

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PANDUIT CORP.,
Petitioner,

v.

CORNING OPTICAL COMMUNICATIONS LLC,
Patent Owner.

Case IPR2016-01703
Patent 8,452,148 B2

Before BEVERLY M. BUNTING, JENNIFER MEYER CHAGNON, and
TERRENCE W. McMILLIN, *Administrative Patent Judges*.

McMILLIN, *Administrative Patent Judge*.

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

I. INTRODUCTION

In response to a Petition (Paper 2, “Pet.”) filed by Panduit Corp. (“Petitioner”), we instituted an *inter partes* review of claims 1–20 of U.S. Patent No. 8,452,148 B2 (Ex. 1001, “the ’148 patent”). Paper 7 (Decision, Institution of *Inter Partes* Review (“Dec.”)), 29. During the trial, Corning Optical Communications LLC (“Patent Owner”) filed a Response (Paper 12, “PO Resp.”), to which Petitioner timely filed a Reply (Paper 29, “Reply”). An oral hearing was held on November 17, 2017, and a copy of the transcript was entered into the record. Paper 36 (“Tr.”).

This is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of the claims on which we instituted trial. Based on the record before us, Petitioner has shown, by a preponderance of the evidence, that claims 1–20 are unpatentable.

A. Related Matters

The ’148 patent has been asserted in *Corning Optical Communications LLC v. Panduit Corp.*, 16-cv-00268-GMS (D. Del) and *Corning Optical Communications LLC v. Diversified Material Specialists, Inc.*, 15-cv-00786 (M.D. Fla.). Pet. 1; Paper 4 (Patent Owner’s Mandatory Notices), 1. U.S. Patent No. 8,184,938 B2, which shares a specification with the ’148 patent, is the subject of IPR2016-01709. Pet. 1.

B. The ’148 Patent

The ’148 patent is titled “Independently Translatable Modules and Fiber Optic Equipment Trays in Fiber Optic Equipment.” Ex. 1001, [54]. It issued on May 28, 2013, from U.S. Patent Application No. 12/323,415, which was filed on November 25, 2008, and which claims priority to U.S. Provisional Application No. 61/190,538, filed August 29, 2008, and U.S.

Provisional Application No. 61/197,068, filed October 23, 2008. *Id.* at [21], [22], [45], [60]. According to the Abstract, “[f]iber optic equipment that supports independently translatable fiber optic modules and/or fiber optic equipment trays containing one or more fiber optic modules is disclosed.” *Id.* at [57].

Figure 1 of the ’148 patent is reproduced below.

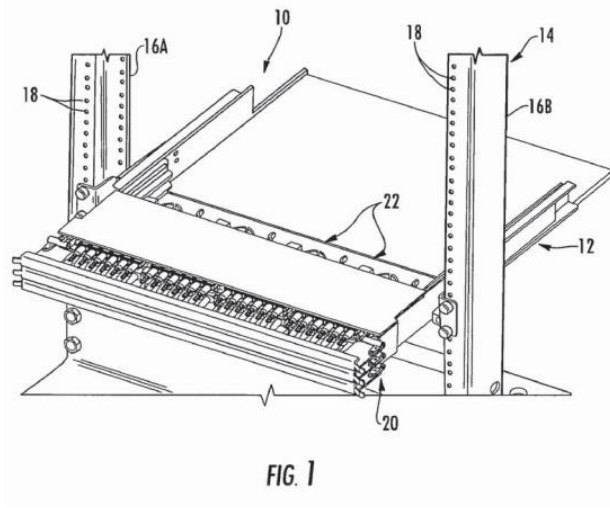


Figure 1 depicts “an exemplary fiber optic equipment rack with exemplary fiber optic equipment supporting rear-installable fiber optic modules according to one embodiment.” *Id.* at 3:3–6. In Figure 1, “[t]he fiber optic equipment 10 is attached and supported by the fiber optic equipment rack 14 in the form of shelves that are stacked on top of each other within the vertical rails 16A, 16B.” *Id.* at 5:47–50.

Figure 3 of the '148 patent is reproduced below.

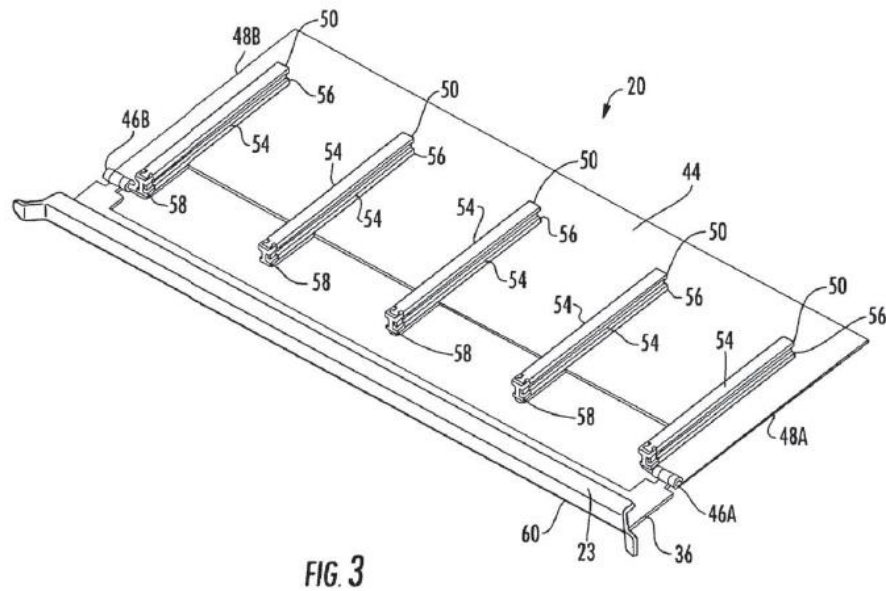


Figure 3 depicts “an individual fiber optic equipment tray in the fiber optic equipment of FIG. 1 without rear-installable fiber optic equipment modules installed in module guides disposed in the fiber optic equipment tray.” *Id.* at 3:13–16. Figure 4 of the '148 patent is reproduced below.

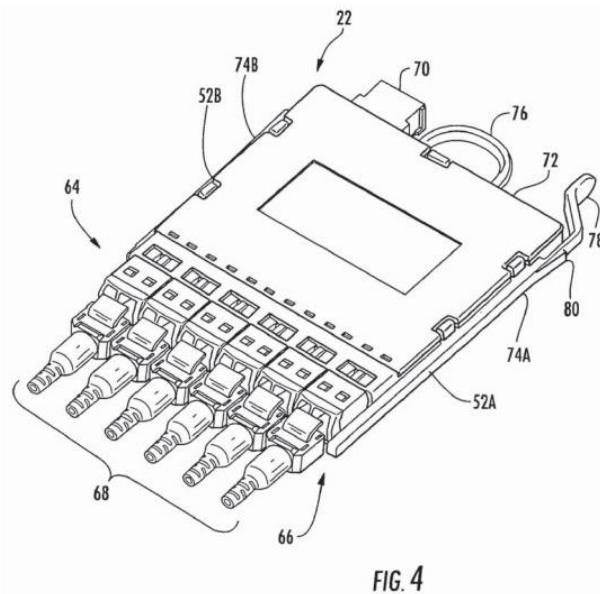


Figure 4 depicts “a fiber optic module that is rear-installable in the fiber optic equipment tray of FIG. 3.” *Id.* at 3:17–19.

C. The '148 Patent Claims

The '148 patent contains 20 claims, all of which are directed to “fiber optic apparatus.” Ex. 1001, 15:60–18:38. Claim 1 is the sole independent claim and is illustrative of the challenged claims. Claim 1 recites:

1. A fiber optic apparatus, comprising:

a chassis;

a tray guide system disposed within the chassis and receiving a plurality of fiber optic equipment trays, wherein each of the plurality of fiber optic equipment trays includes

opposite front and rear ends that are spaced apart from one other in a longitudinal direction, and

opposite first and second ends that are spaced apart from one another in a lateral direction that extends crosswise to the longitudinal direction, and

each of the plurality of fiber optic equipment trays is independently translatable in the longitudinal direction about the chassis; and

a module guide system including a plurality of module guides respectively carried by the plurality of fiber optic equipment trays, wherein for each fiber optic equipment tray of the plurality of fiber optic equipment trays, the fiber optic equipment tray

carries laterally spaced apart module guides of the plurality of module guides, and

carries at least one fiber optic module that extends laterally between, and is movably supported by both of, the laterally spaced apart module guides carried by the fiber optic equipment tray, wherein

the laterally spaced apart module guides, which are carried by the fiber optic equipment tray, are adapted for guiding the at least one fiber optic module so that the fiber optic module is independently translatable in the longitudinal direction relative to the fiber optic equipment tray,

the at least one fiber optic module includes at least one fiber optic adapter that extends in the lateral direction while the at least one fiber optic module extends laterally between, and is movably supported by both of, the laterally spaced apart module guides carried by the fiber optic equipment tray; and

the at least one fiber optic module having a front end, a rear end, and an inside, the at least one fiber optic adapter disposed through the front end, and at least one optical fiber provided within the inside of the at least one fiber optic module connected to the at least one fiber optic adapter.

Id. at 15:60–16:36.

D. Instituted Grounds of Unpatentability

We instituted trial for challenges under 35 U.S.C. § 103(a)¹ over the following combinations of references. Dec. 7.

