

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMMSCOPE TECHNOLOGIES LLC,
Petitioner,

v.

BELDEN CANADA ULC,
Patent Owner.

IPR2024-01382
Patent 11,740,423 B2

Before JOSIAH C. COCKS, CHRISTOPHER M. KAISER, and
KIMBERLY McGRAW, *Administrative Patent Judges*.

COCKS, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Petitioner CommScope Technologies LLC (“Petitioner”) filed a Petition to institute *inter partes* review of claims 1–30 (“the challenged claims”) of U.S. Patent No. 11,740,423 B2 (Ex. 1001, “the ’423 patent”). Paper 1 (“Pet.”). Patent Owner Belden Canada ULC (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”).

We have authority under 35 U.S.C. § 314 to determine whether to institute an *inter partes* review. The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a).

A decision to institute under § 314 may not institute on fewer than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018). In addition, if the Board institutes trial, it will “institute . . . on all grounds in the petition.” PTAB Consolidated Trial Practice Guide, 5–6 (Nov. 2019)¹ (“CTPG”); 37 C.F.R. § 42.108(a); *see also PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (interpreting the statute to require “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”).

Having considered the arguments and evidence presented in the Petition, and all the briefing before us, we institute *inter partes* review.

¹ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

II. BACKGROUND

A. Related Matters

Both parties identify *Belden Canada ULC v. CommScope, Inc. et al.*, Case No. 1:23-cv-00810-RGA (D. Del.) as a related matter. *See* Pet. 1; Paper 5 (Patent Owner’s Mandatory Notices), 1. Patent Owner also refers to the following as matters that may affect, or be affected by a decision in this proceeding:

- IPR2024-01218 involving U.S. Patent No. 10,795,107 B2;
- IPR2024-01227 involving U.S. Patent No. 11,435,542 B2
- IPR2024-01228 involving U.S. Patent No. 11,656,422 B2;
- U.S. Patent Application No. 18/328,431; and
- U.S. Patent Application No. 18/232,729.

B. Real Parties In Interest

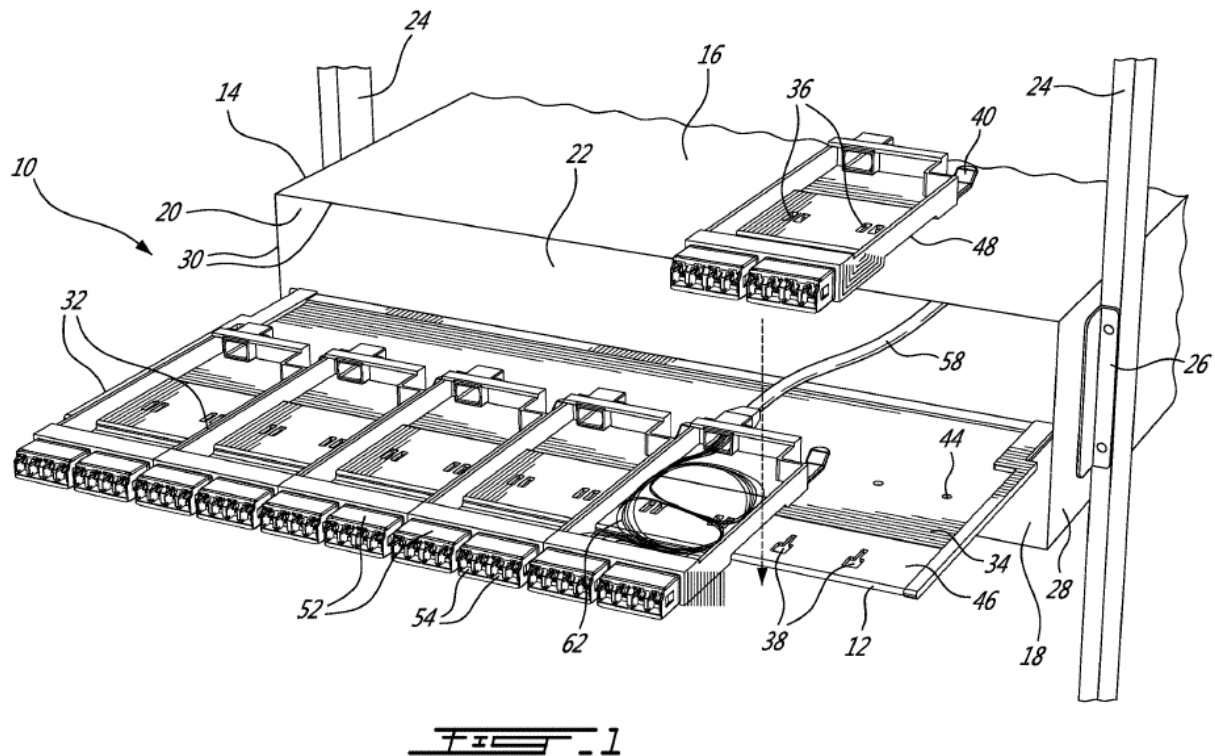
Petitioner identifies itself, CommScope, Inc. of North Carolina, and CommScope, Inc. as the real parties in interest. *See* Pet. 1. Patent Owner identifies itself and Belden Inc. as the real parties in interest. *See* Paper 3, 1.

C. Overview of the 107 patent

The ’423 patent, titled “Tray System For Providing Modular Cassette Configurations in a Fiber Optic Management System,” is directed to “a tray for providing a plurality of modular cassette configurations in a fiber optic management system that may include a fiber optic cassette comprising a width of one or more standard width units such that fiber optic cassettes of different widths can be arranged on the same tray while optimizing the use of tray space.” Ex. 1001, code (54), 1:24–30. The application giving rise to the ’423 patent was filed on February 3, 2023, and has an earliest priority

claim to U.S. Provisional Application No. 62/567,339, filed on October 3, 2017. *Id.* at codes (21), (22), (60).

