

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PPC BROADBAND, INC.,
Petitioner,

v.

TIMES FIBER COMMUNICATIONS, INC.,
Patent Owner.

IPR2022-00947
Patent 11,001,471 B2

Before BART A. GERSTENBLITH, GEORGE R. HOSKINS, and
FRANCES L. IPPOLITO, *Administrative Patent Judges*.

HOSKINS, *Administrative Patent Judge*.

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

I. INTRODUCTION

PPC Broadband, Inc. (“Petitioner”) has filed a Petition (Paper 7, “Pet.”)¹ pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of U.S. Patent No. 11,001,471 B2 (“the ’471 patent”), claims 1–8.

Times Fiber Communications, Inc. (“Patent Owner”) elected not to file a Preliminary Response. *See, e.g.*, 37 C.F.R. § 42.107(a)–(b) (a patent owner *may* file a preliminary response no later than 3 months after a notice granting a filing date to a petition); Paper 6 (Notice of Filing Date Accorded to Petition, dated June 10, 2022), 1.

For reasons provided below, we determine, on behalf of the Director (*see* 37 C.F.R. § 42.4(a)), that the Petition demonstrates a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim. *See* 35 U.S.C. § 314(a). We therefore institute the petitioned *inter partes* review.

II. BACKGROUND

A. *Real Parties-in-Interest and Related Proceedings*

Petitioner identifies itself and Belden Inc. as real parties-in-interest. *See* Pet. 86. Patent Owner identifies itself as a real party-in-interest. *See* Paper 5 (Patent Owner’s Mandatory Notices), 1.

There are five related IPR proceedings, challenging patents related to the ’471 patent. *See, e.g.*, Paper 5, 1. They are IPR2022-00830 (U.S. Patent No. 10,913,632 B2, in which institution was denied after Patent Owner canceled all challenged claims); IPR2022-00831 (U.S. Patent

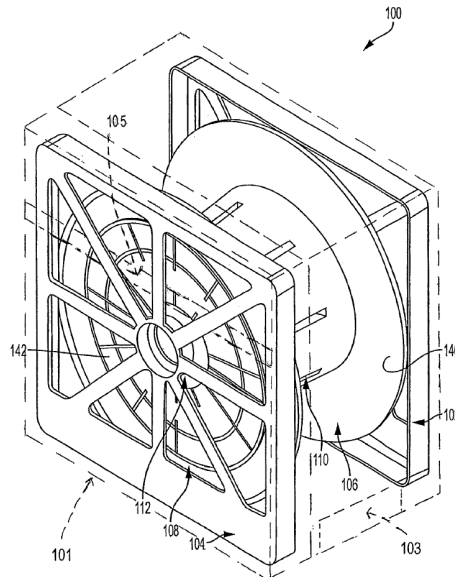
¹ An initially filed petition (Paper 2) was later corrected (Paper 7), with prior approval from the Board. *See* Pet. Cover Page n.1.

No. 10,589,957 B2, in which institution was denied after Patent Owner canceled all challenged claims); IPR2022-00946 (U.S. Patent No. 10,988,342 B2); IPR2022-01087 (U.S. Patent No. 10,941,016 B2); and IPR2022-01088 (U.S. Patent No. 10,906,771 B2).

There is a related U.S. district court litigation in which Patent Owner has asserted five of these six patents against Petitioner. *See Times Fiber Commc'ns, Inc. v. PPC Broadband, Inc.*, No. 1:21-cv-01823 (D. Del.); Pet. 86; Paper 5, 1. On July 1, 2022, the court stayed the litigation “pending at least a decision by the PTAB on institution of the [five] IPR petitions.” *Times Fiber*, Docket Nos. 36, 37.

B. The '471 Patent Specification

The '471 patent is directed to a cable reel apparatus that allows for easy installation of cable at an installation site. *See* Ex. 1001, 1:16–27. Figure 1 of the '471 patent is reproduced below.



The '471 Patent, Figure 1.

Figure 1 is a perspective view of cable reel 100, which stores a coil of cable (not shown), and which “may be carried in a conventional shoulder bag or

satchel . . . and the like 101, with an opening 103 for easy payout of cable supported on the cable reel.” *Id.* at 7:4–6, 8:7–11.

The cable is coiled around hub member 110, and held between first flange 106 and second flange 108. *See id.* at 8:21–24, 9:3–4, Fig. 4A (showing cable C received on first hub portion 150 of hub member 110). The reel structure (hub member 110 and flanges 106 and 106) is rotatably supported by and between two frames 102 and 104. *See id.* at 8:21–24. Specifically, each frame 102 and 104 has flange support 124 (shown in Figures 2 and 6) received within central opening 144 in one of the flanges 106 or 108 (shown in Figure 3). *See id.* at 8:32–34, 8:57–64. This connection may comprise intermeshing gear members 128 and 146, which form braking mechanism 112 to prevent overpayout of the cable. *See id.* at Figs. 2, 3, 8, 8:36–47, 8:64–9:2, 9:50–10:4.

Figures 4B and 5B of the ’471 patent are reproduced below.

