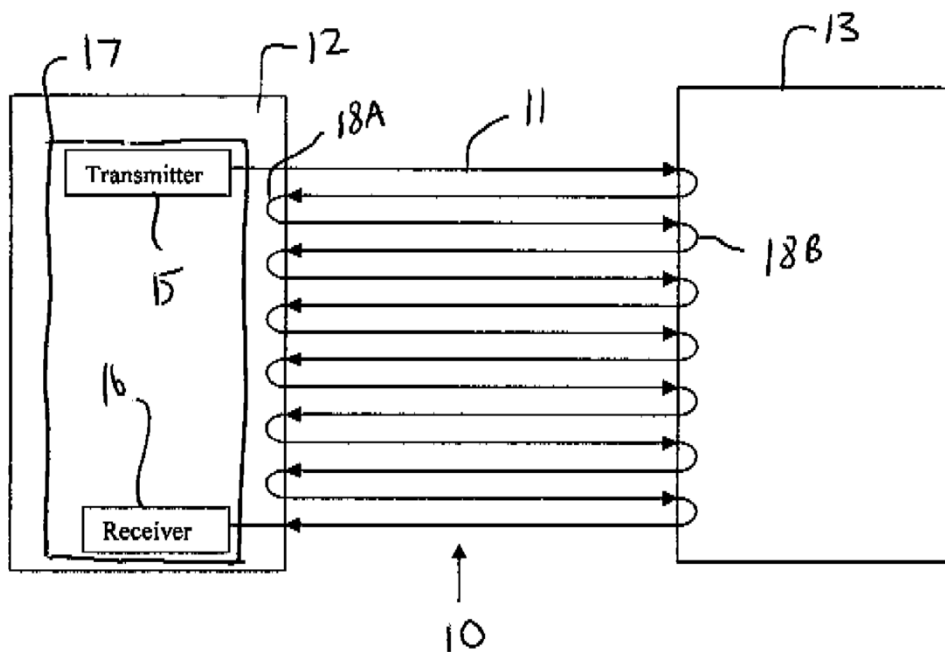
The ’641 Patent is generally directed to a system and method for detecting movement of a monitored optical fiber of an optical fiber cable for the purpose of intrusion detection. The claims of the ’641 Patent are method claims that include method steps such as injecting light into fibers to be monitored and receiving light signals that have been transmitted along the fibers being monitored. The ’641 Patent monitors “a plurality of fibers of the cable,” which are the actual

transmission/communication fibers within the cable core that carry data. *Id.* at 2:1-

2. The patent teaches monitoring these interior fibers for movement as “a prelude to an intrusion event” before actual damage occurs. *Id.* Abstract.

Claims 1 and 12 of the '641 Patent, for example, read on a point-to-multipoint network layout where the number of fibers being monitored is greater than the number of light sources and greater than the number of sensor arrangements that detect the light being transmitted through the monitored fibers. In its practicing products, NIS borrows language from the '641 Patent and refers to this architecture as the “hub and spoke” technology. *See* Ex-2004, 1-2.

Figure 1 of the '641 Patent (set forth below) depicts an exemplary point-to-multipoint network layout.



Ex. 1001, '641 Patent, Fig. 1.

NIS manufactures and sells two products that are relevant to the '641 Patent. The "Interceptor" and "Vanguard," which are both interrogator type devices that provide light to optical fibers being monitored and receive light signals from those fibers. The received light signals are analyzed for abnormalities that indicate whether there is an intrusion into the cable carrying the fiber or the fiber itself. The analysis of the light signals may be performed by software in the interrogator device or by software on a separate computer providing a user interface, or both. Both the Interceptor and Vanguard devices are capable of protecting up to 8-separate zones or cable paths distributed throughout a physical structure, for example, a building, by monitoring strands of fibers within optical cables making up the network infrastructure.

A system operating with a NIS Interceptor or Vanguard device detects and reports tampering or intrusion attempts for the purposes of data theft (tapping) or denial of service attacks. The Interceptor and Vanguard devices are designed to be used in a detection system and method that utilizes a point-to-multipoint network layout.

Thus, the '641 Patent teaches novel and innovative methods.

B. Prosecution History

During prosecution, the examiner rejected the then-pending independent claims as anticipated by U.S. Patent No. 7,211,783 (“Beinhocker”; EX-2013). EX-1002 (’641 File History) at 91-94. The examiner, however, identified certain allowable subject matter and accordingly objected to then-pending claims 3-11 as being dependent upon a rejected base claim. *Id.* at 94-96.