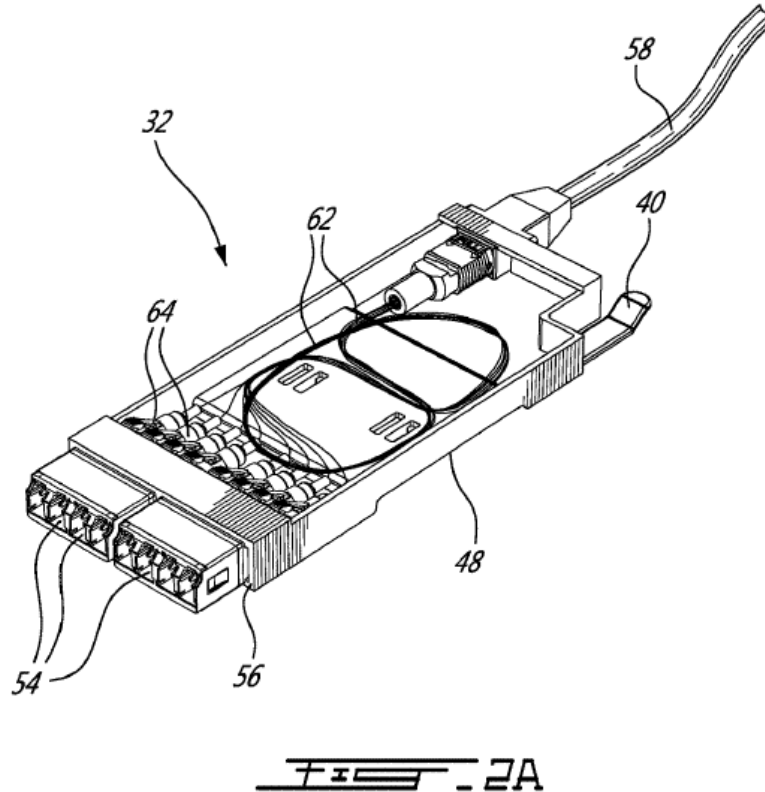
Figure 1, reproduced below, illustrates “a modular fiber optic cassette and system mounted in a rack.” Ex. 1001, 7:15–16.



As shown in Figure 1, modular cassette system 10 includes slidable tray 12 mounted in case 14, which in turn is mounted to rails 24 of a rack. *Id.* at 7:48–55. Case 14 includes tray receiving space 22, where “front edges 30 of the walls 16, 18, 20 [of case 14] define an opening via which the tray receiving space 22 can be accessed.” *Id.* at 7:57–59. Tray 12 may receive removable fiber optic cassettes 32, which are arranged side by side on upper surface 34 of tray 12. *Id.* at 7:64–66. Each cassette may be “secured to the tray 12 using a fastener comprising tabs 36 of inverted ‘T’ cross section

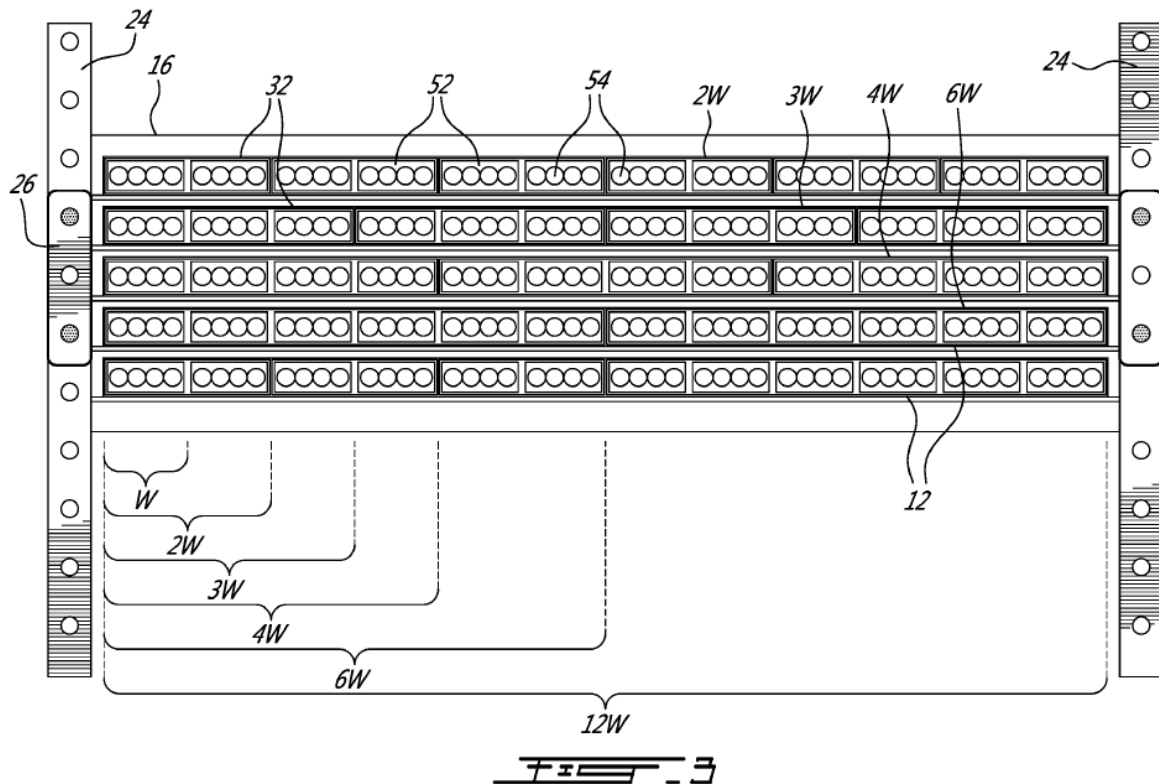
which engage with respective slots 38 machined or otherwise formed in the tray 12.” *Id.* at 7:67–8:3.

Figure 2A, reproduced below, illustrates a modular fiber optic cassette. Ex. 1001, 7:19–22.