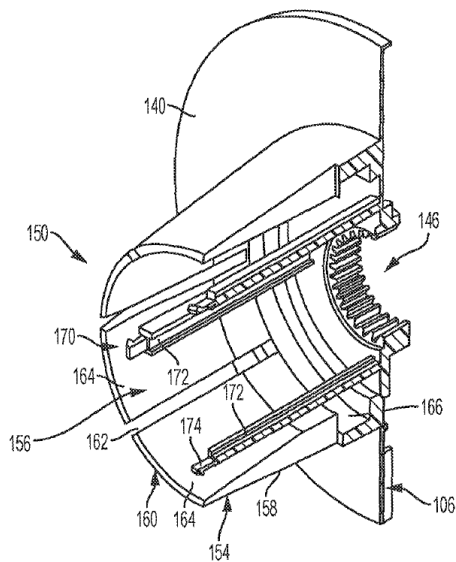


FIG. 4B

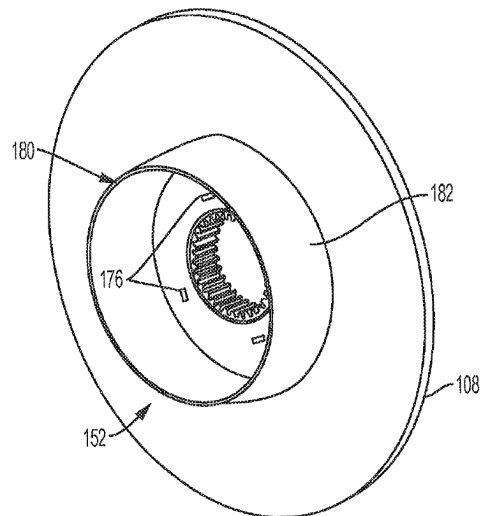


FIG. 5B

The ’471 Patent, Figures 4B and 5B.

Figure 4B is a partial perspective view of first flange 106 and first hub portion 150, and Figure 5B is a perspective view of second flange 108 and

second hub portion 152. *See id.* at 7:11–19, 9:3–11. These two structures are coupled together to form the rotating reel of Figure 1 by inserting wall 180 of second hub portion 152 into inner area 156 formed by wall 154 of first hub portion 150. *See id.* at 9:12–18, 9:42–49. The two reel structures are coupled together by a “friction fit” between wall 180 and flexible segments 164 of wall 154 (*id.* at 9:18–28, 9:44–49), as well as a “[s]econdary engagement” of snap tabs 174 within corresponding slots 176 (*id.* at 9:29–41).

The two reel structures may be decoupled and separated from each other, to install a “prepacked” cable coil C on first hub portion 150, and then recoupled together to form a complete reel. *See id.* at Fig. 4A, 9:12–15, 10:5–18. In this way, cable reel 100 may be reused to dispense multiple cable coils C. *See id.* at code (57), 4:3–6, 4:58–66, 5:29–34.

In one embodiment, “first support frame 102 . . . is secured to the base of the bag [101],” and “second support frame 104 is secured to the cover or flap of the bag.” *Id.* at 10:19–23. Then, when a replenished cable coil assembly (i.e., cable coil C mounted on hub member 110 between flanges 106 and 108) is inserted into the bag, middle flange support 124 of first frame 102 (at the base of the bag) fits inside central opening 144 of the forward flange. *See id.* at 10:23–30. Next, when the bag cover is closed, middle flange support 124 of second frame 104 (at the cover of the bag) fits inside central opening 144 of the rearward flange, so “the operator can then dispense or payout the cable through a cable payout slot or opening in the bag.” *See id.* at 10:30–36.

C. The Challenged Claims of the '471 Patent

The Petition challenges claims 1–8 of the '471 patent, which include independent claims 1 and 4. *See* Pet. 1. We reproduce illustrative claim 1 here:

1. A cable reel apparatus, comprising:
 - a cable reel for holding a coil of cable, the cable reel including,
 - a central longitudinal axis,
 - a first flange configured to be rotatably coupled to a first frame, the first flange having opposite inner and outer sides,
 - a second flange separate from the first flange that is configured to be rotatably coupled to a second frame, the second flange having opposite inner and outer sides, and
 - at least one of the first and second flanges including a hub portion extending transversely from the inner side thereof,
 - wherein the first and second flanges are configured to be releasably coupled to one another for supporting a coil of cable on the hub portion between the first and second flanges along the central longitudinal axis of the cable reel and are configured to be decoupled from one another when replacing the coil of cable once dispensed from the cable reel apparatus,
 - wherein the coil of cable has an inner diameter, and the hub portion is sized to be received in the inner diameter when supporting the coil of cable,
 - wherein a bag is configured such that the second flange is removable from the hub portion of the first flange allowing the coil of cable to be loaded on and unloaded from the hub portion,

wherein the first frame and the second frame are disposed on inner surfaces of the bag that has a payout opening for dispensing cable of the coil of cable wherein the first frame is positioned in a base of the bag and the second frame is positioned at a cover of the bag, such that when the cover of the bag is closed with respect to the base of the bag, the second frame releasably couples with the second flange and such that when the cover of the bag is opened with respect to the base of the bag, the second frame decouples from the second flange, and wherein the coil of cable is prepackaged without a cable reel.

Ex. 1001, 11:14–12:2; *id.* at pg. 20 (Cert. of Correction).

D. Asserted Prior Art

Petitioner relies principally on the following four references. *See* Pet. 1.

Name	Reference	Pub. Date	Exhibit No.
Blunt	US 2012/0168554 A1	July 5, 2012	1004
Fontana	US 6,145,780	Nov. 14, 2000	1005
Brochure	PPC Perfect Tote™ 500 Eco Reel Tote Bag	Sept. 25, 2014 ²	1006
Johanson	US 7,938,357 B2	May 10, 2011	1013

Petitioner asserts each reference qualifies as prior art to the '471 patent by virtue of their respective publication dates preceding the '471 patent's earliest claimed priority date of February 27, 2015. *See* Pet. 1, 4, 6. This assertion is undisputed at this stage of the proceeding.

² Petitioner asserts Brochure is a printed publication as of September 25, 2014, when it was disseminated at the Cable-Tec Expo 2014 in Denver, Colorado. *See* Pet. 10–18 (citing Exs. 1007, 1009, 1010, 1016, 1018–1038).

E. Asserted Grounds

Petitioner proposes the following four grounds of unpatentability for the challenged claims. *See* Pet. 2.