In response, *inter alia*, the applicants amended certain aspects of the claims and traversed the rejection over Beinhocker on multiple bases. *Id.* at 122-25. For example, the applicants explained that the monitored fibers of the invention were fibers *of the optical fiber cable* itself, whereas the fibers of Beinhocker were “not part of the cable but are individual monitoring fibers”:

Beinhocker discloses an arrangement in which the fibers are arranged end to end sequentially and there is no cable with the fibers extending from one end to the other end of the cable. There is no cable and no fibers of that cable which are monitored. The fibers are not part of a cable but are individually monitoring fibers connected sequentially end to end.

Id. at 123. The applicants also explained that the system of Beinhocker was fundamentally different than the claimed invention, *inter alia*, in that “the fibers [of Beinhocker] are looped across a surface of a box in such a manner that opening the box will damage or otherwise impact that fiber loop.” *Id.* Significantly, the applicants explained:

Beinhocker does not disclose detecting motion of the fibers but instead is looking for a breach of the fiber caused by cutting through the wall of the container.

However these fibers are NOT of the type with which the present invention is concerned in that the present invention is concerned with optical fiber cables where the fibers to be monitored extend from one end of the cable to the other end[.]

This is not at all what the present invention does. The present invention detects the handling of a communication fiber of a cable as a method to avoid data theft. This invention allows multiple legs to be monitored by fewer sources and detectors.

There is no mention in Beinhocker of the sensing of the motion of the fiber or other advanced or sophisticated detection techniques. Beinhocker is looking for a damaged fiber within the loops, the present invention is looking for a fiber in motion between the loops.

It is submitted therefore that claim 1 is now properly distinguished from Beinhocker under 35 USC 102.

Id. at 124. In response, the examiner withdrew the rejection over Beinhocker and allowed the claims as amended. *Id.* at 131-36.

III. The Board Should Deny Institution Because Petitioner Is Not Reasonably Likely to Prevail on Any Ground

A. Grounds 1 and 2 Present the Same Arguments as Overcome by the Applicants During Prosecution

The precedential (in part) decision of the Patent Trial and Appeal Board (“PTAB”) in *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8, 17-18 (P.T.A.B. Dec. 15, 2017) (precedential as to § III.C.5, first

paragraph) (“*Becton, Dickinson*”), explained that the PTAB considers the following non-exclusive factors when evaluating discretion denial of institution under Section 325(d): (a) the similarities and material differences between the asserted art and the prior art involved during examination; (b) the cumulative nature of the asserted art and the prior art evaluated during examination; (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection; (d) the extent of the overlap between the arguments made during examination and the manner in which a petitioner relies on the prior art or a patent owner distinguishes the prior art; (e) whether a petitioner has pointed out sufficiently how the examiner erred in its evaluation the asserted prior art; and (f) the extent to which additional evidence and facts presented in a petition warrants reconsideration of the prior art or arguments. More acutely, *Becton, Dickinson* factors (a), (b), and (d) pertain to whether the same or substantially the same art or argument was previously presented to the Office, and *Becton, Dickinson* factors (c), (e), and (f) relate to whether the petitioner has demonstrated material error by the Office.

In *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GMBH*, IPR2019-01469, Paper 6, 8 (P.T.A.B. Feb. 13, 2020) (precedential) (“*Advanced Bionics*”), the PTAB established the following “two-part framework” for evaluating whether to exercise discretion under Section 325(d):

1. Whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and
2. If either condition of the first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

The *Advanced Bionics* two-part framework is intended to streamline the process for applying the six non-exclusive factors enumerated in *Becton, Dickinson*.

Here, the Petition fails the requisite analysis. The first *Advanced Bionics* inquiry is answered in the affirmative—as three of the four primary references (including, significantly, the only two references alleged to be anticipatory) are substantially the same as art previously presented to the Office (namely, the Beinhocker reference identified by the examiner). The second *Advanced Bionics* inquiry is answered in the negative, as the Petition does not even attempt to argue that the Office or the examiner erred in a manner material to the patentability of challenged claims. The Petition’s silence is determinative; the Petition cannot and does not overcome the *Advanced Bionics* inquiry.

Indeed, the Petition’s reliance on U.S. Patent No. 5,093,568 to Maycock (“Maycock”; EX-1004) and U.S. Published Patent Application No. 2005/0244116 A1 to Evans (“Evans”; EX-1006) in Grounds 1 and 2, respectively, as allegedly

anticipating³ and/or rendering obvious the challenged claims, is fatally flawed, as nearly the same arguments and similar art were presented during prosecution and overcome by the applicants. Significantly, however, the Petition is silent as to the arguments made during prosecution concerning the similar Beinhocker reference. In fact, the Petition does not even mention the Beinhocker reference whatsoever. Rather, the Petition's sole discussion of the prosecution history is contained in a singular, terse paragraph:

The application that issued as the '641 Patent was filed on August 2, 2006. A Non-Final Rejection issued on February 5, 2009, rejecting the claims based on prior art references from the Examiner's search. Applicant submitted an Amendment and Request for Reconsideration on August 5, 2009, with amended claims to overcome the rejection. EX1002, 1-34, 88-98, 111-125, 131-136.