As shown in Figure 2A, each cassette 32 includes receptacle modules 52 (not labeled in Figure 2A) comprising receptacles 54 exposed on forward edge 56 of cassette 32. *Id.* at 8:13–17. Fiber optic cable 58 terminates at cassette 32, where each fiber “is interconnected with a respective one of the receptacles 54 using an optic fiber segment 62 comprising a receptacle end which is terminated by a plug 64.” *Id.* at 8:17–24.

Figure 3, reproduced below, illustrates “a front plan view of a modular fiber optic cassette system mounted in a rack.” Ex. 1001, 7:23–25.



As shown in Figure 3, each cassette 32 includes multiple receptacle modules 52, each comprising four receptacles 54, with “four (4) different cassette sizes to accommodate terminating fiber optic cables comprising different number[s] of optic fibers.” *Id.* at 8:33–38. Specifically, the different cassette sizes are based on integer multiples of a standard width unit “W,” which in this embodiment comprises a single receptacle module 52 with four receptacles 54. *Id.* at 8:39–42. Figure 3 depicts cassette sizes of 2W, 3W, 4W, and 6W fitting “snuggly side by side,” with only cassettes of like sizes being accommodated within each tray of width 12W, although the ’107 patent discloses that “in a particular embodiment cassettes 32 of different widths could be used together.” *Id.* at 8:51–56.

D. The Challenged Claims

Petitioner challenges claims 1–30 of the '423 patent. Pet. 2. Of those challenged claims, claims 1, 9, and 17 are independent. Claim 1 is representative and is reproduced below:²

1. A tray for providing a plurality of different modular fiber optic cassette configurations in a standard U-space fiber optic management system comprising:

[1A] a tray having a first tray side end portion and a second tray side end portion defining a tray width portion that extends between the first tray side end portion and the second tray side end portion;

[1B] wherein the tray width portion fits within a standard U-space width dimension;

[1C] wherein the tray is configured to fit a plurality of different modular fiber optic cassette configurations in the tray width portion in a standard U-space fiber management system;

[1D] wherein each of the plurality of different modular fiber optic cassette configurations include a modular fiber optic cassette that is configured to support a receptable module having a first module side end portion and a second module side end portion defining a module width portion that extends between the first tray side end portion and second tray side end portion;

[1E] wherein the module width portion is configured to fit in a standard one width (1 W) unit;

[1F] wherein each of the modular fiber optic cassettes includes a first cassette side end portion and a second cassette side end portion defining a standard cassette width unit extending between the first cassette side end portion and the second cassette side end portion that comprises a standard two width (2 W) unit, a standard three width (3 W) unit, a standard four width (4 W) unit, or a standard a standard six width (6 W) unit relative to the standard one width (1 W) unit;

² We reproduce the claim with similar designations for claim limitations that are used in the Petition (i.e., “1A” through “1K”). *See, e.g.*, Pet. 155–157.

[1G] wherein the receptable module is configured to fit at least four fiber optic plug receiving receptacle portions in a standard one width (1W) unit;

[1H] wherein the plurality of different modular fiber optic cassette configurations comprise:

- a first modular fiber optic cassette configuration that includes six modular two standard width unit (2 W) cassettes that are each arranged side by side of each other along the tray such that a cassette side end portion of each modular two standard width (2 W) cassette adjacently faces a cassette side end portion of at least one other modular two standard width (2 W) cassette;

- a second modular fiber optic cassette configuration that includes four modular three standard width unit (3 W) cassettes that are each arranged side by side of each other in a row along the tray such that a cassette side end portion of each modular three standard width (3 W) cassette adjacently faces a cassette side end portion of at least one other modular three standard width (3 W) cassette;

- a third modular fiber optic cassette configuration that includes three modular four standard width unit (4 W) cassettes that are each arranged side by side of each other in a row along the tray such that a cassette side end portion of each modular four standard width (4 W) cassette adjacently faces a cassette side end portion of at least one other modular four standard width (4 W) cassette;

- a fourth modular fiber optic cassette configuration that includes two modular six standard width unit (6 W) cassettes that are each arranged side by side of each other in a row along the tray such that a cassette side end portion of one of the two modular six standard width (6 W) cassettes adjacently faces a cassette side end portion of the other modular six standard width (6 W) cassette; and

- a fifth modular fiber optic cassette configuration that includes three modular two standard width unit (2 W) cassettes, which are each arranged side by side of each other in a row along the tray such that a cassette side end portion of one of the three modular two standard width (2 W) cassettes adjacently faces a cassette side end portion

of one of the other modular two standard width (2 W) cassette, and one modular six standard width unit (6 W) cassette that is arranged side by side in a row along the tray with one of the three modular two standard width unit (2 W) cassettes, such that a cassette side end portion of the one modular six standard width unit (6 W) cassette adjacently faces a cassette side end portion of one of the other three modular two standard width unit (2 W) cassettes;

[1I] wherein each modular two standard width (2 W) cassette is configured to fit two receptacle modules; wherein each modular three standard width (3 W) cassette is configured to fit three receptacle modules;

wherein each modular four standard width (4 W) cassette is configured to fit four receptacle modules;

wherein each modular six standard width (6 W) cassette is configured to fit six receptacle modules;

[1J] wherein the tray is configured to be removably secured to each modular fiber optic cassette when the tray fits the plurality of different modular fiber optic cassette configurations within the tray width portion in the standard U-space fiber management system; and

[1K] wherein the tray includes a plurality of cassette engaging portions that are configured to conform to the standard one width (1 W) so as to support the modular two standard width (2 W) cassette, the modular three standard width (3 W) cassette, the modular four standard width (4 W) cassette, and the modular six standard width (6W) cassette.

Ex. 1001, 10:24–11:60.