References	Challenged Claims
Smrha, ² Coburn, ³ and Niazi ⁴	1–3, 5–15, and 18–20
Smrha, Coburn, Niazi, and Wagner ⁵	4, 16, and 17

Petitioner asserts that Smrha, Coburn, and Wagner are prior art to the '148 patent under 35 U.S.C. § 102(e) and Niazi is prior art under 35 U.S.C. § 102(a). Pet. 4. Patent Owner does not challenge the prior art status of any of these references. *See generally* PO Resp.

The earliest priority date claimed for the '148 patent is August 29, 2008. Ex. 1001, [60]. Smrha was filed on March 6, 2007. Ex. 1004, [22]. Coburn claims priority to an application filed on January 19, 2007. Ex. 1005, [63]. Niazi was published on February 14, 2008. Ex. 1006, [43].

¹ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (September 16, 2011), took effect on March 16, 2013. Because the application from which the '148 patent issued was filed before that date, our citations to Title 35 are to its pre-AIA version.

² Smrha et al. (US 7,570,861 B2, issued August 4, 2009, filed March 6, 2007) (Ex. 1004).

³ Coburn et al. (US 2009/0214171, published August 27, 2009, filed February 16, 2009 as a continuation of 11/655,764, filed on January 19, 2007) (Ex. 1005).

⁴ Niazi et al. (US 2008/0037209 A1, published February 14, 2008) (Ex. 1006).

⁵ Wagner et al. (US 7,689,089 B2, issued March 30, 2010, filed October 10, 2007) (Ex. 1007).

Wagner was filed on October 10, 2007. Ex. 1007, [22]. The cited references are prior art.

Petitioner relies on the Declaration of Casimer DeCusatis, Ph.D. (Ex. 1003, “DeCusatis Declaration”). Patent Owner relies on the Declaration of Eric R. Pearson (Ex. 2001, “Pearson Declaration”).

II. ANALYSIS

Petitioner bears the burden of proving unpatentability of the challenged claims, and the burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail, Petitioner must establish the unpatentability of the challenged claims by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

A. Claim Construction

A claim of an unexpired patent subject to *inter partes* review receives the “broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b); *see also Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard). Under the broadest reasonable interpretation standard, and absent any special definitions, 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).

Petitioner does not argue any claim term requires explicit construction, but asserts “[t]he broadest reasonable construction . . . is sufficient.” Pet. 15. Patent Owner discusses the term “fiber optic module”

under the heading “Claim Construction” in its Patent Owner Response but does not offer any explicit construction of this (or any other) term. PO Resp. 13–15.⁶ Rather, the Patent Owner Response states, “[h]ere, one of ordinary skill in the art reading the claims, specification, and prosecution history would understand that the applicant meant a ‘fiber optic module’ includes a housing with an inside and fiber optic components disposed within its walls rather than simply a panel of unenclosed adapters.”⁷ *Id.* at 15. In relevant part, claim 1 of the ’148 patent recites,

at least one fiber optic module having a front end, a rear end, and an inside, the at least one fiber optic adapter disposed through the front end, and at least one optical fiber provided within the inside of the at least one fiber optic module connected to the at least one fiber optic adapter.

Ex. 1001, 16:31–36. The explicit recitation in the claims of a fiber optic module having, among other things, an inside and an optical fiber provided within the inside thereof, does not support Patent Owner’s argument that a housing with an inside and fiber optic components disposed within its walls are “already *inherent*” in the term “fiber optic module.” See PO Resp. 14. We agree with Petitioner’s assertion that Patent Owner’s proposed construction “has no foundation in the specification.” Reply 3. As

⁶ There are no page numbers in Patent Owner’s Response (Paper 12), but it includes a Table of Contents with page numbers. The page numbers used herein refer to the numbers of the pages in accordance with the Table of Contents. As such, numbering begins in the body of the Response with the page on which the “Introduction” is found being designated page 1.

⁷ This is in accordance with Patent Owner’s argument that Smrha discloses panels of unenclosed adapters rather than fiber optic modules. See, e.g., PO Resp. 9–10.

Petitioner points out, the Specification of the '148 patent states, “[t]he fiber optic modules can be fiber optic adapter modules or any other type of fiber optic modules or fiber optic apparatuses, including those that support fiber optic connections.” *Id.* (citing Ex. 1001, 5:30–32). This description of “fiber optic modules” in the Specification does not support construing this term as Patent Owner proposes to require “a housing with an inside and fiber optic components disposed within its walls rather than simply a panel of unenclosed adapters.” Petitioner’s expert, Dr. DeCusatis testified that the '148 patent teaches “the term ‘module’ has a broader meaning and could include any fiber optic connector that bridges fiber cables, including, but not limited to, an adapter, a connector, a cassette, a harness, a group of adapters.” Ex. 1003 ¶ 39. Thus, neither the language of the claims themselves nor the Specification supports Patent Owner’s restrictive construction of “fiber optic module.”

We also agree with Petitioner’s assertion that Patent Owner’s proposed construction is not supported by the file history of the '148 patent. *See* Reply 4. For example, Patent Owner points to the prosecution history, where, in an attempt to distinguish Smrha,⁸ applicants argued during an interview with the Examiner that it was “already ***inherent***” in the term “fiber optic module” that it includes a front end, a rear end, and an inside, and that Smrha “admits that it does not disclose” a “connection location . . . enclosed within a housing or module.” Ex. 1002, 179 (Interview Summary and Supplemental Reply after RCE, dated June 30, 2011) (citing US

⁸ The “Smrha” cited by the Examiner during prosecution (US 2008/0175552 A1) is the published application corresponding to the Smrha reference relied upon in the asserted grounds.

2008/0175552 A1 ¶ 28); PO Resp. 14. The Examiner made clear, however that, in his view, “the small area inside the confines of the opening of cavity provided in the ‘adapter panel 60’ that receives the ‘adapters’ was a ‘fiber optic module’ under the broadest reasonable interpretation of Smrha.”

Ex. 1002, 179–80; *see also id.* at 255–56 (the Examiner explicitly rejecting applicant’s argument that the “modules” as claimed had to be enclosed and finding Smrha teaches fiber optic modules) (Examiner’s Answer, dated Feb. 24, 2011). Applicants acknowledged as much and proposed “clarifying amendments,” adding the explicit structural language modifying “fiber optic module,” discussed above, rather than dispute this finding. *See id.* at 179–80.

For the reasons discussed, we do not adopt Patent Owner’s proposal that “a ‘fiber optic module’ includes a housing with an inside and fiber optic components disposed within its walls rather than simply a panel of unenclosed adapters” (PO Resp. 15). Instead, we construe “fiber optic module” broadly, but reasonably, as a structure encompassing unenclosed (or enclosed) fiber optic adapters or connectors.

No explicit construction of any other claim term is required in order to make a decision regarding unpatentability of the challenged claims. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”).

*B. Obviousness of Claims 1–3, 5–15, and 18–20
Over Smrha, Coburn, and Niazi*

Petitioner identifies in Smrha, Coburn, and Niazi teachings of the subject matter of claims 1–3, 5–15, and 18–20 and provides an articulated basis with rational underpinning for combining the teachings of these

references. Pet. 27–71. In its Response, Patent Owner only presents arguments with respect to independent claim 1.⁹ *See generally* PO Resp.

We have reviewed the parties’ contentions and supporting evidence. Given the evidence of record, we are persuaded Petitioner has shown, by a preponderance of the evidence, that claims 1–3, 5–15, and 18–20 would have been obvious based on Smrha, Coburn, and Niazi. We begin our analysis with the principles of law that apply generally to a ground based on obviousness, followed by brief summaries of Smrha, Coburn, and Niazi, and then address the parties’ contentions in turn.

1. Principles of Law

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art;

⁹ Other than the “Introduction” stating the instituted grounds, claim 1 is the only claim specifically referenced in Patent Owner’s Response. *See generally* PO Resp. And, other than the final paragraph of the Pearson Declaration, which states that dependent claims 2–20 are not obvious because the cited art does render claim 1 obvious, Patent Owner presents no evidence supporting the patentability of claims 2–20. *See* Ex. 2001 ¶ 133 (“Smrha, Coburn, and Niazi do not render obvious the elements of claim 1, and for the same reasons do not render obvious those same elements in claims 2-20.”).

(3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

2. *Smrha* (Ex. 1004)

Smrha is titled, “Adapter Panel with Lateral Sliding Adapter Arrays.” Ex. 1004, [54]. The apparatus disclosed in *Smrha* is directed to fiber optic applications for use with various types of fiber optic adapters. *Id.* at 3:4–7; see *id.* at 7:36–37 (“[T]he present disclosure is described with respect to use in a fiber optic application.”). *Smrha* teaches:

An adapter panel arrangement including a chassis and a panel of adapters. The adapters defining rearward cable connections and forward cable connections of the panel arrangement. Openings permitting access to the rearward and forward cable connections of the adapters are provided. The chassis further including a removable rear chassis portion to provide access to cable routing areas within the chassis interior.

Id. at [57] (Abstract).

Figure 1 of *Smrha* is reproduced below.