Petition, 10.

Missing from the Petition is how the Beinhocker reference—relied upon by the examiner and traversed by the applicants—is substantially the same as both Maycock and Evans.

More specifically, the applicants specifically distinguished the claimed invention from Beinhocker on the basis that Beinhocker “does not disclose

³ In presenting Grounds 1 and 2 as based on “§§102/103”, the Petition contains a tacit admission that neither reference discloses every limitation of the claims.

detecting motion of the fibers but instead is looking for a breach of the fiber.” EX-1002 (’641 File History) at 124. Both Maycock and Evans similarly do not disclose detecting motion of the fibers. For example, Maycock discloses that “the system detects a fault or intrusion in the cable 10”, but there is no mention of detection movement of the fibers. EX-1004, Maycock at 5:54-63. Maycock’s limited detection method is fundamentally different than the method claimed in the ’641 Patent, but essentially the same as the method disclosed in the Beinhocker reference distinguished during prosecution.

The examiner did not err when she accepted the argument that “[t]here is no mention in Beinhocker of the sensing of the motion of the fiber.” EX-1002 (’641 File History) at 124. The same argument applies to Maycock – i.e., there is no mention in Maycock of sensing of the motion of the fiber. *See* EX-1004.

The Evans reference fares no better. For example, Evans describes embedding “monitor optical fibers 12” within the cable jacket 11 that are “substantially invisible to an observer looking at the outside of the jacket.” EX-1006, Evans, [0011], Fig. 1. Evans states the sacrificial monitoring fibers should “fracture or significantly deform if the surrounding jacket is cut” to provide “immediate alarm indicative of any tampering.” *Id.* at [0012], [0006]. There is no mention of detecting movement of the fibers in Evans.

Evans is also distinguishable from the claims of the ‘641 Patent—and similar to Beinhocker—on yet another basis. The jacket-embedded tamper sensor fibers of Evans are separate and distinct from the core transmission fibers 3 that carry data, just like Beinhocker. *See, e.g.*, EX-1006, Evans, [0011-12], Fig. 1. Applicants distinguished the claimed invention from Beinhocker because the monitored fibers of the invention were fibers *of the optical fiber cable* itself, whereas the fibers of Beinhocker were “not part of the cable but are individual monitoring fibers.” EX-1002 (’641 File History) at 123. Applicants’ argument applies with equal force to Evans, and the examiner did err when she accepted that argument.

Because the Petition does not allege examiner error, Grounds 1 and 2 are fundamentally defective.

B. Grounds 3 Through 5 Fail to Present a *Prima Facie* Case of Obviousness

For the reasons discussed below, *inter partes* review on the bases of Grounds 3 through 5 should not be instituted because Petitioner has failed to present a *prima facie* case of obviousness.

1. Improper Use of Hindsight

Each of Grounds 3 through 5 are deficient for failing to include any reasoned basis for *how* a POSA would have had any motivation to combine any of the references beyond the fact that a POSA allegedly *could* make the combination.

The primary references presented in Grounds 3 through 5 (i.e., U.S. Patent No. 5,177,354 to Tomita (“Tomita”; EX-1005), U.S. Patent No. 5,649,036 to Anderson (“Anderson”; EX-1007), and Evans) each present a fundamentally different technical problem than the claimed invention. The secondary references included in Grounds 3-5 are also unrelated to both the claimed invention and the primary references. As such, the proposed combinations presented in the Petition require a conceptual leap that can only be explained as a result of using the disclosure of the ’641 Patent itself as a roadmap. In other words, Grounds 3 through 5 present grounds that impermissibly rely on hindsight to reconstruct the claimed invention. The Petitioner must put forward some “explanation as to how or why the references would be combined to arrive at the claimed invention...[otherwise] hindsight bias [becomes] the thread that stitches together prior art patches into something that is the claimed invention.” *Metalcraft of Mayville, Inc. v. The Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017) (citation omitted). In this instance, the Petition does not include the required explanation.