E. Asserted Grounds of Unpatentability

Petitioner asserts the following ground of unpatentability:

Ground	Claim(s) Challenged	35 U.S.C. § ³	Reference(s)/Basis
1	1–30	102, 103	“Anticipated or obvious based on Fukui, ^[4] alone”
2	1–30	103	Fukui, Sauter ⁵
3	1–30	103	Sauter, Dagley ⁶
4	1–30	103	Sauter, Dagley, Fukui
5	7, 15, 25	103	“Either of Grounds 4 or 5 in further combination with Laarveld” ⁷

Pet. 2.

F. Testimonial Evidence

In support of its proposed ground of unpatentability, Petitioner relies on the Declaration of Dr. Stephen Ralph (Ex. 1003).

³ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102 and 103 effective on March 16, 2013, and those amendments apply to the ’423 patent. Neither party, however, argues that the outcome of this case would differ based on applying the pre-AIA or post-AIA versions of these laws.

⁴ Fukui et al., U.S. Patent No. 10,101,551 B2 issued Oct. 16, 2018 (Ex. 1004, “Fukui”).

⁵ Sauter et al., U.S. Patent No. 9,960,064 B2 issued June 27, 2017 (Ex. 1006, “Sauter”).

⁶ Dagley et al., U.S. Patent Application Publication No. 2017/0192191 A1 (Ex. 1030, “Dagley”).

⁷ Laarveld, Dutch Patent No. NL2008155C2 issued July 31, 2013 (Exs. 1028, 1026 (English translation), “Laarveld”).

III. PATENTABILITY ANALYSIS

A. Principles of Law

A patent claim is unpatentable as anticipated under 35 U.S.C. § 102 “if each and every limitation is found either expressly or inherently in a single prior art reference.” *WhitServe, LLC v. Computer Packages, Inc.*, 694 F.3d 10, 21 (Fed. Cir. 2012) (quoting *Celeritas Techs., Ltd. v. Rockwell Int’l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998)). To establish anticipation under 35 U.S.C. § 102, each element in a claim, arranged as is recited in the claim, must be found in a single prior art reference. *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008).

A patent claim is unpatentable under 35 U.S.C. § 103 “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” 35 U.S.C. § 103. 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; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of nonobviousness.⁸ *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is

⁸ Patent Owner does not present arguments or evidence of secondary considerations in its Preliminary Response. Therefore, secondary considerations do not constitute part of our analysis herein.

unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion never shifts to Patent Owner. See *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

At this preliminary stage, we determine whether the information presented shows a reasonable likelihood that Petitioner would prevail in establishing that at least one of the challenged claims would have been unpatentable over the proposed prior art. We analyze the asserted grounds with the above-noted principles in mind.

B. Level of Ordinary Skill in the Art

We consider the asserted grounds of unpatentability in view of the understanding of a person of ordinary skill in the art. In assessing the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (quoting *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986)). “[O]ne or more factors may predominate.” *Id.*

Petitioner contends the following in connection with the level of ordinary skill in the art:

A person of ordinary skill in the art (POSITA) would have a B.S. degree or equivalent in mechanical or electrical engineering or

similar fields, in addition to a minimum of two years of professional experience with or graduate studies involving design, development, and/or utilization of optical communication systems.

Pet. 24 (citing Ex. 1003 ¶¶ 19–21).

Patent Owner does not dispute Petitioner’s assessment of the level of ordinary skill in the art, or offer its own assessment. Based on this record, we adopt Petitioner’s articulation of the level of ordinary skill in the art, which is consistent with the ’423 patent and the asserted prior art, and we apply it in our patentability evaluations below. *See also Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior art, itself, can reflect appropriate level of ordinary skill in art).

C. Claim Construction

In interpreting the claims of the ’423 patent, we “us[e] the same claim construction standard that would be used to construe the claim[s] in a civil action under 35 U.S.C. [§] 282(b).” *See* 37 C.F.R. § 42.100(b) (2020). The claim construction standard includes construing claims in accordance with the ordinary and customary meaning of such claims as would have been understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (*en banc*).

Petitioner generally expresses that it “presently believes the plain meaning is enough to resolve at least the lead Fukui grounds.” Pet. 21. Petitioner notes that there are claim construction “disputes in the district court action.” *Id.* Petitioner represents that those disputes refer to the following claim terms or requirements:

- “‘two,’ three,’ ‘four,’ and ‘six’ standard width units” (*Id.* at 21–3);
- “directly adjacent” (*id.* at 23–24); and
- “each of the plurality.” (*id.* at 24).

More specifically, with respect to the claim limitations pertaining to “standard width units,” Petitioner states the following in connection with Patent Owner’s district court construction:

[Patent Owner] proposes the claim merely refers to counting receptacle modules. [Patent Owner] proposes “standard one width unit” refers to a “unit of width that accommodates a single receptacle module...” EX1011,^[9] 8. Likewise, PO proposes the other sizes refer to “a unit that accommodates two receptacle modules,” “a unit that accommodates three receptacle modules”, “a unit that accommodates four receptacle modules, and “a unit that accommodates six receptacle modules.” EX1011, 13-14.

Pet. 22.

Petitioner, however, discounts that proposed claim construction as having been “expressly rejected [by Patent Owner] during prosecution,” and infers that it is inconsistent with the plain language of the claims. Pet. 22–23.

Petitioner additionally urges the following:

Petitioner’s proposed constructions in district court are: (1) “Each of the modular fiber optic cassettes has a cassette width that equals two, three, four, or six times the standard one width unit, without an additional amount. This means the cassette widths must be evenly divisible by the standard width unit” and (2) “A standard width unit means an actual width that is

⁹ Exhibit 1011 is a “Joint Claim Construction Chart” from the United States District Court for the District of Delaware.

standardized in the industry. For example, the width of an SC Duplex footprint.”

Pet. 23.