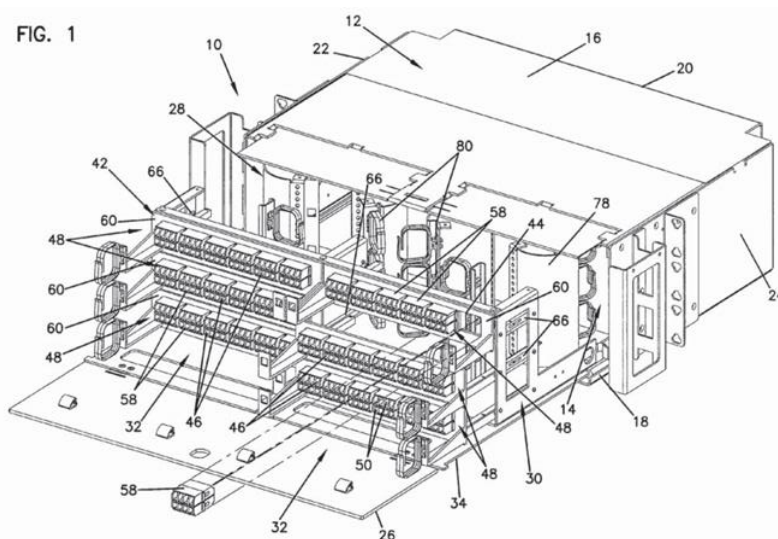


Figure 1 depicts “an adapter panel arrangement . . . with a drawer of the adapter panel arrangement in an open position.” *Id.* at 1:58–61. *Smrha*

states, “[t]he adapter panel arrangement 10 is designed to provide a high density of cable terminations, yet facilitate access to the cable terminations from the rear during installation procedures.” *Id.* at 2:39–42. Figure 7 of Smrha is reproduced below.

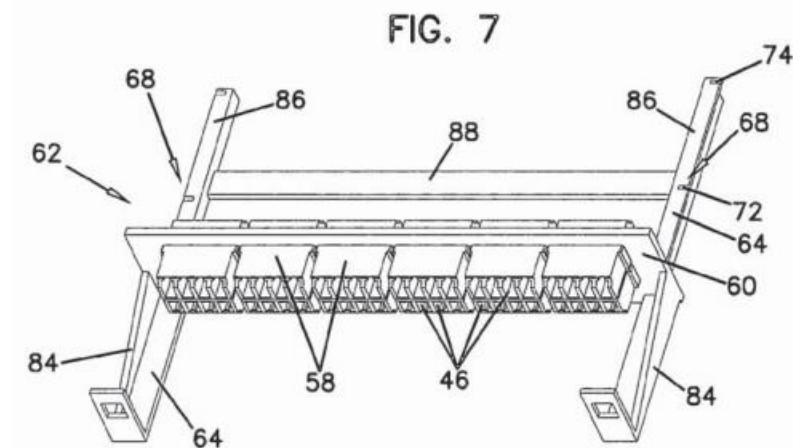


Figure 7 depicts “a sliding frame piece and an adapter array of the adapter panel arrangement of FIG. 1.” *Id.* at 2:7–9. Smrha states, “[t]he sliding frame piece 62 includes a pair of elongated rail members 64,” and “[t]he pairs of elongated rail members 64 are arranged to engage and slide within pairs of guides 66 (one shown in FIGS. 10-12) that are mounted to the framework structure 30 (FIG. 1) of the arrangement 10.” *Id.* at 4:5–6, 4:12–15. Figure 10 of Smrha is reproduced below.

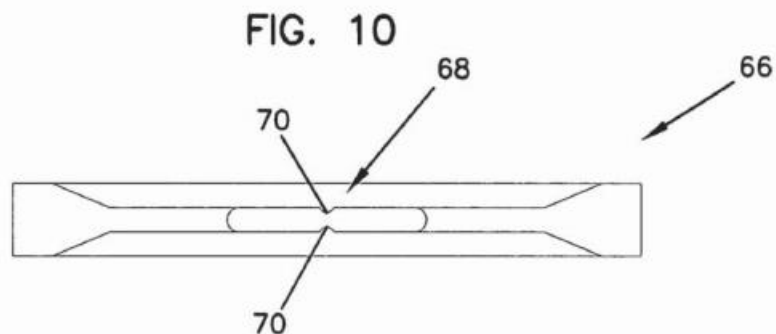


Figure 10 depicts “a guide of the adapter panel arrangement of FIG. 1.” *Id.* at 2:14–15. The guide in Figure 10 is open to accommodate the sliding

frame piece at both the front and rear ends. *Id.* at 4:3–55. Figure 12 of Smrha is depicted below.

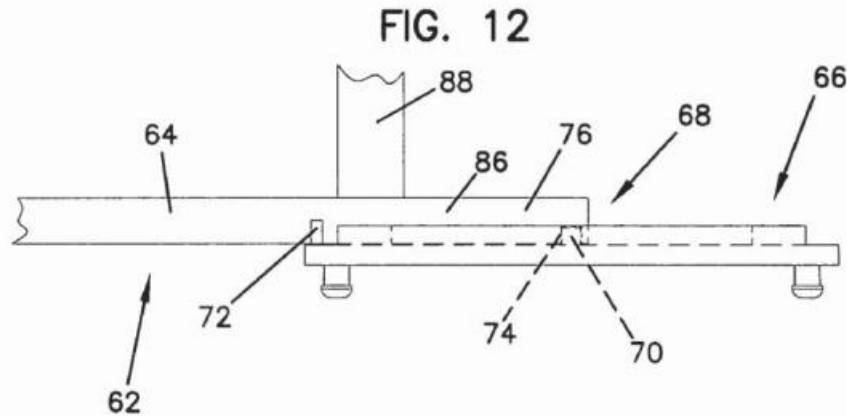


Figure 12 depicts “the guide of FIG.10, and a portion of the sliding frame piece.” *Id.* at 2:19–20.

3. Coburn (Ex. 1005)

Coburn is titled, “Fiber Optic Adapter Cassette and Panel.” Ex. 1005, [54]. Coburn “relates to an adapter cassette including a housing and a plurality of fiber optic adapters that are interconnected to a multi-fiber cable adapter.” *Id.* ¶ 5. The Abstract of Coburn states, “[t]he fiber optic adapters [are] interconnected to a multi-fiber cable connector by fiber optic cables located within an interior of the housing.” *Id.* at [57]. Figure 2 of Coburn is reproduced below.

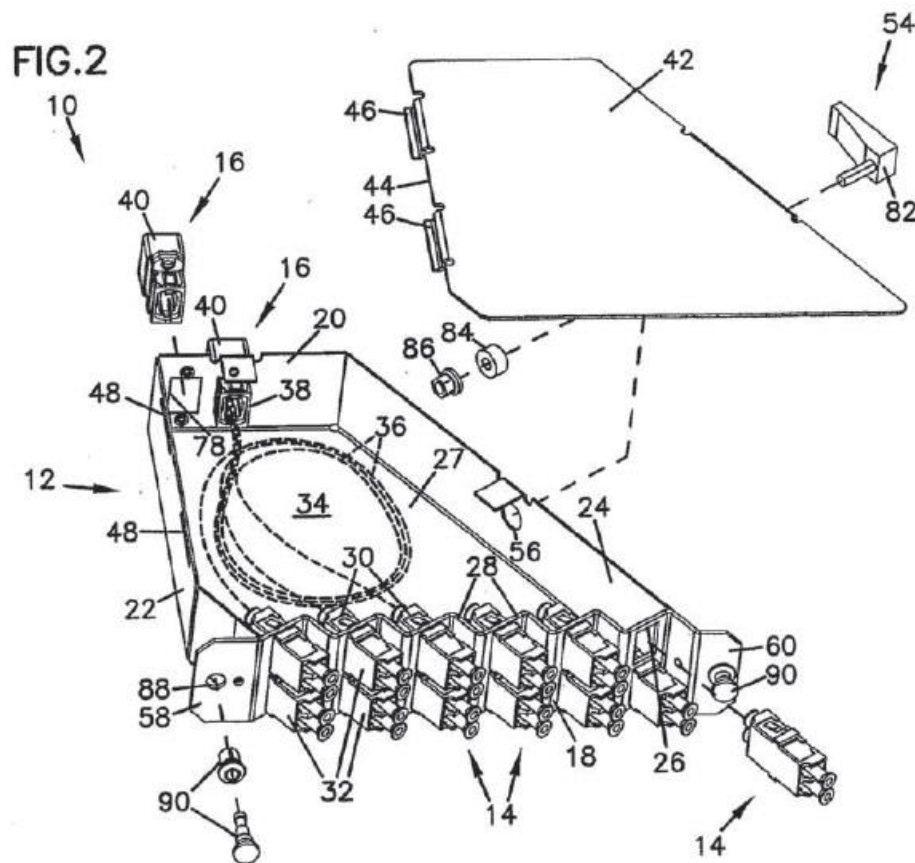


Figure 2 depicts an “adapter cassette.” *Id.* ¶ 8. Coburn states:

Referring to FIGS. 1 and 2, the adapter cassette 10 generally includes a housing 12 having an interior 34, a plurality of fiber optic adapters 14, and at least one multi-fiber cable adapter 16. The multi-fiber adapter 16 is interconnected to the fiber optic adapters 14 by optical cable connections 36 (shown schematically) located within the interior 34 of the housing 12. In the illustrated embodiment, the cassette 10 has two multi-fiber cable adapters 16, each cable adapter 16 interconnecting to six of twelve fiber optic adapters 14.

Id. ¶ 18.

4. *Niazi (Ex. 1006)*

Niazi is titled, “Computer Chassis For Two Motherboards Oriented One Above The Other.” Ex. 1006, [54]. Figure 1 of Niazi is reproduced below.