Ground	Claims Challenged	35 U.S.C. § ³	References
1	1–8	103	Brochure, Blunt
2	1–8	103	Brochure, Blunt, Johanson
3	1–8	103	Brochure, Blunt, Fontana
4	1–8	103	Brochure, Blunt, Johanson, Fontana

F. Testimonial Evidence

Petitioner relies on the declaration testimony of Charles A. Eldering, Ph.D. (Ex. 1002) as a proffered technical expert witness. Petitioner also relies on the declaration testimony of Cary Mullin (Ex. 1009), Rebecca Firmani (Ex. 1038), and Mark Banick (Ex. 1039), as factual witnesses regarding Brochure being prior art to the '471 patent.

III. ANALYSIS OF PETITIONER'S PROPOSED GROUNDS

A. Law of Obviousness

A patent claim is unpatentable under 35 U.S.C. § 103 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

³ The Leahy-Smith America Invents Act ("AIA") included revisions to 35 U.S.C. § 103 that became effective in March 2013. The earliest possible effective filing date for the '471 patent is February 27, 2015. *See* Ex. 1001, code (60), 1:3–14. Therefore, in this Decision, we apply the post-AIA version of § 103.

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; (3) the level of ordinary skill in the art; and (4) secondary considerations of nonobviousness, if placed at issue which is not the case at the present time. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

Petitioner contends a person having ordinary skill in the art pertaining to the '471 patent “would have at least a bachelor’s degree in physics or engineering and experience with the installation of cable,” and “[a]dditional education could substitute for professional experience and vice versa.” Pet. 4; Ex. 1002 ¶ 15.

At this stage of the proceeding, we find Petitioner’s proposal is consistent with the level of ordinary skill in the art reflected by the '471 patent and the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978). Therefore, we adopt it in our consideration of the issues presently before us.

C. Claim Construction

We interpret the '471 patent claims “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b). This “includ[es] construing the claim in accordance with the ordinary and customary

meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

Petitioner asserts that, apart from one limitation in claim 4, “no . . . terms need construction and the plain meaning can be applied.” Pet. 5. Petitioner asserts claim 4’s “means for releasably coupling” limitation (Ex. 1001, 12:21–27, pg. 20 (Cert. of Correction)) is a means-plus-function limitation under 35 U.S.C. § 112(f), and Petitioner provides a corresponding construction. *See* Pet. 5–6. For reasons provided below, we determine Petitioner’s challenge to claim 1 provides a sufficient basis to justify institution of review regardless of claim 4, so we do not reach this claim construction issue at the present time. *See* 35 U.S.C. § 314(a) (authorizing institution of *inter partes* review if there is a reasonable likelihood Petitioner would prevail with respect to at least *one* of the challenged claims).

Based on our review of the record at this preliminary stage, we determine no explicit construction of any claim term is needed to decide whether to institute review. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

D. Ground 1—Obviousness over Brochure and Blunt

In Ground 1, Petitioner argues claims 1–8 of the ’471 patent are unpatentable as having been obvious over Brochure and Blunt. *See* Pet. 2, 18–78; Ex. 1002 ¶¶ 44–150. We have reviewed the preliminary record, and we conclude Petitioner has demonstrated a reasonable likelihood of

prevailing on its assertions as to at least claim 1. We begin our analysis with brief summaries of Brochure and Blunt. Then, we address Petitioner’s contentions concerning claim 1.

1. Summary of Brochure

Brochure is a one page document describing the features and use of the Perfect Tote™ 500 Eco cable tote made by Petitioner. *See* Ex. 1006; Pet. 1, 10 (identifying Petitioner as “PPC” and describing Brochure as “PPC’s” brochure). Two photographs from Brochure are reproduced below.



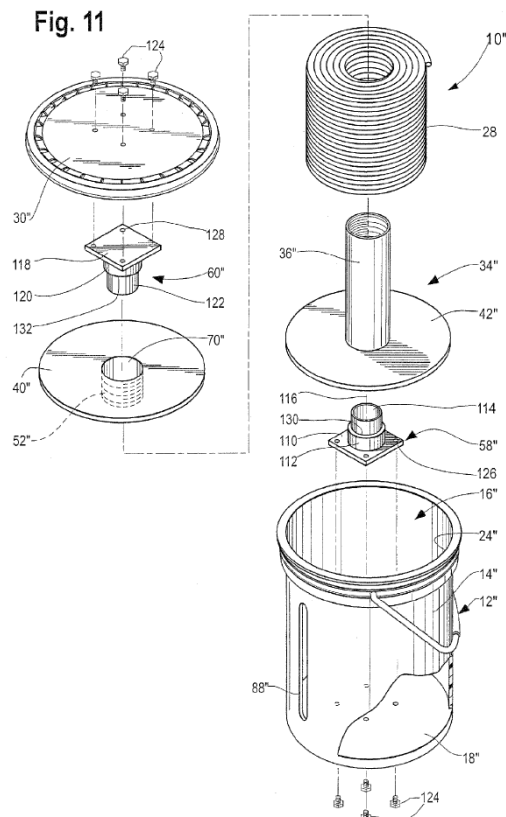
Brochure Photographs.

The first photograph (at left) shows a “500 ft plastic cable reel,” and the second photograph (at right) shows the cable reel placed within a rectangular-shaped “bag” having an opened “side panel,” with the free end of the cable extending through an “[o]pening for smooth cable payout” from the bag. Ex. 1006. The second photograph additionally shows a frame element disposed on the underside of the bag’s side panel, with a “frame hub” disposed at the central part of the frame. *Id.* (“How to use” step 2).

Brochure provides instructions on how to use the illustrated cable tote. In step 1: “Insert the cable reel into the bag so that the flange center hole fits over the frame hub and so that the cable pays straight across the bottom of the reel and out the opening of the bag.” *Id.* In step 2: “Close the side panel and ensure that the frame hub is positioned in the cable reel flange opening.” *Id.* In step 3: “Zip the side panel so it is secured.” *Id.*

2. Summary of Blunt

Blunt provides a “System for Storing a Bulk Supply of Cable for Controlled Payout.” Ex. 1004, code (54). Figure 11 of Blunt is reproduced below.