The Petition’s improper use of hindsight is demonstrated by its incomplete presentation of the alleged resulting combinations. While the combinations set forth in the Petition allegedly amount to allegedly disclosing all limitations of each challenged claim of the ’641 Patent, the Petition fails to make clear *what* the resulting system of combining the alleged prior art would be or *how* the proposed combinations would supposedly function. Instead of attempting to incorporate an aspect of a secondary reference into the system disclosed by any primary reference to achieve any allegedly beneficial result, the proposed combinations merely start with a primary reference and then tack on individual features allegedly disclosed in secondary references in order to arrive at the claimed invention. *See, e.g.*, Petition, 65-66 (Ground 3: purporting to replace the optical coupler of Tamica with a WDM allegedly disclosed by a secondary reference), 90-92 (Ground 4: purporting to add a “test system controller” of a secondary reference that allegedly compares received light signals to previously received light signals), 103-04 (Ground 5: purporting to add the claimed jumpers “in order to fully utilize all the optical fibers available” without explanation of how the modified system would function).

In the case of the claims of the ’641 Patent, where a simpler, easier, and more advantageous alternative solution exists, the Petitioner must provide a motivation to *specifically* use the *claimed* solution—something Petitioner has failed to do here. *See, e.g., In re Nouvel*, 493 Fed. Appx. 85, 93 (Fed. Cir. Aug. 29,

2012) (“[T]he key question in this appeal (as well as before the Board) is why an ordinary artisan would thicken only one arm of Liou’s pliers.... In its briefs and at oral argument, Nouvel provided multiple reasons, grounded in mechanics, why an ordinary artisan aiming to increase strength by increasing size would enlarge both arms of the pliers.”); *see also Janssen Prods., L.P. v. Lupin Ltd.*, 109 F. Supp. 3d 650, 684 (D.N.J. 2014) (“Under Mylan’s obviousness theory, a person of ordinary skill in the art would have rejected an acceptable manufacturing process for making darunavir taught in the prior art, despite the absence of any reason for doing so, and would then have formulated a longer and more expensive process that combined aspects of the prior art methods with isolated features chosen from non-analogous, non-darunavir references. Without the benefit of hindsight, there is no reason why a person of ordinary skill in the art would have done that.”).

2. Lack of Any Motivation to Combine

The Supreme Court has explained:

[A] patent composed of several elements is not proved obvious by merely demonstrating that each of its elements was, independently, known in the prior art.... [I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.

KSR Int’l Co. v. Teleflex Inc., 550 U.S. 398, 418 (2007). A petitioner must put forward some “explanation as to how or why the references would be combined to

arrive at the claimed invention.” *Metalcraft*, at 1367. Hindsight reconstruction of the claimed invention must be carefully guarded against. *KSR*, 550 U.S. at 418.

Here, none of Grounds 3 through 5 presents any reasoned basis for *why* a POSA would have had any motivation to combine any of the references beyond the fact that a POSA allegedly *could* make the combination. For each ground, Petitioner’s attempts to address the prior art combination and alleged motivation to combine are generic and high-level and fail to address *why* a POSA would have been motivated to combine the references in a way that practices each limitation of the challenged claims. No such motivation exists.

When Petitioner’s failure to show any motivation to combine is considered against the backdrop of its reliance on primary references that are fundamentally different than the claimed invention and/or very similar to art distinguished during prosecution (*see* Section III.A, above), it is clear that Petitioner’s generic assertion that a POSA would have combined functionalities of the various references into a single combination that allegedly practices the challenged claims uses impermissible hindsight bias to select and combine the references. *KSR*, 550 U.S. at 418; Ashley A. Bolt, Combating Hindsight Reconstruction in Patent Prosecution, 64 EMORY LAW J. 1137, 1158 (2015) (citing *KSR*, 550 U.S. at 418) (“[I]f the reasoning [to combine] is not clearly presented in a sensible manner, or if the reasoning is merely conclusory, this suggests the use of impermissible

hindsight in the selection and combination of the references. If the combination cannot be explained, it seems likely that, in truth, the combination was derived using the applicant’s specification as a roadmap.”).

As addressed below, for each ground, the Petition merely assumes—based on Petitioner’s deficient, high-level reasons for combining the references—that a POSA would have combined specific teachings in specific ways to practice the claimed limitations. This generic analysis is insufficient to meet Petitioner’s burden under Section 103 to articulate a POSA’s motivation to combine the teachings of the cited references. *KSR*, 550 U.S. at 418 (noting there must be “a reason” for a skilled artisan “to combine the elements in the way the claimed new invention does”).

For **Ground 3**, the Petition asserts, for example, the following:

To the extent it is argued that Tomita teaches post-fault location methods, rather than a method for detecting movement of optical fibers, it would have been obvious to a POSA that Tomita’s light pulse testing apparatus 6 could be used to detect movement in the fibers. EX1003, ¶269. For example, a POSA could change the “optical coupler 10” to a WDM or other similar multiplexing coupler, which has long been known in the art. EX1005, 3:62-4:42, Figs. 1 & 4-5; EX1011, 3:28-56, Fig. 1; EX1003, ¶269.