Fig. 1

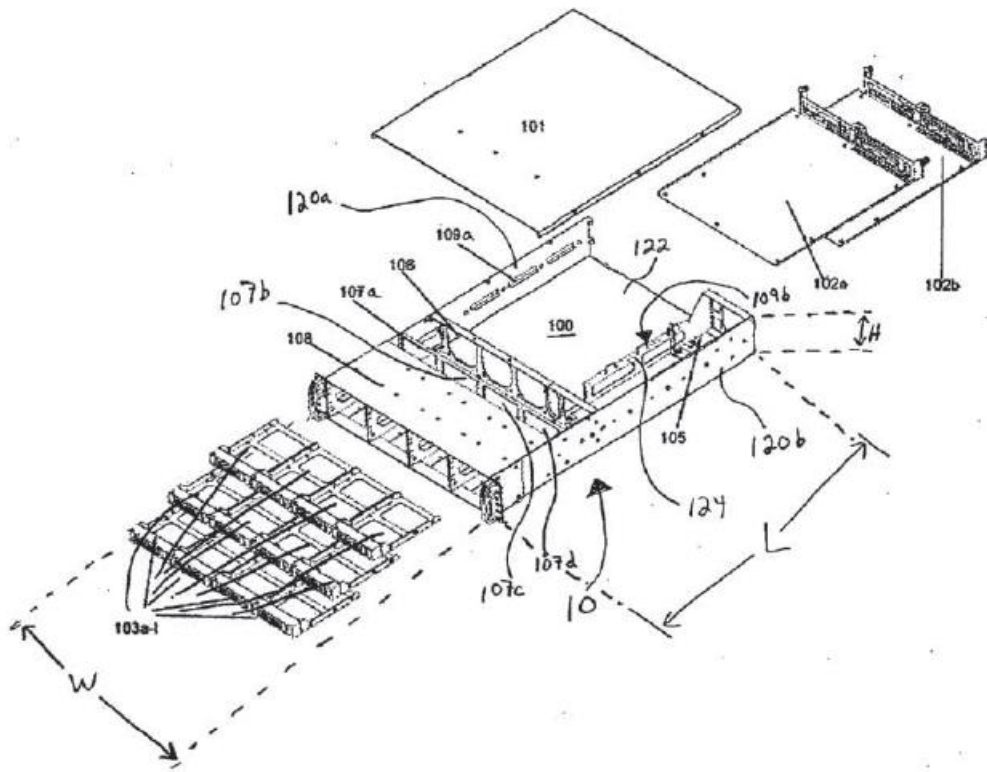


Figure 1 depicts computer chassis 10. *Id.* ¶ 26. According to Niazi, “the chassis 10 includes a chassis base 100, at least two trays 102a, 102b for motherboards (not shown) of the computer system, and a plurality of drawers 103a-103l for electronic modules, such as hard drives (not shown).”

Id. Niazi further states:

More particularly, the trays 102a, 102b slide in on shelves or rails that are part of chassis 10. This separates the two motherboards within the chassis. For example, one set of rails 109a can be formed on sidewall 120a. Another set of rails 109b is formed on a railing system 124 situated within the chassis. FIG. 1 shows only one rail 109a on sidewall 120a. During use, the trays 102a, 102b slide within the chassis body such that the top 101 encloses the trays 102a, 102b within the chassis 10, with only one end of

the trays 102a, 102b protruding from the rear of the chassis 10 for connections for ports of the computer system. In addition, the trays 102a, 102b are removably engaged within the chassis body 100 such that, when in use, tray 102a with one motherboard is situated vertically above tray 102b with another motherboard.

Id. ¶ 28.

5. *Level of Ordinary Skill in the Art*

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham*, 383 U.S. at 17. “The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991).

Petitioner asserts:

The level of ordinary skill in the art applicable to this petition is: (a) a Bachelor’s Degree in Mechanical Engineering or similar, with at least 5 years of experience designing fiber optic equipment housings for data center deployment; or (b) a Master’s Degree in Mechanical Engineering or similar, with at least 3-5 year[s] of experience designing fiber optic equipment housings for datacenter deployment. (Ex. 1003, ¶ 23).

Pet. 14. Petitioner supports this showing with citations to the DeCusatis Declaration. *Id.*

Patent Owner argues for a similar level of skill in the art, contending that “[a] person of ordinary skill in the art of the ’148 patent would have a bachelor’s degree in mechanical engineering, materials science, or a related field; and 2 years of experience in fiber optic equipment.” PO Resp. 1 (citing Ex. 2001 ¶¶ 14–15).

We note the parties' proposals differ in the specific number of years of experience required; however, neither party argues this distinction makes a difference in analyzing the asserted grounds or other issues in this proceeding. Based on this record, we determine that the level of ordinary skill proposed by Petitioner is consistent with the challenged patent and the asserted prior art. We, therefore, adopt that Petitioner's proposed level of ordinary skill in the art. Our findings and conclusions, however, would be the same under either party's proposed level of ordinary skill in the art.

6. *Claim 1*

Petitioner's showing that Smrha, Coburn, and Niazi teach all elements of independent claim 1 is detailed and supported by citations to the record. *See* Pet. 24–35. Petitioner also provides a showing of an articulated basis with rational underpinning for combining the relevant teachings of the references (*see KSR*, 550 U.S. at 418). Pet. 24–35.

The preamble of claim 1¹⁰ recites, “[a] fiber optic apparatus.” Ex. 1001, 15:60. Petitioner cites the Abstract of Smrha which states, “[a]n adapter panel arrangement including a chassis and a panel of adapters.” Pet. 30. Smrha states, “the present disclosure is described with respect to use in a fiber optic application.” Ex. 1004, 7:36–37. In addition, Coburn is titled, “Fiber Optic Adapter Cassette and Panel.” Ex. 1005, [54].

¹⁰ “A preamble does not generally limit the claims.” *Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1346 (Fed. Cir. 2002) (citation omitted). We need not decide this issue for purposes of this Final Written Decision, however, because we are persuaded that Petitioner has shown sufficiently that the cited references teach a fiber optic apparatus, as recited in the preamble of claim 1.

a. Chassis Limitation

The first limitation of claim 1 is “a chassis.” Ex. 1001, 15:61. Petitioner cites column 2, lines 43–44, of Smrha, which state, “[t]he adapter panel arrangement 10 of the present disclosure generally includes a chassis 12 having an interior 14.” Based on the record before us, we find Smrha teaches a chassis.

b. Tray Guide System Limitation

The second (“tray guide system”) limitation of claim 1 recites:

a tray guide system disposed within the chassis and receiving a plurality of fiber optic equipment trays, wherein each of the plurality of fiber optic equipment trays includes

opposite front and rear ends that are spaced apart from one other in a longitudinal direction, and

opposite first and second ends that are spaced apart from one another in a lateral direction that extends crosswise to the longitudinal direction, and

each of the plurality of fiber optic equipment trays is independently translatable in the longitudinal direction about the chassis.

Ex. 1001, 15:62–16:6.

Petitioner relies on a combination of Smrha and Niazi as teaching or suggesting these elements of claim 1. Pet. 31–34 (citing Ex. 1004 (Smrha), Fig. 1, 2:46–59; Ex. 1006 (Niazi), Figs. 1 and 2, ¶¶ 28, 34, 49). Figure 1 of Smrha is reproduced below.

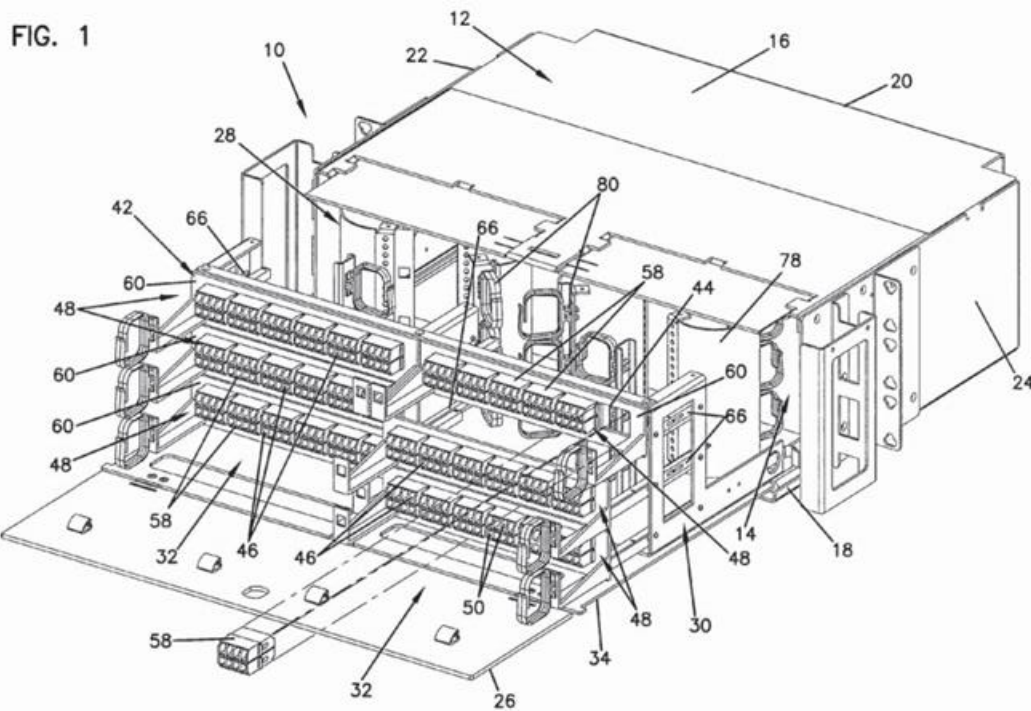


Figure 1 of Smrha depicts the adapter panel arrangement of Smrha “shown with a drawer of the adapter panel arrangement in an open position.”