Blunt, Figure 11.

Figure 11 is an exploded, perspective view of system 10'' for storing a wrapped supply of cable 28. *See id.* ¶¶ 67, 70, 92. System 10'' includes

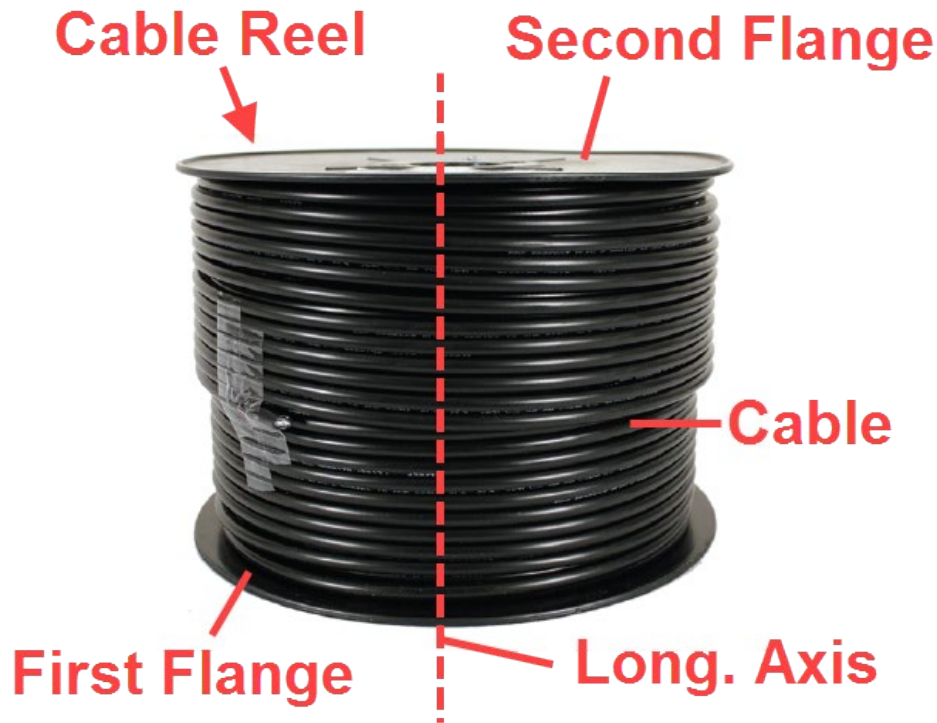
reel 34" composed of core 36" and two flanges 40" and 42" for holding cable 28. *See id.* ¶¶ 71–72, 96–97. Reel 34" is rotatably mounted between two guide components 58" and 60" within enclosed space 16" formed by container 12" and lid 30", to facilitate controlled payout of cable 28 through opening 88" of container 12". *See id.* ¶¶ 70, 75–76, 82, 92–97.

3. *Claim 1*

a) *Brochure vs. Claim 1*

Petitioner contends Brochure depicts a cable reel apparatus that shows every limitation of claim 1, “*except* structural detail of the hub of the reel between its two flanges”—that is, except for the two flanges being releasably coupled to each other. Pet. 18 (emphasis added); *id.* at 43–47; Ex. 1002 ¶¶ 44, 80–86. For the following reasons, based on the present record, we determine this contention is sufficiently supported by the evidence of record to justify institution of review.

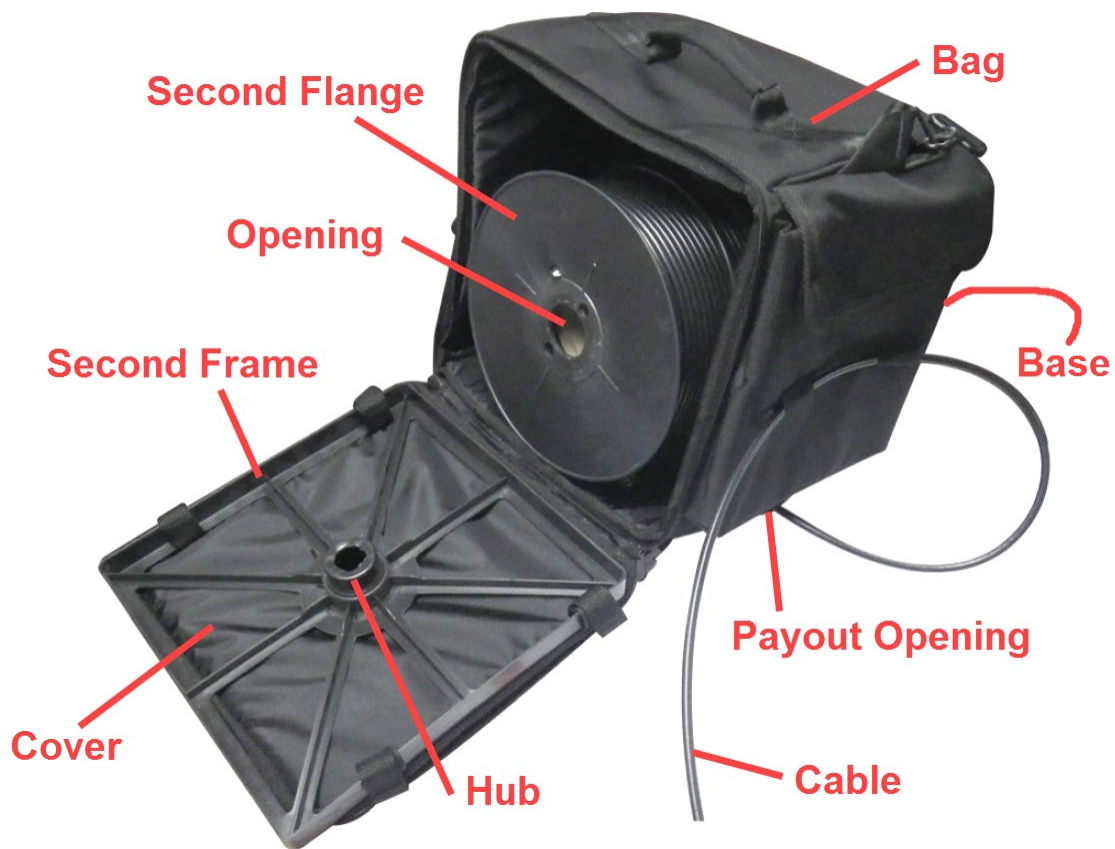
The evidence of record indicates Brochure discloses a cable reel for holding a coil of cable, with the cable reel including a central longitudinal axis, a first flange, and a second flange, as recited in claim 1. *See* Ex. 1001, 11:15–24; Pet. 18–20, 34–38; Ex. 1002 ¶¶ 46, 64–71. To illustrate this, a photograph from Brochure is reproduced below, with our annotations in red.