In this proceeding, Patent Owner does not dispute any of Petitioner’s contentions as to claim construction or offer any construction of its own for any term. We are mindful of Petitioner’s view that Patent Owner’s litigation construction is inconsistent with the plain language of the claims. We also question whether that construction adds clarity in seemingly substituting “width that accommodates” for “width,” and replacing “standard width units” with “receptable modules,” without, on this record, support for such word variations. Nevertheless, our determination whether to institute trial does not require resolution of any claim construction dispute or necessitate that we adopt any particular construction for any claim term. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (holding that only claim terms in controversy need to be construed, and only to the extent necessary to resolve the controversy (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Proposed Grounds Based on Fukui

Petitioner contends that claims 1–30 are unpatentable for either anticipation or obviousness over a ground involving Fukui. Pet. 2. Petitioner also sets forth that the claims are unpatentable based on that ground along with the additional reference, Sauter. *Id.*

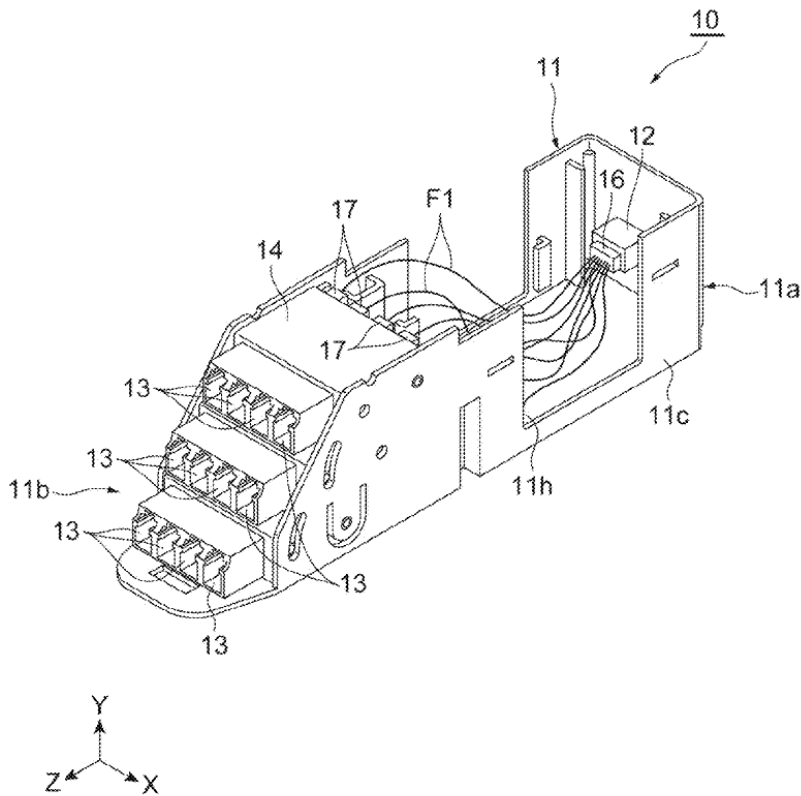
1. Overview of Fukui

Fukui, titled “Multi-Core/Single-Core Conversion Module and Multi-Core/Single-Core Conversion Apparatus,” relates to a multi-core/single-core

conversion module that uses multiple optical fibers to connect a multi-core optical connector to a number of single-core optical connectors in the inner space of a housing. Ex. 1004, codes (54), (57).

Figure 4, reproduced below, illustrates a perspective view of a multi-core/single-core conversion module.

Fig.4

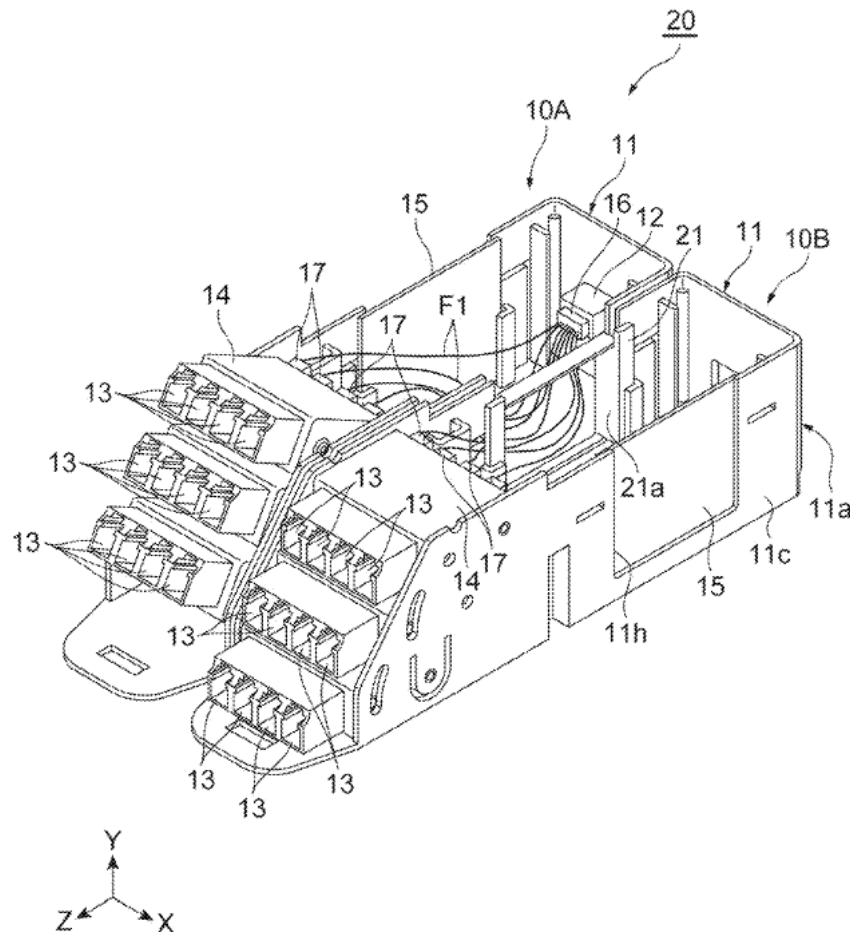


As shown in Figure 4, in conversion module 10 “multi-core optical connector 16 is inserted into the multi-core optical connector adapter 12 from the inner side of the housing 11, and many optical fibers F1 extend from the multi-core optical connector 16.” Ex. 1004, 6:35–39. Further, for each of a number of single-core optical connectors 17, the connector “is inserted into the single-core optical connector adapter 13 from the inner side

of the housing 11, and one optical fiber F1 extends from the single-core optical connector 17.” *Id.* at 6:39–42. In module 10, “each single-core optical connector adapter 13 is inserted into the corresponding adapter socket 14 and the respective adapter sockets 14 are attached to the housing 11 in order from the lowermost tier.” *Id.* at 7:9–13. Each of three tiers of adapter sockets 14 include four single-core optical connector adapters 13. *See id.* at 5:63–6:3; Fig. 4.