Ex. 1004, 1:58–61. The cited passage (*id.* at 2:46–59) of Smrha states:

The adapter panel arrangement 10 also includes a sliding drawer 34 that slides between an open position (FIG. 1) and a closed position (FIG. 2). Referring now to FIGS. 1 and 2, the adapter panel arrangement 10 includes a framework structure 30 (FIG. 1) that is attached or mounted to the drawer 34. A panel of adapters 32 is mounted to the framework structure 30. As will be described in greater detail hereinafter, the drawer 34 is designed to slide outward from the chassis 12 primarily for installation purposes.

Figures 1 and 2 of Niazi are reproduced below.

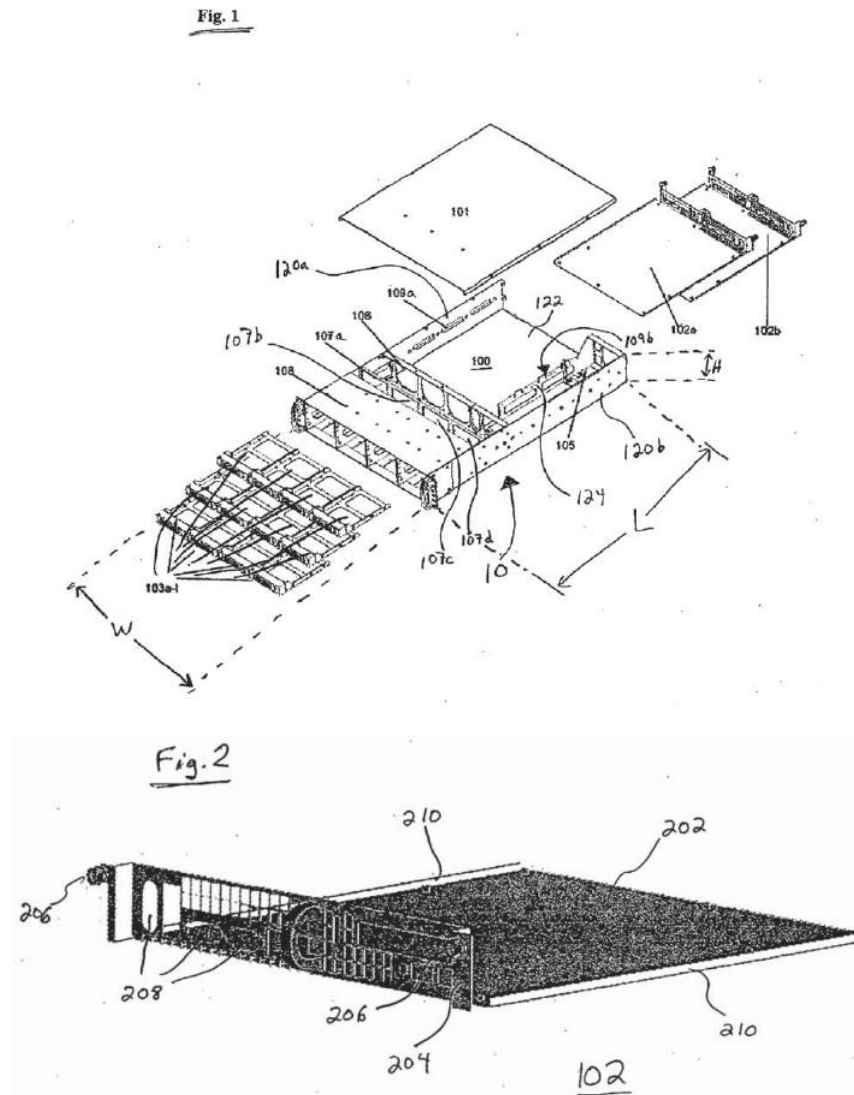


Figure 1 depicts a computer chassis and Figure 2 depicts a tray. Ex. 1006, ¶¶ 8, 9. The cited passages (*id.* ¶¶ 28, 34, 49) in Niazi state:

[T]he trays 102a, 102b slide in on shelves or rails that are part of chassis 10. This separates the two motherboards within the chassis. For example, one set of rails 109a can be formed on sidewall 120a. Another set of rails 109b is formed on a railing system 124 situated within the chassis. FIG. 1 shows only one rail 109a on sidewall 120a. During use, the trays 102a, 102b slide within the chassis body such that the top 101 encloses the trays 102a, 102b within the chassis 10, with only one end of the

trays 102a, 102b protruding from the rear of the chassis 10 for connections for ports of the computer system. In addition, the trays 102a, 102b are removably engaged within the chassis body 100 such that, when in use, tray 102a with one motherboard is situated vertically above tray 102b with another motherboard.

* * * *

During use, after attachment of a motherboard to the tray 102, the tray 102 can slide within the chassis base 100 of FIG. 1 so that the rails 210 of the tray 102 mate with the shelves 109a, 109b of the chassis base 100.

* * * *

The embodiment of FIG. 1 can be modified to include four servers in a single chassis 10 having a height of 2 U. In this embodiment, the server length L can be extended by 6 inches to a total length of about 30 inches. The chamber 108, which houses drawers 103 in FIG. 1, can be combined with the additional 6 inches of length to allow for two additional trays for motherboards, similar in design and layout to trays 102a, 102b, to be included in the front of the chassis 10. Like trays 102a, 102b, these trays in the front can be situated one above the other. These two trays can be oriented so that they may be removed from the front of the chassis 10, while trays 102a, 102b can still be removed from the rear of the chassis 10.

Based on the record before us, we find the cited figures and passages in Smrha and Niazi teach all the elements of the tray guide system limitation of claim 1. Specifically, Smrha teaches a system disposed within a chassis in which there are a plurality of adapter panels which are independently translatable in the longitudinal direction about the chassis and which carry fiber optic adapters. Ex. 1004, Fig. 1, 2:46–59. The adapter panels taught by Smrha have opposite front and rear ends that are spaced apart from one another in a longitudinal direction and opposite first and second ends that are

spaced apart from one another in a lateral direction that extends crosswise to the longitudinal direction. *Id.* at Fig. 7. Niazi teaches a tray guide system disposed within a chassis and receiving a plurality of equipment trays.

Ex. 1006, Fig. 1, ¶ 28. The equipment trays taught by Niazi have opposite front and rear ends that are spaced apart from each other in a longitudinal direction and opposite first and second ends that are spaced apart from one another in a lateral direction that extends crosswise to the longitudinal direction. *Id.* at Figs. 1, 2, ¶¶ 8, 9. And, each of Niazi's equipment trays is independently translatable in the longitudinal direction about the chassis. *Id.* ¶¶ 28, 34, 49.

Relying on the testimony of Dr. DeCusatis, Petitioner provides the following rationale for combining the teachings of Smrha and Niazi:

While Niazi is not explicitly directed to fiber optics, Niazi is therefore analogous in that it is related to a chassis for computer components that is also rack-mounted for use in data centers. (Ex. 1003 [DeCusatis Declaration], ¶¶54-55) While the electronics housed by the chassis in Niazi are more specifically tailored to motherboards, hard drives, and other computer components, Niazi seeks to solve the exact same problem as Smrha and '148 Patent – improving access to electronic components in chassis mounted in data centers. (*Id.*) Furthermore, computer servers frequently include fiber optic connectors or make use of fiber optics to transmit data from server-to-server. (Ex. 1003, ¶54) Therefore, Niazi is directed to solving the same problem as Smrha and Coburn, namely improving access and installation techniques for rack-mounted chassis' in data center storage.

Pet. 27–28.

Niazi teaches that a plurality of trays can exist within a single chassis. (Ex. 1006, ¶28) Modifying the fiber optic equipment taught by the combination of Smrha and Coburn to include

multiple trays within a single chassis as taught by Niazi would lead to the predictable result of increasing the number of connections in a chassis without sacrificing electronic installation convenience. (Ex. 1003 [DeCusatis Declaration], ¶¶72 and ¶76) Increasing the number of trays within a chassis results in access to additional rows of fiber optic components within a single chassis. (*Id.*) Furthermore, Niazi shows unequivocally that there is nothing novel or inventive about simply increasing the number of known components (trays) to a known system (fiber optic equipment). (Ex. 1003, ¶77) Again, the motivation to combine Smrha and Coburn with Niazi would be to increase the accessibility to electronic components within a chassis and potentially increase the number of fiber connections in a chassis, which may increase electronic component capacity. (Ex. 1003, ¶71) This, in turn, would lead to a related motivation, which is the desire and need within the industry to increase accessibility to fiber connections and to improve installation convenience for installers. (Ex. 1003, ¶¶71-72) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the combination of Smrha and Coburn with Niazi. (*Id.*).

Id. at 29–30.

Patent Owner argues a person of ordinary skill in the art would not have had reason or motivation to redesign the drawer of Smrha as multiple equipment trays. PO Resp. 26–30. This argument is not convincing because Petitioner relies on both Smrha and Niazi as teaching multiple equipment trays. Pet. 31–32, 56–58. With regard to Smrha, Petitioner argues duplicating the drawers of Smrha is “merely duplication of conventional parts, which is not patentable.” Pet. 56–57 (citing *In re Harza*, 274 F. 2d 669 (CCPA 1960)¹¹). The Petition states, “even if the duplicated parts were

¹¹ “It is well settled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced, and we are of

given patentable weight, Niazi expressly teaches a tray guide system that receives a plurality of trays 102a, 102b within a single chassis 10.” Pet. 57 (citing Ex. 1006 (Niazi) ¶¶ 28, 34). In addition, Petitioner asserts, “this limitation merely claims standard components, which were in existence at the time of the alleged invention of the ’148 Patent, using those components in a well-known manner to those having skill in the art, to achieve a predictable result.” *Id.* Niazi clearly teaches this element and the use of a plurality of trays to organize and support electronic components is known. In *KSR*, 550 U.S. at 416, the Supreme Court stated, “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” The apparatus recited in this limitation is simple (trays and a tray guide system) and easily recognized as commonly employed in many contexts. In this limitation, familiar elements are combined in a common way to yield no more than the predictable result of a rack to support equipment on trays. Such a combination would have been within the skill of an ordinary artisan. *See KSR*, 550 U.S. at 417 (“For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”).