Brochure Photograph (Annotated in Red).

This photograph shows a “500 ft plastic cable reel.” Ex. 1006. Our annotations identify the “Cable Reel” and its central longitudinal axis (“Long. Axis”), “First Flange,” and “Second Flange,” as well as the “Cable” coiled on to the cable reel. *See id.* Brochure describes how this cable reel is inserted into a rectangular-shaped bag. *See id.*

The evidence of record also indicates the Brochure cable reel’s first flange is configured to be rotatably coupled to a first frame inside the bag, and its second flange is configured to be rotatably coupled to a second frame inside the bag, as recited in claim 1. *See* Ex. 1001, 11:18–24, 11:42–46; Pet. 18–24, 35–41, 53–55; Ex. 1002 ¶¶ 46–50, 66–76, 98–100. To illustrate this, a photograph from Brochure is reproduced below, with our annotations in red.



Brochure Photograph (Annotated in Red).

This photograph shows Brochure's cable reel disposed inside a rectangular-shaped bag. *See* Ex. 1006. Our annotations identify the cable reel's "Second Flange" having an "Opening," the "Bag," and the "Cable" extending out through a "Payout Opening" of the bag for smooth payout from the bag. *See id.* (referring to an "[o]pening for smooth cable payout"). Our annotations additionally identify a "Second Frame" having a "Hub," which is disposed on an inner surface of the bag's "Cover." *See id.* Our annotations further identify the "Base" of the bag, which is the side opposite the cover.

As to the first frame of claim 1, although it is not shown in the photograph above, Dr. Eldering testifies that a person of ordinary skill in the art would have understood that Brochure's apparatus includes a first frame

disposed on an inner surface of the base of the bag, with a hub akin to the hub of the second frame shown in the photograph. *See* Pet. 21–24, 36, 38–39, 40, 53–55; Ex. 1002 ¶¶ 47–50, 67, 71–72, 75, 98–100. Dr. Eldering relies on Brochure’s instructions to “[i]nset the cable reel into the bag so that *the flange center hole fits over the frame hub*” and then “[c]lose the side panel and ensure that *the frame hub is positioned in the cable reel flange opening.*” Ex. 1006 (steps 1 and 2) (emphases added); Ex. 1002 ¶ 48. Dr. Eldering concludes a person of ordinary skill in the art would have understood that the firstly recited “frame hub” refers to the hub of a frame in the base of the bag, and the secondly recited “frame hub” refers to the frame hub identified in the photograph above. *See* Ex. 1002 ¶ 48.

Dr. Eldering also testifies that, when the cover of Brochure’s bag is closed, the cable reel is rotatably mounted between the hub of the first frame and the hub of the second frame, so the cable may be unwound from the reel for “smooth cable payout” as described by Brochure. Ex. 1006; *see* Pet. 22–23, 39–41; Ex. 1002 ¶¶ 49, 73–76.

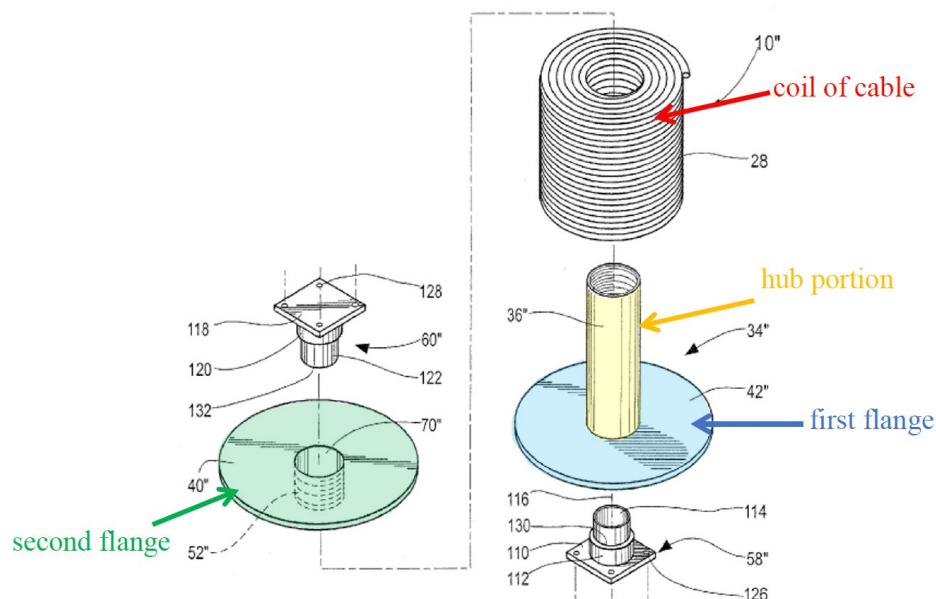
Dr. Eldering moreover testifies that when the cover of Brochure’s bag is closed, the second frame releasably couples with the second flange (i.e., in the photograph reproduced above, the hub of the second frame is received in the flange opening), and when the cover of Brochure’s bag is opened, the second frame decouples from the second flange (i.e., the hub of the second frame is removed from the flange opening), as required by claim 1. *See* Ex. 1001, 11:46–51; Pet. 39–40, 56; Ex. 1002 ¶¶ 73–74, 101–102.