Figure 5, reproduced below, illustrates a perspective view of a conversion modules coupling structure.

Fig.5

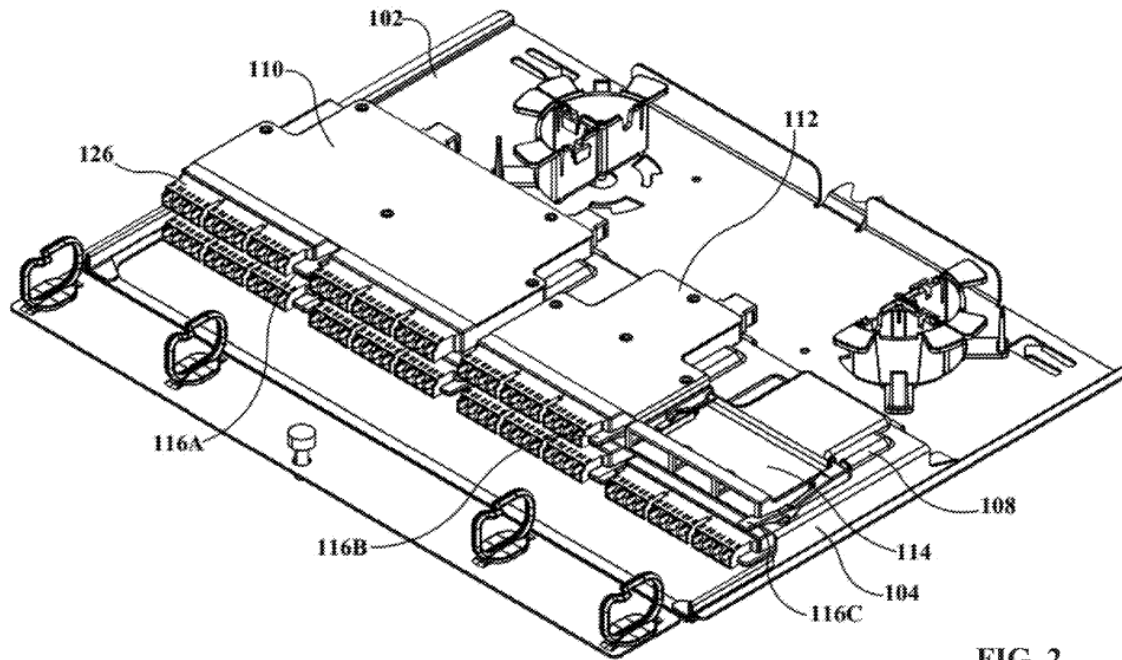


Industries Alliance (EIA) in 1U size, for example, as well as the single-core optical connector adapters 13 can be arranged in plural tiers.” *Id.* at 9:30–35. “[U]p to 1 tier x 12 rows of the modules 10, that is, 144 single-core optical connector adapters 13 in total are housed in 1U size,” and “up to 1 tier x 6 rows of the modules 20, that is, 144 single-core optical connector adapters 13 in total are housed.” *Id.* at 9:35–41. It is also possible that “conversion modules 10 and 20 may be present together in combination.” *Id.* at 9:42–43.

2. *Overview of Sauter*

Sauter, titled “Multi-Gang Cassette System,” relates to “[a] cassette mounting system [that] allows fiber optic cassettes of different sizes to be mounted on the same fiber optic tray or other mounting surface.” Ex. 1006, codes (54), (57).

Figure 2, reproduced below, illustrates a three-dimensional view of an example fiber optic cassette tray with a number of cassettes.



As shown in Figure 2, fiber optic cassette tray 102 provides for the mounting of “cassettes of different sizes (e.g., both single-gang and multi-gang cassettes) on the same cassette tray 102 simultaneously at any position on the mounting interfaces.” Ex. 1006, 5:4–8. Specifically, Figure 2 shows “a single-gang cassette 112, a dual-gang cassette 110, and a single-gang adapter plate 114 are mounted on the upper mounting interface 104 of tray 102.” *Id.* at 5:9–11. Rail guides 108 hold cassettes and adapter plates in place and ensure proper orientation when cassettes and adapter plates are installed from the front of tray 102. *Id.* at 5:16–23. More specifically, “a single-gang cassette 112 or adapter plate 114 will interface with two adjacent rail guides 108 when installed,” whereas “a double-gang cassette will interface with three rail guides 108.” *Id.* at 7:3–8. Although Figure 2 demonstrates a two-layered configuration, Sauter also discloses single-layer cassette trays or trays that stack more than two layers. *Id.* at 6:30–42.

3. Discussion

Supported by the testimony of Dr. Ralph (Ex. 1003), Petitioner explains in detail how all of the features of claims 1–30 are accounted for based on Fukui’s teachings. *See* Pet. 25–93. Petitioner alternatively points to Sauter’s teachings in the event Patent Owner disputes three aspects of Petitioner’s reliance on Fukui’s teachings. Those alternative assessments focus on: (1) various cassette configurations claimed (i.e., limitation [1H] and corresponding limitations designated as “9E” and “17E”) (*see id.* at 93–95); (2) limitations pertaining to “the height of Fukui’s mo[d]ules”; (*see id.* at 95–98); and (3) certain cassette configurations set forth in dependent claims 2, 10, and 18 (*see id.* at 98).