Patent Owner also argues that the combination of Smrha and Niazi does not teach or suggest a system that satisfies claim 1 because combining the embodiments disclosed in Smrha and Niazi would require the complete

the opinion that such is not the case here.” *In re Harza*, 274 F. 2d 669, 774 (CCPA 1960). Patent Owner’s declarant Pearson agrees that Smrha teaches one tray. Ex. 1009, 75:1–3.

redesign of the embodiment disclosed in Smrha. PO Resp. 26–30. Patent Owner’s argument ignores the specific combination of teachings on which the challenge to claim 1 is based and does not squarely address whether claim 1 would have been obvious in light of the combination of the teachings in the cited art. *See In re Keller*, 642 F.2d 413, 426 (CCPA 1981) (“[O]ne cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references.”). Smrha and Niazi teach all the elements of the tray guide system and a determination of obviousness based on the combination of prior art devices does not require that the prior art devices be able to be physically combined. *Keller*, 642 F.2d at 425 (“To justify combining reference teachings in support of a rejection it is not necessary that a device shown in one reference can be physically inserted into the device shown in the other.”); *In re Nievelt*, 482 F.2d 965, 968 (CCPA 1973) (“Combining the *teachings* of references does not involve an ability to combine their specific structures.”). Thus, we do not find Patent Owner’s argument persuasive. To the contrary, and as noted above, we find in accordance with Petitioner’s showing that Smrha and Niazi teach all the elements of the tray guide system limitation in claim 1 and that there existed a motivation to combine these teachings, that is, improving access to electronic components in a chassis. *See* Pet. 27–28.

c. Module Guide System Limitation

The third (“module guide system”) limitation of claim 1 recites:

a module guide system including a plurality of module guides respectively carried by the plurality of fiber optic equipment trays, wherein for each fiber optic equipment tray of the plurality of fiber optic equipment trays, the fiber optic equipment tray

carries laterally spaced apart module guides of the plurality of module guides, and

carries at least one fiber optic module that extends laterally between, and is movably supported by both of, the laterally spaced apart module guides carried by the fiber optic equipment tray, wherein

the laterally spaced apart module guides, which are carried by the fiber optic equipment tray, are adapted for guiding the at least one fiber optic module so that the fiber optic module is independently translatable in the longitudinal direction relative to the fiber optic equipment tray,

the at least one fiber optic module includes at least one fiber optic adapter that extends in the lateral direction while the at least one fiber optic module extends laterally between, and is movably supported by both of, the laterally spaced apart module guides carried by the fiber optic equipment tray; and

the at least one fiber optic module having a front end, a rear end, and an inside, the at least one fiber optic adapter disposed through the front end, and at least one optical fiber provided within the inside of the at least one fiber optic module connected to the at least one fiber optic adapter.

Ex. 1001, 16:5–36.

Petitioner relies on a combination of Smrha and Coburn as teaching or suggesting these elements of claim 1. Pet. 34–39 (citing Ex. 1004 (Smrha), Figs. 1 and 7, 2:53–56, 3:23–35, 3:46–50, 3:64–66, 4:3–15, 4:59–64;

Ex. 1005 (Coburn), Fig. 2, 2:16–24, 2:26–31, 3:12–17¹²). Figure 7 of Smrha is reproduced below.

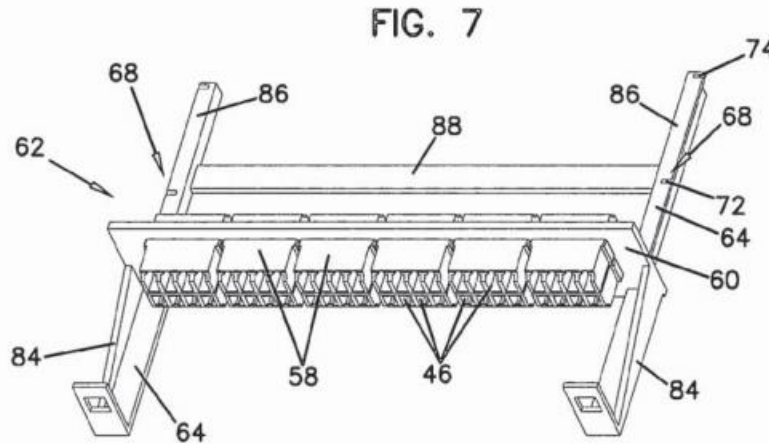


Figure 7 depicts “a sliding frame piece and an adapter array of the adapter panel arrangement” of Smrha. Ex. 1004, 2:7–9. The cited passages of Smrha (*id.* at 2:53–56, 3: 23–35, 3:46–50, 3:64–66, 4:3–15, 4:59–64) state:

Referring now to FIGS. 1 and 2, the adapter panel arrangement 10 includes a framework structure 30 (FIG. 1) that is attached or mounted to the drawer 34. A panel of adapters 32 is mounted to the framework structure 30.

* * * *

Referring now to FIGS. 1 and 4, the adapters 46 of the adapter blocks 58 each includes a front connection end 50 (FIG. 1) and a rear connection end 52 (FIG. 4). When mounted within the openings 44, the front connection ends 50 of the adapters 46 are located toward the front opening 28 of the chassis

¹² Coburn (Ex. 1005) is a published US patent application. We note that Petitioner’s citations with respect to Coburn, i.e., columns and lines, is unusual in that published applications, unlike patents, do not provide column numbering or line numbering, but instead provide paragraph numbers. We understand the citations by Petitioner (2:16–24, 2:26–31, 3:12–17) to correspond to the paragraphs numbered 18, 19, and 23 of Coburn. In the discussion that follows, we cite the paragraph numbers in Coburn.

12, and the rear connection ends 52 of the adapters 46 are located toward the rear wall 20 of the chassis 12. The front connection ends 50 of the adapters 46 define open frontward cable connection locations 54 (FIG. 2) of the face panel 42. The rear connection ends 52 of the adapters 46 define open rearward cable connection locations 56 (FIG. 4) of the face panel 42.

* * * *

Referring now to FIGS. 1, 5 and 6, the adapter arrays 48 of the face panel 42 are designed to slide in a lateral direction independent of other adapter arrays. In particular, the face panel 42 is defined by a number of separate panel sections 60.

* * * *

Each separate panel section 60 is designed to selectively slide in a forward, lateral direction (A) independent of the other panel sections.

* * * *

Referring to FIGS. 7-9, each separate panel section 60 of the panel of adapters 32 is attached to a sliding frame piece 62. The sliding frame piece 62 includes a pair of elongated rail members 64. . . . The pairs of elongated rail members 64 are arranged to engage and slide within pairs of guides 66 (one shown in FIGS. 10- 12) that are mounted to the framework structure 30 (FIG. 1) of the arrangement 10.

* * * *

Referring to FIG. 4, during installation, cables 36, such as fiber optic cables, are routed into the chassis 12 through rear openings 38 and terminated to the open rearward connection locations 56 of the face panel 42 (i.e., the rear connector ends 52 of the adapters 46).

wall 24 opposite the first side wall and extending between the front wall and the rear wall, and a bottom wall 27 (FIG. 2).

* * * *

Referring again to FIGS. 2-4, each of the adapters 14 of the cassette 10 is mounted within the openings 26 of the front wall 18 such that an interior connection end 30 (FIG. 4) of the adapter is located within the interior 34 of the housing 12; and such that an exterior connection end 32 of the adapter 14 is located outside of the housing.

Based on the record before us, we find the cited figures and passages in Smrha and Coburn teach all the elements of the module guide system limitation of claim 1. Specifically, Smrha discloses separate panel sections with panels of fiber optic adapters (fiber optic connectors) attached to sliding frame pieces and, thus, Smrha teaches fiber optic modules (a fiber optic apparatus that supports fiber optic connections (*see* Ex. 1001, 5:30–33)). Ex. 1004, Fig. 7, 2:7–9. Smrha teaches a plurality of module guides carried in a drawer. *Id.* at Fig. 3. Smrha teaches the drawer carries laterally spaced apart module guides; and modules that extend laterally and are movably supported by both of the laterally spaced apart guides carried in a drawer. *Id.* at Fig. 1, 3:46–50, 3:64–66. Smrha teaches the modules are independently translatable in the longitudinal direction relative to the drawer. *Id.* Smrha teaches the fiber optic modules include fiber optic adapters that extend in the lateral direction. *Id.* at Fig. 7, 2:53–56. The fiber optic modules in Smrha have a front end and a rear end (front and rear connection locations for fiber optic cables). *Id.* Coburn teaches fiber optic adapter cassettes or modules that include fiber optic cable adapters that extend laterally. Ex. 1005, Fig. 2, ¶¶ 18, 19, 23. Coburn teaches fiber optic

modules which have a front end, a rear end, and an inside. *Id.* Coburn teaches the fiber optic modules have fiber optic adapters disposed through the front end and an optical fiber provided within the inside of the fiber optic module. *Id.* Coburn teaches the optical fiber inside the fiber optic module is connected to the fiber optic adapters. *Id.* at Fig. 2, ¶ 18.