Dr. Eldering’s foregoing testimony is un rebutted in the present record. We determine that the disclosure of Brochure sufficiently supports this un rebutted testimony to justify institution of review.

b) Blunt vs. Claim 1

Petitioner contends “Blunt discloses a cable reel compatible with the [Brochure] bag with a reel structure that allows for replenishing the cable supply,” by separating two releasably coupled flanges from each other, in the fashion required by claim 1. Pet. 18; *id.* at 43–47; Ex. 1002 ¶ 44, 80–86. For the following reasons, based on the present record, we conclude this contention is sufficiently supported by the evidence of record to justify institution of review.

The evidence of record indicates that Blunt, like Brochure, discloses a cable reel for holding a coil of cable, with the cable reel including a central longitudinal axis, a first flange, and a second flange, as recited in claim 1. *See* Ex. 1001, 11:15–24; Pet. 26–27; Ex. 1002 ¶¶ 54–55. To illustrate this, an excerpt of Blunt’s Figure 11 is reproduced below, as annotated in the Petition.



Blunt, Figure 11 (Excerpt Annotated at Pet. 45).

Figure 11 of Blunt illustrates reel 34" for holding cable 28, and having "a two-component construction." Ex. 1004 ¶ 96. The first reel component

is “a combined flange 42” [annotated ‘first flange’ in blue] and core 36” [annotated ‘hub portion’ in yellow].” *Id.* The second reel component, annotated as the “second flange” (in green), is a combined flange 40” and stub 52”. *See id.* The dotted line in Figure 11 identifies the central longitudinal axis of reel 34” when the first and second flanges are attached together to hold cable 28 on core 36” of the first flange, between flanges 40” and 42”. *See id.* ¶¶ 96–97. Thus, as recited in claim 1, the first flange includes a hub portion (i.e., core 36”) extending transversely from the inner side of flange 42”, for supporting a coil of cable 28 on the hub portion between the first and second flanges along the central longitudinal axis of reel 34”. *See* Ex. 1001, 11:25–37; Pet. 43–46; Ex. 1002 ¶¶ 80–85.

The evidence of record also indicates Blunt’s reel 34” is configured to be rotatably coupled between two guide components 58” and 60” received within opposite ends of bore 70” of reel 34”, to permit cable 28 to be progressively and smoothly paid out from reel 34”. *See* Ex. 1004 ¶ 82 (Fig. 3); *id.* ¶¶ 92–97 (Fig. 11); Pet. 24–25, 41–42; Ex. 1002 ¶¶ 53, 77–78. This rotatable mounting of reel 34” between components 58” and 60” is similar to the rotatable mounting of Brochure’s cable reel between two frame hubs, as described above in Section III.D.3(a). *See* Pet. 42; Ex. 1002 ¶ 78.

The evidence of record further indicates that Blunt, unlike Brochure, discloses that its first and second flanges are, as recited in claim 1, “configured to be releasably coupled to one another for supporting a coil of cable on the hub portion,” and also “are configured to be decoupled from one another when replacing the coil of cable once dispensed from the cable reel apparatus.” Ex. 1001, 11:28–41; *see* Pet. 27–28, 46–52; Ex. 1002

¶¶ 54–56, 85–96. In particular, Blunt describes how Figure 11 illustrates a “modified form of system” 10”, referring back to another system 10 illustrated in Figures 1–6. Ex. 1004 ¶ 92. Both systems 10 and 10” provide a first flange having a stub component 52 or 52”, and a second flange having a receptacle 54 or 54” for receiving the stub component of the first flange, whereby the first and second flanges may be releasably maintained together. *Compare id.* at Fig. 3, ¶ 73, *with id.* at Fig. 11 (identifying stub component 52” and illustrating, but not numbering, receptacle 54” in core 36” for receiving stub component 52”). More specifically, as described in Blunt, stub component 52” of the second flange “can be nested in” the “complementary” receptacle 54” of the first flange, via which the two flanges “may be releasably maintained together through frictional engagement, or otherwise as by the use of cooperating threads.” *Id.* ¶ 73. The first and second flanges may then be “selectively separated . . . to allow the core [36”] end . . . to be directed through a pre-coiled supply of cable 28.” *Id.*

The evidence of record moreover indicates that Blunt’s coil of cable 28 “is prepackaged without a cable reel” as recited in claim 1 (Ex. 1001, 12:1–2), such that the prepackaged coil of cable 28 has an inner diameter sized to receive core 36” to load or unload the cable on core 36” when the second flange is removed from the first flange as further recited in claim 1 (*id.* at 11:28–41). *See* Pet. 24, 27–28, 47–49, 57–59; Ex. 1002 ¶¶ 52, 54–56, 87–91, 103–108. In particular, Blunt describes that its system may employ “a pre-coiled wire supply that is slid onto a core.” Ex. 1004 ¶ 10; *see also id.* ¶¶ 72–73 (“The cable 28 can be pre-coiled and slid axially

over the core 36” and “the core end 56 [may] be directed through a pre-coiled supply of cable 28.”).

We determine that the disclosure of Blunt sufficiently supports Petitioner’s contentions to justify institution of review.

c) Motivations for Combining Brochure and Blunt

Petitioner posits two motivations for the obviousness of modifying Brochure’s cable reel apparatus to practice the invention of claim 1. We consider each in turn.

