

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMMSCOPE TECHNOLOGIES LLC,
Petitioner,

v.

BELDEN INC.,
Patent Owner.

Case No. IPR2023-01056
Patent 9,991,030 B2

**DECLARATION OF DR. CHARLES A. ELDERING IN SUPPORT OF
PATENT OWNER RESPONSE**

CommScope v. Belden
IPR2023-01056

Belden EX-2012

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I. INTRODUCTION

131. I, Dr. Charles A. Eldering, submit this Declaration in Support of the Patent Owner Response to state my opinions on the matters described below. In September 2023, I prepared a first Declaration in Support of Patent Owner Preliminary Response (“First Declaration”). EX-2001 ¶¶1-130.

132. I have been retained on behalf of Patent Owner, Belden Inc. (“Belden”), as an independent expert for the above-identified inter partes review (“IPR”) proceeding involving Patent 9,991,030 B2 (“’030 Patent”).

133. Petitioner, CommScope Technologies LLC (“CommScope”), challenges claims 1-3, 9-14, 16-18 (the “Challenged Claims”) of the ’030 Patent.

134. I have been asked to, and have, reviewed the Expert Declaration of Kenneth Cornelison (“Cornelison” or “Mr. Cornelison”) in which Cornelison has asserted and offered opinions that all of the Challenged Claims are anticipated and/or obvious in view of four primary references (U.S. Patent Publication No. 2013/0248240 (Glew) (EX-1008), U.S. Patent No. 3,622,683 (“Roberts”) (EX-1009), U.S. Patent No. 9,363,935 (“Cook”) (EX-1010), and U.S. Patent Pub. No. 2006/0169478 (Clark-478) (EX-1025)) and three secondary references (U.S. Patent No. 3,911,200 (“Simons”) (EX-1012), U.S. Patent No. 3,233,036 (“Jachimowicz-036”) (EX-1013), and U.S. Patent No. 3,894,172 (“Jachimowicz-172”) (EX-1014)) (collectively, the “Petitioner Prior Art”).

135. Petitioner sets forth eleven different grounds, including three anticipation grounds and eight obviousness grounds.

136. The anticipation grounds are as follows:

- a. Ground 1 – Claims 1-3, 9-14, 16-18 are anticipated by Cook
- b. Ground 3 – Claims 1-3, 9-14, 16-18 are anticipated by Glew
- c. Ground 5 – Claims 1-3, 9-11, 13, 16-18 are anticipated by Roberts

137. The obviousness grounds are as follows:

- a. Ground 2 – Claim 11 is obvious in view of Cook and Glew and/or the knowledge of a POSITA
- b. Ground 4 – Claims 1-3, 9-14, 16-18 are obvious in view of Glew and Cook and/or the knowledge of a POSITA
- c. Ground 6 – Claims 1-3, 9-11, 13, 16-18 are obvious in view of Roberts and Jachimowicz-172 and/or the knowledge of a POSITA
- d. Ground 7 – Claims 1-3, 9-11, 13, 16-18 are obvious in view of Roberts, Jachimowicz-036 and/or the knowledge of a POSITA
- e. Ground 8 – Claim 11 is obvious in view of Any of Grounds 5-7 and Glew and/or the knowledge of a POSITA
- f. Ground 9 – Claims 12 and 16 are obvious in view of Any of

Grounds 5-8 and Simons and/or the knowledge of a POSITA

g. Ground 10 – Claims 1-3, 9-14, 16-18 are obvious in view of

Clark-478 and Roberts, Glew and/or the knowledge of a POSITA

h. Ground 11 – Claims 3 and 9 are obvious in view of any of

Grounds 3-7 in view of one or more of Cook and/or the

knowledge of a POSITA

138. I have been asked by Belden to prepare this Declaration setting forth my additional comments and opinions on whether the Challenged Claims would have been anticipated and/or obvious to a person of ordinary skill in the art at the time of the invention of the '030 Patent (2013) in light of the Petitioner Prior Art.

139. For the reasons that follow and previously presented in my First Declaration (EX-2001), I respectfully disagree with Mr. Cornelison. Instead, it is my opinion that the proposed grounds do not render any of the Challenged Claims anticipated or obvious. This Declaration sets forth my additional opinions and the bases, reasons, and evidence relied upon in forming those opinions.

II. QUALIFICATIONS AND BACKGROUND

140. My qualifications and background, and my curriculum vitae (Appendix A), are set forth in my First Declaration (EX-2001).

III. MATERIALS CONSIDERED

141. In forming my opinions expressed below, in addition to my own

knowledge and experience based upon my work in the field of cable technology as described below, I have considered the documents provided to me by Belden’s counsel (“counsel”):