Petition, 65. This explanation purports to explain what *could* be done but fails to explain *why* a POSA would have been motivated to do so. Petitioner also asserts:

A POSA would have been motivated to make such a modification to eliminate down time as the test pulse could be performed simultaneously with data transmission, and would also eliminate the need for a person to manually “set[] the light pulse testing apparatus 6 working” since the light pulse testing apparatus could operate continuously. EX1005, 6:50-55, 9:25-30; EX1003, ¶273.

Id., 66; *see also id.* at 75, 77. This assertion is entirely unfounded and solely based on the *ipse dixit* of Petitioner’s expert. Indeed, the cited paragraph of Dr. Méndez presents a verbatim argument of the Petition itself without any additional explanation or evidentiary support. EX1003, ¶273. Such conclusory opinions should be disregarded. *See Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1361 (Fed. Cir. 2016) (“conclusory statements and unspecific expert testimony” cannot be used to “supply a limitation that was admittedly missing from the prior art”); *see also TRW Automotive US LLC v. Magna Electronics, Inc.*, Case IPR2014-00259, Paper No. 19 (P.T.A.B. June 26, 2014) (“TRW argues that one of ordinary skill in the art would include a control functioning as claimed to accomplish the function claimed. Accordingly, TRW’s rationale is circular at best”); *2Wire, Inc. v. TQ Delta, LLC*, Case IPR2015-00421, Paper 18 (P.T.A.B. May 29, 2015) (denying institution and finding that the argument was merely circular, “as it merely states the result of the asserted combination, i.e., the basic components of

Suzuki '614 performing the random number calculations described in Suzuki '415.”).

Further, Petitioner’s combination of three different references, implemented in dissimilar environments with unrelated goals, is unsupported by any rationale sufficiently demonstrating a POSA’s motivation to combine these references.

For **Ground 4**, the Petition asserts, for example, that it would have obvious to modify the primary reference (Anderson) with the teachings of the secondary reference (Jezwinski) — for generic reasons concerning a completely different purported combination (Tomita-Jezwinski):

Alternatively, using OTDR 424 to actively monitor the fibers for faults indicative of movements was obvious in view of Jezwinski, for the same reasons discussed with respect to the Tomita-Jezwinski combination. *Supra* §VIII.C.1. A POSA would have been motivated to make such a combination, and reasonably expected success, for the same reasons. *Supra* §VIII.C.1; *infra* §§VIII.D.1.g-VIII.D.1.i.

Petition, 84. This generic explanation cannot be sufficient for Petitioner to carry its high burden under Section 103. For other limitations, the Petition attempts to provide at least a combination-specific explanation, but, as with Ground 3, the arguments presented fail to explain *why* a POSA would have been motivated to do so. *See, e.g., id.* at 91-92. For Ground 4, Dr. Méndez’s opinions again merely

parrot the arguments in the Petition without any additional explanation or evidentiary support. *See, e.g.*, EX1003, ¶365.

For **Ground 5**, the Petition again presents similarly flawed positions regarding the combination of Evans and Pope. For example, the Petition states the following:

It would have been well within the capabilities of a POSA to make such a modification, as it only involves adding elements already disclosed in Evans in order to make use of each of the monitor optical fibers (12) from the preferred cable embodiment. EX1003, ¶424. A POSA would have been motivated to add jumpers in order to fully utilize all the optical monitor fibers available, allowing built-in redundancy for monitoring the cable via multiple monitor fibers. *Id.* A POSA would have had a high expectation of success, given that the modification would merely involve adding additional fiber loops already taught in Evans, and the addition of known components to fiber optical systems was easily accomplished. *Id.*; *supra* §§III.C; III.E.

Petition, 103-04. Yet again, the explanation purports to explain what *could* be done but fails to explain *why* a POSA would have been motivated to do so. The Petition's generic assertions amount to improper hindsight. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (For obviousness, it is "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements *in the way the claimed new invention does*." (emphasis added)). For Ground 5, Dr. Méndez's opinions again merely recite the

arguments in the Petition without any additional explanation or evidentiary support. *See, e.g.*, EX1003, ¶424.