Relying on the testimony of Dr. DeCusatis, Petitioner provides the following rationale for combining the teachings of Smrha and Coburn:

Both Smrha and Coburn are directed to fiber optics and claim improvements to fiber optic modules/chassis to be stored on rack-mounted equipment in a data center.

Pet. 27 (citations omitted).

Smrha teaches fiber optic equipment with a translatable tray and a plurality of independently translatable fiber optic modules. (Ex. 1004, Fig. 1) Coburn teaches a fully enclosed cassette or module having at least one connector in the rear of the cassette and a plurality of connectors in the front of the cassette. (Ex. 1005, Abstract and Fig. 1) Modifying the well-known independently translatable modules as taught by Smrha with the structure of an encased cassette taught by Coburn would lead to the predictable result of independently translatable, fully-enclosed modules with connectors on the front and rear of the cassette. (Ex. 1003 [DeCusatis Declaration], ¶68) Having rear connectors in the modified cassette maintains the rear installation benefits taught by Smrha are still applicable. (See Ex. 1004, 2:37-42).

Id. at 28.

[I]t would have been obvious to modify the panel sections 60 of Smrha with the enclosed cassette 10 taught by Coburn for the purpose of protecting fiber wires within the metes and bounds of the cassette 10. (Ex. 1003, ¶67) Furthermore, Coburn is a logical module choice because the cassette 10 of Coburn includes a rear-facing multi-fiber adapter and front adapters, thereby

maintaining the benefits of the rear installation features taught by Smrha. (*Id.* ¶91).

Id. at 64.

A person having ordinary skill in the art would have been motivated to modify the panel section 60 of Smrha with the enclosed cassette 10 of Coburn as it would result in more protection for fiber wires and also reduce clutter as wires would be encased within cassettes, rather than loosely draped in the adapter panel arrangement 10 of Smrha. (Ex. 1003, ¶91).

Id.

Patent Owner argues a person of ordinary skill in the art would not have a reason or motivation to combine Coburn with Smrha and enclose the adapter panels. PO Resp. 16–26. According to Patent Owner, it does not make sense to enclose the adapter panels in modules because (1) “the open faced adapters in **Smrha** do not include any optical fibers that would require protection by a module” (PO Resp. 17); (2) the adapter panel arrangement in **Smrha** does not accommodate a rear connector (PO Resp. 19); and (3) **Smrha** discloses the use of open cable connection locations (PO Resp. 21). But, contrary to Patent Owner’s arguments, Petitioner relies on **Coburn** (*see, e.g.*, Ex. 1005, Fig. 2) as teaching an enclosed module with an optical fiber inside, a module accommodating a rear connector, and cable connection locations inside an enclosed module. Pet. 38–39, 62–65. Patent Owner ignores that the combination of cited references teaches all the elements of the module guide system limitation and does not squarely address whether claim 1 would have been obvious in light of the proposed combination of the teachings in the cited art. Thus, Patent Owner’s argument is not persuasive.

Considering this evidence and the arguments of the parties, we find Petitioner has shown that there existed a rational basis with articulated underpinnings to combine the teachings of Smrha and Coburn that is, “[m]odifying the well-known independently translatable modules as taught by Smrha with the structure of an encased cassette taught by Coburn would lead to the predictable result of independently translatable, fully-enclosed modules with connectors on the front and rear of the cassette.” Pet. 28 (citing Ex. 1003 ¶ 68). Accordingly, we find Coburn and Smrha teach all the elements of this limitation in claim 1 and that there existed a motivation to combine these teachings.

d. Objective Evidence of Non-Obviousness

We turn next to Patent Owner’s evidence and arguments relating to objective considerations of non-obviousness. Notwithstanding what the teachings of the prior art would have suggested to one with ordinary skill in the art at the time of the invention, the totality of the evidence submitted, including objective evidence of nonobviousness, may lead to a conclusion that the claimed invention would not have been obvious to one with ordinary skill in the art. *In re Piasecki*, 745 F.2d 1468, 1471–1472 (Fed. Cir. 1984).

Such a conclusion, however, requires the finding of a nexus to establish that the evidence relied upon traces its basis to a novel element in the claim and not to something in the prior art. *Institut Pasteur & Universite Pierre Et Marie Curie v. Focarino*, 738 F.3d 1337, 1347 (Fed. Cir. 2013). All types of objective evidence of nonobviousness must be shown to have nexus. *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995) (nexus generally); *In re Kao*, 639 F.3d 1057, 1069 (Fed. Cir. 2011) (unexpected results); *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996) (commercial

success); *Rambus Inc. v. Rea*, 731 F.3d 1248, 1256 (Fed. Cir. 2013) (long-felt need).

Objective evidence of nonobviousness must also be reasonably commensurate in scope with the claim. *In re Kao*, 639 F.3d at 1068. This does not mean that the offered evidence must reach every embodiment within the scope of the claim, so long as an “adequate basis to support the conclusion that other embodiments falling within the claim will behave in the same manner.” *Id.*

Here, Patent Owner argues that objective evidence of non-obviousness establishes that claim 1¹³ of the ’148 patent would not have been obvious. PO Resp. 31–50. Patent Owner offers evidence of purported copying, praise by others, commercial success, long-felt need, recognition of a problem, and failure of others. *Id.* However, before this evidence may be given substantial weight with regard to the obviousness of claim 1, it must be shown that it relates to the invention recited in claim 1. Having considered all the arguments and evidence presented during trial, Patent Owner has failed to establish its purported evidence of non-obviousness relates to the invention recited in claim 1.

With regard to Patent Owner’s EDGE product which is alleged to be covered by the ’148 patent, Patent Owner does not argue or present sufficient evidence establishing that there is, in the EDGE product itself, “at least one optical fiber provided within the inside of the at least one fiber

¹³ In its argument based on objective evidence of non-obviousness, Patent Owner refers only to claim 1. See PO Resp. 31 (“Objective Indicia Further Establish the Non-Obviousness of Claim 1”). Claims 2–20 are not referred to in this section of Patent Owner’s Response. *Id.* at 31–50.

optical module connected to the at least one fiber optic adapter” as recited in claim 1 (Ex. 1001, 16:33–36). *See* PO Resp. 31–34; *see also* Reply 22 (“Nowhere in the ten pages of argument, or three self-serving declarations that Corning submits, can one find evidence of a nexus between any of copying, praise by others, commercial success, or a long, unfelt need for the EDGE™ system and the claimed features.”). The same deficiency exists in Patent Owner’s argument relating to Panduit’s HD Flex product which is alleged to be a copy of Patent Owner’s product. PO Resp. 34–46.

In addition, Patent Owner’s arguments regarding commercial success, long-felt need, recognition of a problem, and failure of others seemingly relate to the “’938 patent”¹⁴ not the ’148 patent. *See* PO Resp. 47–50. Indeed, the ’148 patent is not referred to expressly in this part of Patent Owner’s Response. *Id.* And Patent Owner presents arguments which do not relate to limitations found in claim 1 of the ’148 patent, particularly with respect to the arguments emphasizing that the modules can be installed from the rear. *Id.* For example, Patent Owner argues, “[i]ndeed, as explained above, not only do these products [Corning’s EDGE and Panduit’s Flex] practice the claims of the ’938 patent, the feature recited in claim 1—slidable trays supporting rear-installable modules—is a ‘key’ feature used by both companies to sell these products and to distinguish them over the existing systems.” PO Resp. 48 (emphasis added). The installation of the modules from the rear or a guide system configured to receive a module from the rear is not recited in claim 1 of the ’148 patent.

¹⁴ We assume this is a reference to US Patent No. 8,184,938 B2 at issue in IPR2017-01709.

We determine that Patent Owner has not shown a sufficient nexus. Therefore, the objective evidence offered by Patent Owner is accorded little or no weight.

e. Conclusion Regarding Claim 1

Based on the evidence in this record, we conclude that, on balance, the strong evidence of obviousness outweighs the objective evidence of nonobviousness, specifically in view of our finding of a lack of nexus between the objective evidence and the claims. *Cf. Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (holding that the objective considerations of nonobviousness presented, including substantial evidence of commercial success, praise, and long-felt need, were inadequate to overcome a strong showing of primary considerations that rendered the claims at issue invalid).

For the reasons discussed, we conclude Petitioner has shown, by a preponderance of the evidence, that claim 1 would have been obvious over Smrha, Coburn, and Niazi.

7. Claims 2, 3, 5–15, and 18–20

Each of dependent claims 2, 3, 5–15, and 18–20 depends directly or indirectly from claim 1 and recites additional limitations. Petitioner's showing that all the elements of dependent claims 2, 3, 5–15, and 18–20 are taught by the cited art is detailed and supported by citations to the relevant portions of the cited art. Pet. 39–55, 65–71. We have reviewed Petitioner's showing and find, based on the figures and passages cited by Petitioner, that the cited art teaches the limitations of claims 2, 3, 5–15, and 18–20. Patent

Owner has not addressed claims 2, 3, 5–15, and 18–20 or disputed any part of Petitioner’s showing regarding these claims. *See generally* PO Resp.¹⁵

Considering the further limitations set forth in dependent claims 2, 3, 5–15, and 18–20 and the arguments and evidence presented, we find that Petitioner has established, by a preponderance of the evidence, that these claims also would have been obvious over Smrha, Coburn, and Niazi.