First, Petitioner asserts that if Brochure is found not to disclose a first frame at the base of its bag for rotatably coupling to its cable reel in the bag, then a person of ordinary skill in the art nonetheless would have been motivated to include such a frame in Brochure’s bag. *See* Pet. 21–22, 40; Ex. 1002 ¶¶ 47–50, 75. Petitioner relies on Dr. Eldering’s testimony that “it [was] well known to a [person of ordinary skill in the art] that a cable payout container includes two frames positioned on opposite ends inside the container, each frame including a frame hub to rotatably support a cable reel in the container for cable payout.” Ex. 1002 ¶ 49 (citing Ex. 1002, “Section VI”); *id.* ¶¶ 27–31 (Section VI, discussing Johanson, Wilkinson,⁴ and Galgano⁵). According to Dr. Eldering, this “background knowledge” would have motivated an ordinarily skilled artisan to use a “duplicate frame” (that is, a duplicate of the second frame illustrated in Brochure’s photograph, as identified above) in the base of Brochure’s bag, in order “to support a cable reel for cable payout.” *Id.* ¶ 49. Otherwise, according to Dr. Eldering,

⁴ Ex. 1014 (US 7,204,452 B2, pub. Apr. 17, 2007).

⁵ Ex. 1011 (US 8,016,222 B2, pub. Sept. 13, 2011).

Brochure's cable dispensing system "would not work . . . because the flanges of [Brochure's] cable reel would have to be rotatably supported on opposite ends in a stable and balanced way for the bag to function for cable payout." *Id.* ¶¶ 49–50.

Second, Petitioner asserts a person of ordinary skill in the art would have been motivated to implement a two-component reel structure, such as Blunt's cable reel 34", within Brochure's cable reel apparatus. *See* Pet. 28–34, 36–38, 49–52. This would have been done, according to Petitioner, in order to permit the user to "replenish the supply of cable in Brochure's cable reel when it is exhausted *in an environmentally friendly way.*" *Id.* at 28 (emphasis added); Ex. 1002 ¶ 57. Petitioner points out that Brochure describes its system as being "Environmentally-Friendly," and alleges that Blunt similarly describes how its two-component reel 34" can "be replenished with a new supply of cable when the cable supply in the reel is exhausted such that the reel would be reused in 'an environmentally friendly manner.'" Pet. 28–29 (quoting Ex. 1006; Ex. 1004 ¶ 107) (citing Ex. 1004 ¶¶ 19, 73, 89); Ex. 1002 ¶ 58. Specifically, according to Petitioner, using Blunt's replenishable two-component reel in Brochure "would be environmentally friendly because it would save cost and reduce waste since the entire cable reel does not have to be disposed." Pet. 29 (citing Ex. 1004 ¶ 19; Ex. 1005, 1:21–25, 4:33–57, Fig. 6); Ex. 1002 ¶ 58. Petitioner also asserts this modification could have been achieved with a reasonable expectation of success, given various similarities between Brochure's and Blunt's rotatable mounting of a cable reel, and related teachings in those and other prior art references. *See* Pet. 29–32; Ex. 1002 ¶¶ 59–61. Petitioner

further provides illustrations of how a person of ordinary skill in the art might have implemented this combination. *See* Pet. 32–34; Ex. 1002 ¶ 62.

Upon review of the foregoing, we determine Petitioner’s contentions regarding the motivations that would have led a person of ordinary skill in the art to use, with a reasonable expectation of success, Blunt’s two-component cable reel structure within Brochure’s cable dispensing apparatus, are sufficiently articulated and supported by the evidence of record to justify institution of review.

d) Conclusion Regarding Claim 1

For the foregoing reasons, and based on the present record, we determine Petitioner has provided sufficient argument and evidence in relation to the proposed obviousness of claim 1 over Brochure and Blunt to demonstrate a reasonable likelihood that Petitioner would prevail with respect to this challenge.

4. Claims 2–8

“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” 37 C.F.R. § 42.108(a). We must “either (1) institute as to all claims challenged in the petition and on all grounds in the petition, or (2) institute on no claims and deny institution.” Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019) (“CTPG”), 5–6, 64. We “will not institute on fewer than all claims or all challenges in a petition.” *Id.* at 5, 64; *see also PGS*

⁶ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

Geophysical AS v. Iancu, 891 F.3d 1354, 1359–60 (Fed. Cir. 2018) (stating a decision to institute is “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”).

Thus, because we have decided to grant institution on Ground 1 against claim 1, we do not need to address Petitioner’s contentions for claims 2–8.

E. Ground 2—Obviousness over Brochure, Blunt, and Johanson

In Ground 2, Petitioner argues claims 1–8 of the ’471 patent are unpatentable as having been obvious over Brochure, Blunt, and Johanson. *See* Pet. 2, 79–81; Ex. 1002 ¶¶ 151–154. Specifically, Ground 2 relies on the arguments presented in Ground 1 (*see supra* Section III.D), and then adds additional argument to consider in the event that Brochure is found not to disclose or render obvious a first frame at the base of its bag for rotatably coupling to its cable reel, as recited in claim 1. *See* Pet. 79; Ex. 1002 ¶ 151. Petitioner contends Johanson discloses such a frame, and asserts a person of ordinary skill in the art would have been motivated to use such a frame in the bag of the Brochure-Blunt combination resulting from Ground 1. *See* Pet. 79–81; Ex. 1002 ¶¶ 152–154.

Petitioner cites Johanson’s Figures 1 and 2 as disclosing cable dispenser 10 including box 12, which houses a pair of duplicate end plates 14 to support spool 16 for rotation therebetween and dispense elongate material 18. *See* Pet. 79–80 (citing Ex. 1013, 2:55–3:10); Ex. 1002 ¶ 152; *see also* Ex. 1013, Fig. 4 (illustrating spool 16 and elongate material 18). Petitioner asserts a person of ordinary skill in the art “would have found it obvious to include a duplicate frame in the base (‘first frame’)

of the [Brochure-Blunt bag] to provide duplicate frames positioned at opposite ends inside the bag in mirror images as in Johanson,” in order “to rotatably support the reel in a stable and balanced position for cable payout, to have a simple structure, and to save cost from having to manufacture only one part.” Pet. 80; Ex. 1002 ¶¶ 153–154. Petitioner relies on much of the same evidence discussed above in Ground 1 in relation to establishing this motivation based more generally on “background knowledge,” as supporting this contention in Ground 2. *See supra* Section III.D.3(c); Pet. 80–81; Ex. 1002 ¶¶ 153–154.