We discern that, at this stage, Patent Owner does not dispute, with any particularity, Petitioner’s above-noted alternative assessments as to Sauter’s teachings in connection with the grounds primarily based on Fukui. Rather, the focus of Patent Owner’s challenge to those Fukui-based grounds arises in connection with Petitioner’s reliance on Fukui’s teachings that is directed to the requirements of independent claims 1, 9, and 17 pertaining to cassettes that include “two,” “three,” “four,” or “six” standard width units relative to a cassette with one standard width unit. *See* Prelim. Resp. 8–15.¹⁰ In particular, in addressing claim 1 specifically, Patent Owner indicates that those requirements are tethered in some capacity to limitations [1C], [1F] and [1H]. *Id.* at 8–9. Limitation [1C] refers to a “tray configured to fit a plurality of different modular fiber optic cassette configurations[.]” Ex. 1001, 10:33–36. Limitations [1F] and [1H], in turn, refer to cassettes of

¹⁰ At times in this Decision, we refer to the pertinent requirements as the “width” limitations.

“two,” “three,” “four,” or “six” standard width units relative to a cassette with one standard width unit. *Id.* at 10:46–11:40.

According to Patent Owner, Fukui’s teachings are “one type of cassette: a single ‘standard width (1W) unit’ cassette” and thus does not disclose cassettes having different widths as is required. Prelim. Resp. 9. As a part of its argument, Patent Owner reproduces Fukui’s Figures 4 and 5 in side-by-side fashion. *Id.* For convenience, we do the same.

Fig.4

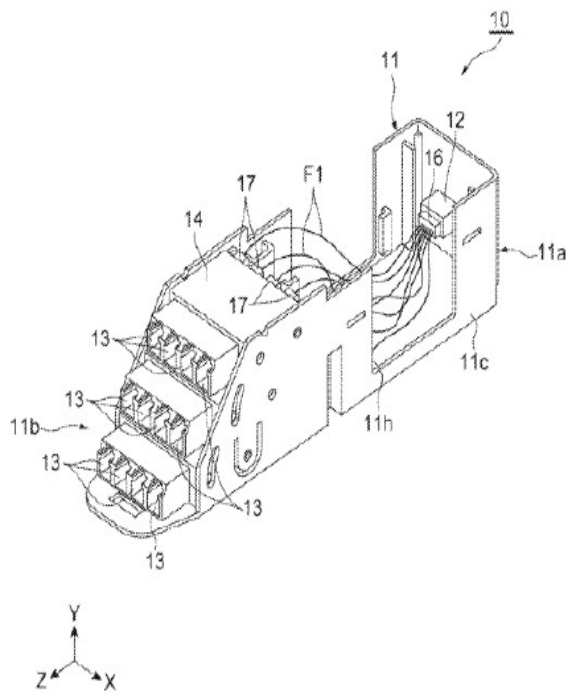


Fig.5

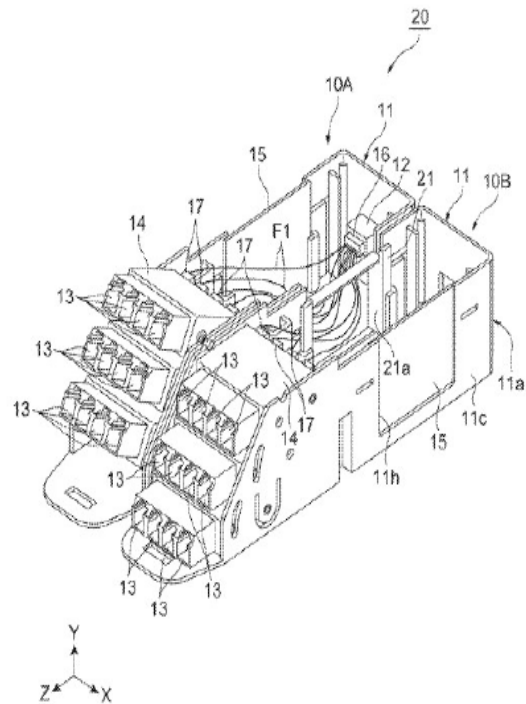


Figure 4, above left, illustrates conversion module 10, and Figure 5, above right, illustrates conversion module 20, that is composed of first unit module 10A coupled to second unit module 10B. Ex. 1004, 6:34–36, 7:23–26. According to Patent Owner, “module 20 is nothing more than two modules coupled together with separate integrally molded housings—not a second module of a different width (e.g., ‘a standard two width (2W) unit [modular

fiber optic cassettes]).” Prelim. Resp. 10 (bracketed terms in original). Based on that characterization, Patent Owner urges that “merely coupling two of the same sizes of cassette together—as taught by Fukui—cannot satisfy the claimed use of differently sized cassettes limitations at issue.” *Id.* at 13.

Stated somewhat generally, the core question underlying Patent Owner’s challenge to Petitioner’s Fukui-based grounds is whether, in Fukui, a conversion module (e.g., 20) that is formed by coupling together two unit modules establishes that conversion module as a new structure identifiable as a unitary cassette.¹¹ We discern that Fukui uses the term “conversion module” to refer to component 10, and uses that same term, i.e., “conversion module” to refer to component 20. *See, e.g.,* Ex. 1004, 6:33–35, 7:23–25. The components 10A and 10B that make-up conversion module 20 are characterized as each being a “unit module.” *See, e.g., id.* at 7:25–27. Thus, once unit modules 10A and 10B are coupled together to form the structure that is “conversion module 20,” the current record reasonably suggests that the conversion module 20 is a component analogous to conversion module 10, but with a larger width, i.e., two times the width. Further, Fukui also characterizes unit modules 10A and 10B as being “fixed” to one another via coupling member 21 (*see, e.g., id.* at 10:11–16) forming “one body” (*see, e.g., id.* at 8:2–3). Further still, as described and shown in Fukui (e.g., Figure 5), conversion module 20 is structured to operate via a singular multicore optical connector 16 from which optical fibers F1 extend to all of the single-core optical connectors 17 of the conversion module. *Id.* at 7:52–

¹¹ There is no dispute on this record that the term “module” as used in Fukui is analogous to the term “cassette” as used in the ’423 patent.