Lastly, Petitioner’s overreliance on expert testimony and opinions — conclusory opinions at that — provides ample reason for denial of the Petition. For example, as shown through the examples above, the expert declaration offers little more than conclusory statements that parrot the Petition itself. As an additional example, in connection with Ground 1, the Petition includes the following statement regarding claim limitation [1.2]⁴:

Maycock discloses monitoring fibers F1/F2 in cable 10 by detecting intrusions along the length of the fiber. EX1004, Abstract, 8:29-32, EX1003, ¶107. Maycock discloses a system that detects and locates “any unauthorized attempt to collect data from the cables,” which a POSA [person of ordinary skill in the art] would understand constitutes detecting “movement” or “manipulation” of the cable. EX1004, 1:21-23, 3:61-67, 8:29-32, Fig. 1; EX1001, 4:8-8; EX1003, ¶¶107-108.

Petition, 19. Dr. Méndez offers no additional detail as to why a POSA would allegedly have this understanding but simply parrots the Petition:

Maycock discloses monitoring fibers F1 and F2 (a plurality of fibers) in cable 10 by detecting intrusions

⁴ Limitation [1.2] recites, “monitoring a plurality of fibers of the cable by detecting movement of the fiber at locations along the length of the fiber by.” *See* Petition, v.

along the length of the fiber. EX1004, Abstract, 8:29-32. Maycock discloses a system that detects and locates “any unauthorized attempt to collect data from the cables,” which a POSA would understand constitutes detecting “movement” or “manipulation” of the cable. EX1004, 1:21-23, 3:61-67, 8:29-32; EX1001, 4:8-8 (“provide monitoring of movement of the fiber indicative of an intrusion event”).

Ex-1003, ¶ 107.⁵ Dr. Méndez’s declaration is replete with similar paragraphs that offer nothing more than conclusory statements that parrot the Petition. *See, e.g.*, Ex-1003, ¶¶ 219-23 (Ground 2 analysis of claim elements 1.2 and 1.3 that match nearly verbatim to Petition’s analysis at pages 53-54), 288-96 (Ground 3 analysis of claim element 8.6 and alleged motivation to combine that is substantively verbatim to Petition’s analysis at pages 299-96), 340-42 (Ground 4 analysis of claim element 1.2 where again the entire expert opinion is no more than a parroting of the Petition’s analysis on page 84), 416-24 (Ground 5 analysis of claim 3 and alleged motivation to combine is near verbatim of Petition’s analysis at pages 100-04).

⁵ Despite the difference between the language of the reference (i.e., “unauthorized attempt to collect data”) and the language of the claim (i.e., “detecting movement”), both Petitioner and its expert maintain that no claim construction is necessary. *See* Petition, 11; Ex-1003, ¶ 70.

These types of conclusory assertions that merely parrot the Petition should be afforded little or no weight. *See TikTok Inc. v. NTech Properties, Inc.*, IPR2024-01339, Paper 9 (PTAB Feb. 25, 2025) (giving “little or no weight” to the testimony of the petitioner’s expert because the declaration was wholly “conclusory” — “repeat[ing], almost verbatim, the language in the Petition without any further explanation or supporting reasoning or evidence”); *see also Scripps Clinic & Rsch. Found. v. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991) (“The role of extrinsic evidence is to educate the decision-maker to what the reference meant to persons of ordinary skill in the field of the invention, not to fill gaps in the reference.”).

3. Strong Secondary Considerations

When assessing obviousness of the claimed invention, objective evidence of secondary considerations pertaining to non-obviousness must be considered, including long-felt but unsolved needs, industry praise, commercial success, etc. *In re Huang*, 100 F.3d 135, 139 (Fed. Cir. 1996). These indicia constitute “the most probative evidence of nonobviousness,” “crucial in avoiding the trap of hindsight when reviewing, what otherwise seems like, a combination of known elements.” *Leo Pharm. Products, Ltd. v. Rea*, 726 F.3d 1346, 1358 (Fed. Cir. 2013); *Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 315 (Fed. Cir. 1985). Such evidence “may often 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).

A patentee is entitled to a presumption of nexus “when the patentee shows that the asserted objective evidence is tied to a specific product and that product embodies the claimed features, and is coextensive with them.” *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 33 at 32 (PTAB Jan. 24, 2020) (precedential). Even where this presumption is not established, nexus may be shown where “the evidence of secondary considerations is the direct result of the unique characteristics of the claimed invention.” *Id.* at 33.

Here, secondary considerations demonstrate that the ’641 Patent was novel and non-obviousness at the time NIS’s “patented hub and spoke technology” satisfied a long-felt need upon its release, received extensive industry praise, has experienced widespread adoption, and has enjoyed and continues to enjoy tremendous commercial success as a direct result of implementing the patented invention. For example, as shown below, NIS’s patented hub and spoke technology has been praised, including by industry awards and those with advanced knowledge of the subject matter of the ’641 Patent. Further, in the parallel district court litigation, Patent Owner will demonstrate that Petitioner has copied the inventions claimed by the ’641 Patent through its unlawful and willful infringement.