Upon review of the foregoing, we determine Petitioner’s contentions regarding the motivations that would have led a person of ordinary skill in the art to use, with a reasonable expectation of success, Johanson’s two-frame reel support within the bag of the Brochure-Blunt combination resulting from Ground 1, are sufficiently articulated and supported by the evidence of record to justify institution of review. Thus, based on the present record, we determine Petitioner has demonstrated a reasonable likelihood that Petitioner would prevail, at least with respect to challenging claim 1 as having been obvious over Brochure, Blunt, and Johanson. As discussed above, we do not need to address Petitioner’s contentions for claims 2–8.

F. Ground 3—Obviousness over Brochure, Blunt, and Fontana

In Ground 3, Petitioner argues claims 1–8 of the ’471 patent are unpatentable as having been obvious over Brochure, Blunt, and Fontana. *See* Pet. 2, 81–84; Ex. 1002 ¶¶ 155–159. Specifically, Ground 3 relies on the arguments presented in Ground 1 (*see supra* Section III.D), and then

adds additional argument to consider in the event that Blunt is found not to disclose “the coil of cable is prepackaged without a cable reel” as recited in claim 1. *See* Pet. 81; Ex. 1002 ¶ 155. Petitioner contends Fontana discloses such a prepackaged coil of cable, and asserts a person of ordinary skill in the art would have been motivated to use such a prepackaged coil of cable in the apparatus of the Brochure-Blunt combination resulting from Ground 1. *See* Pet. 81–84; Ex. 1002 ¶¶ 156–159.

Petitioner cites Fontana as disclosing “an apparatus for dispensing a *prepackaged* coil of cable without a spool ‘[t]o reduce costs and have a more ecological packaging.’” Pet. 81 (emphasis added) (quoting Ex. 1005, 1:21–25) (citing Ex. 1005, Fig. 6, 1:13–20, 4:33–57); Ex. 1002 ¶ 156. Petitioner additionally asserts Fontana discloses using a prepackaged and reel-less coil of cable 15 in combination with spool 12, wherein “[s]pool 12 functions to support cable coil 15 and includes ‘two flanges or half-spools’ coupled together via threads.” Pet. 81–83 (citing Ex. 1005, Fig. 6, 1:21–25, 1:65–67, 2:29–36, 3:22–45, 3:61–65, 4:38–53); Ex. 1002 ¶¶ 156–157. Petitioner asserts a person of ordinary skill in the art would have been motivated “to substitute the supply of cable of Brochure’s cable reel as modified with Blunt for the equivalent cable coil 15 of Fontana so that the supply of cable in Brochure’s modified cable reel would be replenished when it is exhausted.” Pet. 83; Ex. 1002 ¶ 158. Petitioner finds additional motivation “to avoid unravelling of the cable during storage as taught by Blunt and/or to protect the cable from atmospheric corrosion or damage during transportation and storage.” Pet. 83 (citing Ex. 1004 ¶ 87; Ex. 1012, 1:6–33); Ex. 1002 ¶ 159.

Upon review of the foregoing, we determine Petitioner's contentions regarding the motivations that would have led a person of ordinary skill in the art to use, with a reasonable expectation of success, Fontana's prepackaged coil of cable within the apparatus of the Brochure-Blunt combination resulting from Ground 1, are sufficiently articulated and supported by the evidence of record to justify institution of review. Thus, based on the present record, we determine Petitioner has demonstrated a reasonable likelihood that Petitioner would prevail, at least with respect to challenging claim 1 as having been obvious over Brochure, Blunt, and Fontana. As discussed above, we do not need to address Petitioner's contentions for claims 2–8.

G. Ground 4—Obviousness over Brochure, Blunt, Johanson, and Fontana

In Ground 4, Petitioner argues claims 1–8 of the '471 patent are unpatentable as having been obvious over Brochure, Blunt, Johanson, and Fontana. *See* Pet. 2, 81–84; Ex. 1002 ¶¶ 155–159.

Based on the present record, we believe Petitioner intends Ground 4 to be a combination of Grounds 2 and 3, to be considered in the event that Brochure is found not to disclose a first frame at the base of its bag for rotatably coupling to its cable reel (per Ground 2), *and* Blunt is found not to disclose a coil of cable that is prepackaged without a cable reel (per Ground 3). In any event, pursuant to U.S. Patent and Trademark Office rules and policy, we must either institute as to all grounds in the Petition, or deny institution entirely. *See supra* Section III.D.4. Thus, because we have decided to grant institution on Grounds 1–3, we do not need to address Petitioner's contentions for Ground 4.

IV. CONCLUSION

For the above reasons, we determine the information presented in the record establishes there is a reasonable likelihood that Petitioner would prevail with respect to at least one claim of the '471 patent challenged in the Petition. Accordingly, we institute an *inter partes* review of claims 1–8 on all grounds presented in the Petition.

At this preliminary stage, the Board has not made a final determination with respect to the patentability of the challenged claims or any underlying factual or legal issue. The Board's final determination will be based on the record as developed during the *inter partes* review.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted for claims 1–8 of the '471 patent on all grounds presented in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which commences on the entry date of this decision.

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FOR PETITIONER:

Cory V. Bell
Biju Chandran
Xirui Zhang
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP
cory.bell@finnegan.com
biju.chandran@finnegan.com
xirui.zhang@finnegan.com
PPC-Broadband-IPR@finnegan.com

FOR PATENT OWNER:

Dale Chang
Jonathan M. Strang
Richard G. Frenkel
LATHAM & WATKINS LLP
dale.chang@lw.com
jonathan.strang@lw.com
rick.frenkel@lw.com