8:6. Thus, conversion module 20 is recognizable has having a singular system of fiber optic components within its body.

We are mindful of Patent Owner’s observation that a different reference, Laarveld, refers to “*two cassettes* 1a and 1b’—not a single cassette—‘that are arranged side by side.’” Prelim. Resp. 13 (quoting Ex. 1026, 14:23–24). We note, however, that although Laarveld describes its coupled cassettes as “two cassettes 1a and 1b,” rather than as a single larger cassette, it also describes “interconnect[ing] patch cassettes” to form “a rigid assembly,” similar to the “one body” language of Fukui. *Compare* Ex. 1004, 8:2–3, *with* Ex. 1026, 3:4–9. It is Patent Owner’s apparent view that Petitioner’s labeling of those side-by-side cassettes in Laarveld as being “coupled cassettes” in the Petition somehow undermines its characterization of Fukui’s teachings. Prelim. Resp. 13–14 (citing Pet. 87–88). That view, however, is insufficiently substantiated on this record as it simply does not take into account adequately Petitioner’s assessment as to the particular teachings of Fukui, and what those teachings would have conveyed reasonably to a skilled artisan.

At this time, we find persuasive Petitioner’s position that Fukui’s teachings account for the pertinent “width” requirements of each of claims 1, 9, and 17. *See, e.g.*, Pet. 30, 32–46. On this record, Dr. Ralph provides sufficient testimony that under either of the parties’ proposed constructions of the limitations involving cassette widths, Fukui’s teachings account for those limitations. *See, e.g.*, Ex. 1003 ¶¶ 71–98.

Patent Owner does not present separate arguments for any other limitation of claims 1, 9, and 17 or any limitation added by dependent claims 2–8, 11–16, and 18–30, which ultimately depend from one of those

independent claims. On the present record, we do not discern that Petitioner has failed to account adequately for all the features of claims 1–30 in connection with each of the above-noted Fukui-based grounds. *See* Pet. 25–98.

4. Conclusion—Fukui-Based Grounds

Having considered the parties’ arguments and evidence before us, we determine that Petitioner has shown a reasonable likelihood of success in showing that the challenged claims are unpatentable based on each of the grounds presented based primarily on Fukui.

E. Proposed Grounds Based on Sauter

Petitioner also proposes alternative grounds of unpatentability involving Sauter. As we noted above, if the Board institutes trial, it will “institute . . . on all grounds in the petition.” CTPG, 5–6; 37 C.F.R. § 42.108(a); *see also PGS Geophysical AS*, 891 F.3d at 1360 (interpreting the statute to require “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”). Accordingly, because we determine that Petitioner has shown a reasonable likelihood of success based on the grounds principally involving Fukui so as to warrant institution of trial, we also institute on the grounds involving Sauter. Although we need not further address those Sauter based grounds, we do make the following observations.

With respect to limitation “width” limitations, Petitioner appears to premise its assessment of that limitation on adoption of Patent Owner’s litigation claim construction pertaining to the cassette widths. *See* Pet. 107–

113.¹² As we note above, however, (*see supra* § III.C), it is dubious on this record that the construction provides meaningful clarity or is supported adequately.

Furthermore, it is clear from the Petition that the Sauter-based grounds require that the width of a cassette must also include a separate fastener attached to the side of the cassette as a part of the determination of the cassette's width. *See, e.g.*, Pet. 104–108. Patent Owner challenges the propriety of that premise. *See* Prelim. Resp. 21–28. For instance, Patent Owner contends that Petitioner's position is "incorrect because it requires integrating a structural feature onto the outside of a cassette's housing to achieve the claimed cassette width." *Id.* at 23. Patent Owner's arguments in that respect may potentially have merit and may be further assessed during trial.

IV. REQUEST FOR DENIAL UNDER 35 U.S.C. § 325

Patent Owner contends that the Board should exercise its discretion to deny under 35 U.S.C. § 325(d) on the theory that the Petitioner relies on substantially the same prior art and arguments that were previously considered by the Office. *See* Prelim. Resp. 31–37. Patent Owner, however, states the following: "Patent Owner recognizes that this argument only reaches Sauter-based grounds, not Fukui-based grounds. This argument thus only needs to be addressed after the Board confirms the fundamental deficiencies in Petitioner's Fukui-based grounds." *Id.* at 31 n.6. Because, as

¹² For instance, in accounting for aspects of the claims pertaining to a "standard one width (1W) unit," Petitioner indicates specifically that its Sauter ground is presented "[u]nder [Patent Owner]'s interpretation." *See, e.g.*, Pet. 104.

set forth above, we do not agree at this time as to any “fundamental deficiencies in Petitioner’s Fukui-based grounds” that inhibit institution of trial, we regard Patent Owner’s § 325 request as moot, and need not consider it further.

V. CONCLUSION

For the reasons set forth above, we conclude that Petitioner has shown a reasonable likelihood that it would prevail with respect to at least one of the challenged claims.

At this stage of the proceeding, the Board has not made a final determination on the construction of any claim term or the patentability of any challenged claim.

VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review of claims 1–30 of the ’423 patent is instituted with respect to the grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the ’423 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

IPR2024-01382
Patent 11,740,423 B2

FOR PETITIONER:

Philip Caspers
pcaspers@carlsoncaspers.com

Samuel Hamer
shamer@carlsoncaspers.com

FOR PATENT OWNER:

Denis Sullivan
dsullivan@barclaydamon.com

Thomas Hoehner
thoehner@barclaydamon.com

Cory Bell
Cory.bell@finnegan.com