NIS will demonstrate nexus and show that the applicable secondary considerations are a direct result of the claimed invention. Further, the coextensive relationship between NIS's practicing product and the claims of the '641 Patent create a presumption of nexus. Further, "[w]hen a patentee can demonstrate commercial success, usually shown by significant sales in a relevant market, and that the successful product is the invention disclosed and claimed in the patent, it is presumed that the commercial success is due to the patented invention." *J.T. Eaton & Co. v. Atl. Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997). Upon demonstration of commercial success, the burden shifts to the petitioner to demonstrate that the success was due to a factor other than the patented features. *See Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988).

Importantly, a strong showing of secondary considerations by the patent owner will overcome a marginal demonstration of obviousness by the petitioner, effectively requiring the petitioner to make a strong showing of obviousness. *See, e.g., Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983) (explaining that evidence of secondary considerations "may often establish that an invention appearing to have been obvious in light of the prior art was not.") Here, Petitioner will be unable to make such a showing.

i. *The Claimed Invention Received Industry Praise*

Industry praise for an invention evidences non-obviousness where the industry praise is linked to the claimed invention.

Patent Owner released its embodying “hub and spoke” or “point-to-multipoint” technology at least as early as 2010. Over the years, Patent Owner’s embodying products received numerous accolades and awards, including those described below.

For example, in 2015, NIS’s practicing INTERCEPTOR™ Optical Network Security System product was part of a solution which received the 2015 “Most Disruptive Technology Award”, presented by the American Council for Technology-Industry Advisory Council (ACT-IAC) during their Igniting Innovation 2015 Awards Expo held in Washington, D.C. at the Ronald Reagan Building and International Trade Center. EX-2014. As explained in the press release:

By definition a disruptive technology is one that displaces an established technology and shakes up the industry. The core products of the solution, the INTERCEPTOR Optical Network Security System and the Tellabs passive optical LAN, are disruptive technologies on their own; when deployed together, they create a game-changing, future-proof combination that enhances the state-of-the art, and in this case helps the US government and military communicate mission critical information more securely and more efficiently

Id. (emphasis added).

ii. *Patent Owner’s “Hub and Spoke” Technology Enjoys Substantial Commercial Success as a Result of the Significant Benefits the Claimed Invention Provides Over the Prior Art*

A patentee demonstrates commercial success by showing significant sales of the patented product in a relevant market and nexus between the patented invention and the commercial success. *J.T. Eaton & Co. v. Atlantic Paste & Glue Co.*, 106 F.3d 1563 (Fed. Cir. 1997); *Ormco Corp. v. Align Technology, Inc.*, 463 F.3d 1299, 1311-12 (Fed. Cir. 2006). Advertising the benefits of the claimed invention links the invention to commercial success. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1579 (Fed. Cir. 1997); *Wm. Wrigley Jr. Co. v. Cadbury Adams USA LLC*, 683 F.3d 1356, 1369 (Fed. Cir. 2012). Also, statements that a product was successful due to the patented features support a finding of nexus. *See Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1368 (Fed. Cir. 2013).

Patent Owner has implemented the claimed invention of the ’641 Patent in its product offerings, which have been received in the market with increased and widespread adoption over the years and resulted in significant commercial success for Patent Owner. For example, in connection with the WESCO Government Summit in 2011, NIS was the recipient of the “Fastest Growing Supplier” award—an award given to the supplier “who achieved the highest percentage of sales

growth” for the given year. EX-2015. The press release announcing the award also highlights benefits of the patented point-to-multipoint technology embodied NIS’s “Smart-PDS” product: “As a Smart-PDS, INTERCEPTOR is more cost effective and requires less ongoing maintenance than legacy protection methods.” *Id.* NIS proudly displays the award at its headquarters:



EX-2016.

Also, in 2013, NIS’s INTERCEPTOR™ product was selected for the Network Modernization Project at the US Army’s Network Enterprise Technologies Command (NETCOM). EX-2017. The press release announcing the selection emphasizes that the NETCOM network architecture implemented a Secure PON (S-PON) which includes the patented point-to-multipoint

configuration. *See id.* (“[A] 4-port INTERCEPTOR can protect up to 4 or more GPON zones (or over 128 users)”). The press release refers to the widespread adoption of the patent-practicing product, which adoption has resulted in great commercial success for NIS, explaining that its INTERCEPTOR™ product has “recorded in excess of 50-million port-hours protecting design and infrastructure protection.” *Id.* A significant portion of those “50-million” port hours have occurred after the introduction of the “hub and spoke” technology claimed in the ‘641 Patent.