*C. Obviousness of Claims 4, 16, and 17
Over Smrha, Coburn, Niazi, and Wagner*

Each of dependent claims 4, 16, and 17 depends directly or indirectly from claim 1 and recites additional limitations. Petitioner’s showing that all the elements of dependent claims 4, 16, and 17 are taught by the cited art is detailed and supported by citations to the relevant portions of the cited art. Pet. 71–77. Patent Owner has not addressed claims 4, 16, and 17 or disputed any part of Petitioner’s showing regarding these claims. *See generally* PO Resp.

1. Wagner (Ex. 1007)

Wagner is titled, “Release Latch For Pre-Terminated Cassette.” Ex. 1007, [54]. The disclosed apparatus includes “fiber cable cassettes.” *Id.* at 1:24; *see id.* at 3:34–36 (“pre-terminated, high-density Multi-Fiber Push On (MPO) cable assembly”). Figure 19 of Wagner is reproduced below.

¹⁵ *See* Paper 8 (Scheduling Order), 6 (“The patent owner is cautioned that any arguments for patentability not raised in the response will be deemed waived.”); *see also In re Nuvasive, Inc.*, 842 F.3d 1376, 1379–1382 (Fed. Cir. 2016) (holding Patent Owner waived an argument addressed in Preliminary Response by not raising the same argument in the Patent Owner Response).

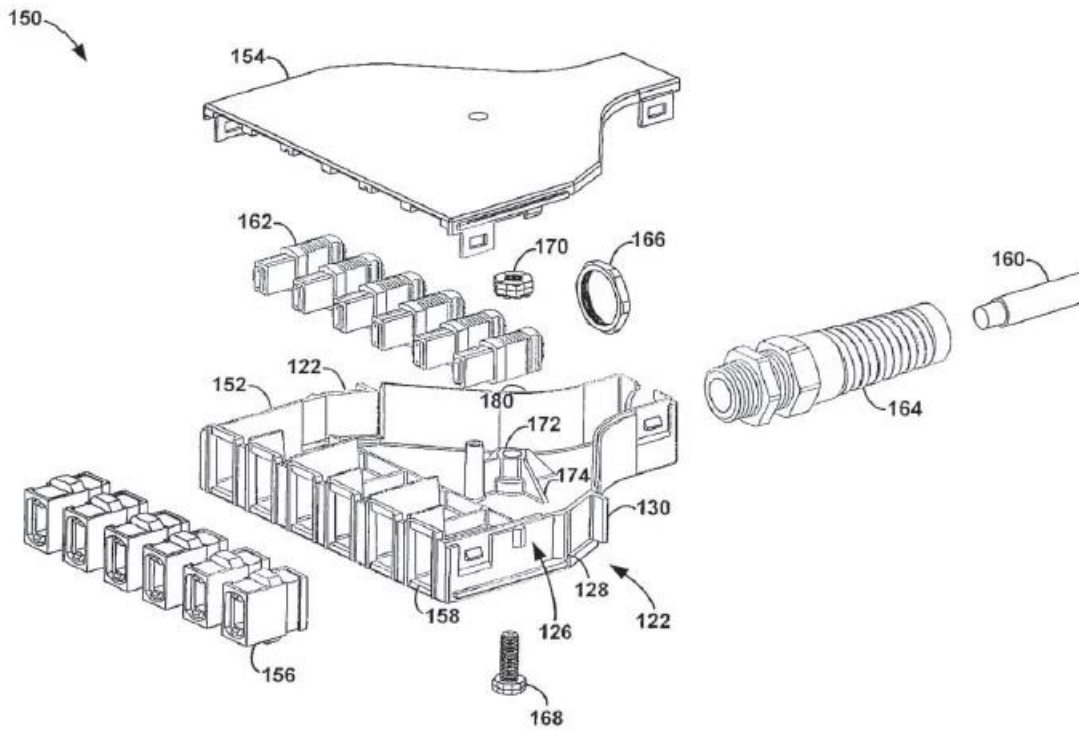


FIG. 19

Figure 19 “depicts an exploded view of the pre-terminated, high-density MPO cable assembly 150.” *Id.* at 7:63–64. Wagner teaches, “[a] multi-fiber cable 160 may be terminated with MPO optical fiber connectors 162. The fiber connectors 162 may be mated to the MPO style adapters 156 when the connectors and adapters are installed in the base 152.” *Id.* at 8:6–9.

2. Obviousness Analysis

Claims 4, 16, and 17 recite:

4. The fiber optic apparatus of claim 1, further comprising a plurality of tray locking features each disposed adjacent a front end of the chassis, wherein each of the plurality of tray locking features are configured to releasably retain a fiber optic equipment tray among the plurality of fiber optic equipment trays.

16. The fiber optic apparatus of claim 1, further comprising at least one module locking feature disposed adjacent a front end

of each of the plurality of fiber optic equipment trays, each of the at least one module locking feature configured to interlock a fiber optic module among the plurality of fiber optic modules to a fiber optic equipment tray among the plurality of fiber optic equipment trays when the fiber optic module is disposed adjacent the front end of the fiber optic equipment tray.

17. The fiber optic apparatus of claim 16, wherein the at least one module locking feature is comprised of at least one detent feature attached to each of the plurality of fiber optic equipment trays, the at least one detent feature configured to interlock with a module latch disposed in the fiber optic module.

Ex. 1001, 16:46–51, 17:35–18:9. Petitioner cites the following passage from Wagner as teaching the “locking feature” limitations of claims 4, 16, and 17 (Pet. 72–76):

When the pre-terminated cassette 115 is fully inserted into the patch panel 20, the latch tab 128 may snap and lock behind the guide latch tab 64. When the latch tab 128 engages the guide latch tab 64, the patch panel 20 firmly locks and holds the pre-terminated cassette 115 in place.

Ex. 1007, 6:41–45. With regard to claims 16 and 17, Petitioner also cites the following passage from Smrha (Pet. 74–75):

Referring to FIGS. 9-12, the stop arrangement 68 (FIG. 12) is defined by at least one projection 70 (FIGS. 10 and 11) located on each guide 66 of the pair of guides, and first and second pockets or detents 72, 74 (FIG. 9) formed in the rail members 64. In the illustrated embodiment, two projections 70 (upper and lower projections) are provided on each of the guides 66 . . . While the illustrated embodiment depicts the detents 72, 74 formed in the rail members 64 and the projections 70 provided on the guides 66, it is contemplated that the detents can be

formed in the guides 66 and the projection correspondingly provided on the rail members 64.

Ex. 1004, 4:20–32.

With regard to the motivation to combine the teachings of Smrha, Coburn, Niazi, and Wagner, the Petition states:

Combining the fiber optic management chassis having independently translatable fiber optic modules and trays of the combination of Smrha, Coburn, and Niazi with the locking features taught by Wagner is merely a combination of prior art elements according to known methods to yield a predictable result. (Ex. 1003 [DeCusatis Declaration], ¶113) Wagner teaches that locking modules provides secure mounting. (Ex. 1007, 4:61-65) A person having ordinary skill in the art would have been motivated to lock a sliding tray or module in place to prevent possible damage to the tray or module as it extends out of the protection of the chassis. (Ex. 1003, ¶113) The simple addition of a locking feature as taught by Wagner to secure the modules or trays in the combination of Smrha, Coburn, and Niazi results in lockable modules and trays that do not translate without an application of an intentional, overcoming force. (Ex. 1003, ¶113) Therefore, it would have been obvious to combine Wagner with Smrha, Coburn, and Niazi to provide a secure mounting of translatable components within a chassis.

Pet. 76–77.

Petitioner presents sufficient arguments and credible evidence to support a finding that the cited passages in Wagner and Smrha teach the limitations of claims 4, 16, and 17. And we find Petitioner has provided an articulated reason with rational underpinnings to combine the teachings of the cited references, that is, “to provide a secure mounting of translatable components within a chassis.” See Pet. 77. Patent Owner does not argue otherwise.

Based on this record, we conclude Petitioner has established, by a preponderance of the evidence, that claims 4, 16, and 17 would have been obvious over Smrha, Coburn, Niazi, and Wagner.

III. CONCLUSION

For the foregoing reasons, we conclude Petitioner has established, by a preponderance of the evidence, that claims 1–20 of the '148 patent are unpatentable.

IV. ORDER

Accordingly, it is:

ORDERED that claims 1–20 of U.S. Patent No. 8,452,148 B2 are held to be unpatentable.

Because this is a final written decision, parties to this proceeding seeking judicial review of our decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2016-01703
Patent 8,452,148 B2

PETITIONER:

Kelly J. Eberspecher
Daniel S. Stringfield
keberspecher@steptoe.com
dstringfield@steptoe.com
STEPTOE & JOHNSON LLP
115 South LaSalle Street, Suite 3100
Chicago, IL 60603

Katherine Cappaert
kcappaert@steptoe.com
STEPTOE & JOHNSON LLP
1330 Connecticut Avenue, NW
Washington, DC 20036

David L. Hecht
dhecht@steptoe.com
STEPTOE & JOHNSON LLP
1114 Avenue of the Americas
New York, NY 10036

PATENT OWNER:

Eric D. Hayes
Eugene Goryunov
G. William Foster
Eric.hayes@kirkland.com
egoryunov@kirkland.com
billy.foster@kirkland.com
KIRKLAND & ELLIS LLP
300 North LaSalle Street
Chicago, IL 60654