Furthermore, Patent Owner advertises its implementation of the ‘641 Patent (and its benefits), calling to attention the use of its “patented hub and spoke technology”⁶ in its product specifications used to market and sell its products:

⁶ As addressed in Patent Owner’s Request for Discretionary Denial of Institution (Paper 11, filed on Oct. 27, 2025), the ‘641 Patent discloses, “Preferably there is provided a plurality of cables arranged in **a hub-and-spoke arrangement** where a main unit in a central location feeds remote units and wherein the fibers of more than one of the cable are monitored.” Ex. 1001, ‘641 Patent, 3:3-6. The patent even claims “providing a plurality of optical fiber cables arranged in **a hub-and-spoke arrangement** where each optical fiber cable extends from a main unit at a central location to one of a plurality of remote units.” *Id.* at 8:57-60 (Claim 12).



INTERCEPTOR™



INTERCEPTOR™ CS

The INTERCEPTOR™ monitors two or more dark (spare, unused) fibers within a cable carrying classified information. INTERCEPTOR supports standard single-mode and multimode fiber optic cables and can be used to secure existing network infrastructure. Using patented hub and spoke technology, a single INTERCEPTOR utilizing one rack space can monitor up to eight continuous optical circuits (zones), providing protection for multiple remote buildings or many dozens of user drops per zone in a facility. When dark data fibers are not available, INTERCEPTOR+Plus can be used to monitor active fibers. A Remote Termination Unit (RTU) is required for each zone when using the INTERCEPTOR+Plus. Contact us for more details.

INTERCEPTOR™ CS is a bundled solution consisting of the INTERCEPTOR and CyberSecure Infrastructure Management System, a software application that provides NIS monitoring devices with the capability to centrally manage alarms, create PDS Standard Operating Procedures (SOPs), eliminate false alarms and automatically guide user responses to alarms and more.

Ex-2004 at 1. NIS also refers to “hub and spoke” technology of the ’641 Patent in its marketing and training presentations. For example, an NIS presentation from 2012 included a slide entitled “NIS Innovations” that references the patented “Monitor[ing] from the device to multiple end-points (point-to-multipoint) in a hub-spoke configuration”:

NIS Innovations

- Patents Granted to Network Integrity Systems include:
 - ✓ Using fibers within protected cables as the sensors for monitoring
 - ✓ Monitor from the device to multiple end-points (point-to-multipoint) in a hub-spoke configuration
 - ✓ Monitor single mode fibers cost effectively
 - ✓ Use of fibers carrying active data as sensors for monitoring
 - ✓ Detection of an intrusion prior to the actual tap and on adjacent fiber
 - ✓ False alarm suppression: ability to discriminate between benign day-day events and actual intrusion signatures.



These features and patents make NIS Solutions the most cost effective, proven, and reliable physical infrastructure security option.

Ex-2010.

In addition, sales of Petitioner's infringing products, as alleged in the parallel district court proceeding, provides further evidence of the commercial success of the technology claimed in the '641 Patent. Patent Owner expects discovery will provide evidence of significant infringing sales by the Petitioner, which will only bolster the evidence described above and serve to further highlight the commercial success of the claims of the '641 Patent.

* * *

Accordingly, Patent Owner's hub and spoke technology, which implemented the patented method, received widespread industry praise and was commercially successful, as a direct result of the claimed invention. The evidence supporting these secondary considerations constitutes strong objective evidence that the claims are non-obvious and confirms Petitioner's reliance on hindsight in constructing its deficient grounds.

IV. Reservation of Rights

In submitting this preliminary response, Patent Owner does not waive and expressly reserves the ability to further challenge the Petition, present additional legal and factual flaws in the Petition, challenge the disclosure of the alleged prior art references and proposed combinations, dispute supposed motivations to combine any reference with any other, in this forum or another, and/or challenge

other particulars of the Petition (e.g., level of ordinary skill in the art). Patent Owner's decision not to address any particular issue or assertion in the Petition should not be construed as acquiescence to or agreement with any position taken in the Petition.

V. Conclusion

Accordingly, institution of *inter partes* review should be denied, as the Petition is not likely to succeed on the merits of any of its five disparate grounds.

Date: December 1, 2025

Respectfully submitted,

By /Howard N. Shipley/

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CERTIFICATE OF SERVICE

It is hereby certified that on December 1, 2025, a copy of the PATENT OWNER'S PRELIMINARY RESPONSE was served via Electronic Mail upon the following:

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CERTIFICATION OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), Patent Owner certifies that the foregoing
PATENT OWNER'S PRELIMINARY RESPONSE contains 6,758 words.

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