EXHIBIT	DESCRIPTION
EX-1001	U.S. Patent No. 9,991,030 (“’030 Patent”)
EX-1002	Office Action dated 06/28/2019
EX-1003	Amendment and Response to Non-Final Office Action dated 10/3/2017
EX-1004	-
EX-1005	Scheduling Order, C.A. No. 22-783-RGA (D. Del.)
EX-1006	Expert Declaration of Kenneth Cornelison
EX-1007	<i>Curriculum Vitae</i> of Kenneth Cornelison
EX-1008	U.S. Patent Publication No. 2013/0248240 (“Glew”)
EX-1009	U.S. Patent No. 3,622,683 (“Roberts”)
EX-1010	U.S. Patent No. 9,363,935 (“Cook”)
EX-1011	U.S. Patent No. 7,335,837 (“Pfeiler”)
EX-1012	U.S. Patent No. 3,911,200 (“Simons”)
EX-1013	U.S. Patent No. 3,233,036 (“Jachimowicz-036”)
EX-1014	U.S. Patent No. 3,894,172 (“Jachimowicz-172”)
EX-1015	U.S. Patent No. 4,428,787 (“Pan”)
EX-1016	<i>Electronic Wire & Cable - A User’s Guide: Performance and Selection</i> , Section 5: Multiconductor Cables, AT&T (1987)
EX-1017	Whitham D. Reeve, <i>Subscriber Loop Signaling and Transmission Handbook – Digital</i> , IEEE Telecommunications Handbook Series (1995)
EX-1018	Whitham D. Reeve, <i>Subscriber Loop Signaling and Transmission Handbook – Analog</i> , IEEE Telecommunications Handbook Series (1992)
EX-1019	U.S. Patent No. 5,380,591 (“Keogh”)
EX-1020	U.S. Patent No. 1,727,972 (“Ford”)
EX-1021	U.S. Patent No. 1,956,730 (“Reichelt”)
EX-1022	U.S. Patent No. 3,803,340 (“Jachimowicz-340”)
EX-1023	Canadian Patent Application No. 2,058,046 (“Tessier”)
EX-1024	U.S. Patent No. 4,262,164 (“Nutt”)
EX-1025	U.S. Patent Pub. No. 2006/0169478 (“Clark-478”)

EXHIBIT	DESCRIPTION
EX-1026	U.S. Patent Publication No. 2010/0206609 (“’609 Publication”)
EX-1027	U.S. Patent No. 5,670,748 (“Gingue”)
EX-1028	G.F. Moore, Electric Cable Handbook, BICC Cables (3rd. Ed. 1997)
EX-1029	The New IEEE Standard Dictionary of Electrical and Electronics Terms (5th ed. 1993)
EX-1030	Neil Sclater and John Markus, Electronics Dictionary, McGraw-Hill (6th Ed. 1997)
EX-1031	Draka – B03: Rodent protection (2009-01-19)
EX-1032	U.S. Patent No. 5,427,643 (“Aitken”)
EX-1033	U.S. Patent No. 4,213,280 (“Sandborn”)
EX-1034	U.S. Patent No. 4,439,632 (“Aloisio”)
EX-1035	U.S. Patent No. 4,327,248 (“Campbell”)
EX-1036	U.S. Patent No. 5,518,836 (“McCullough”)
EX-1037	US Patent Publication No. 2011/0147039 (“Smith”)
EX-1038	US Patent No. 7,532,794 (“Cook-794”)
EX-1039	US Patent No. 6,074,503 (“Clark-503”)
EX-1040	U.S. Patent No. 4,755,629 (“Beggs”)
EX-1041	Alcatel Cable Systems Product Catalog (circa 1988-1990)
EX-1042	U.S. Patent No. 6,378,283 (“Barton”)
EX-1043	U.S. Patent No. 6,570,095 (“Clark”)
EX-1044	U.S. Patent No. 6,365,836 (“Blouin”)
EX-1045	Declaration of Sylvia D. Hall-Ellis, PhD. re. EX-1016, EX-1017, EX-1018 and EX-1028
EX-2001	Declaration of Dr. Charles A. Eldering in Support of Patent Owner Preliminary Response (“Eldering”)
EX-2002	August 29, 2016 Amendment (U.S. Application No. 14/520,125)
EX-2003	March 7, 2017 Amendment (U.S. Application No. 14/520,125)
EX-2004	March 27, 2017 NOA (U.S. Application No. 14/520,125)
EX-2005	May 31, 2017 Original Claims (Application No. 15/610,504)
EX-2006	U.S. Patent No. 8,450,606 B2 (“McNutt”)
EX-2007	U.S. Patent Application Publication No. 2016/0037691 (“Kroushl”)
EX-2008	NEPTCO – NEPTAPE® Data Sheet – NEPTAPE Foil Free Edge Shielding Tapes: General Information (8/2000)
EX-2009	NEPTCO – NEPTAPE® Data Sheet – Foil Free Edge Shielding Tapes - NEPTAPE® F1141 (8/2000)

EXHIBIT	DESCRIPTION
EX-2010	Declaration of Kenneth Cornelison, <i>Belden Inc. v. CommScope, Inc.</i> , Civ. No. 22-783-RGA (D. Del.) (February 10, 2024)
EX-2011	Deposition Transcript. Kenneth Cornelison (March 1, 2024)
EX-2013	U.S. Patent No. 7,923,641 (“Smith-641”)
EX-2014	U.S. Patent No. 8,927,866 (“Cornelison Patent”)
EX-2015	Dictionary Definition of “Lateral” (The American Heritage College Dictionary) (2002)

IV. RELEVANT LEGAL STANDARDS

142. In preparing this declaration and forming my opinions, I am relying on certain legal principles that counsel explained to me.

143. I have reviewed Mr. Cornelison’s summaries of the Relevant Legal Principles with respect to claim construction, anticipation, and obviousness. I do not disagree with those summaries.

A. LEVEL OF ORDINARY SKILL IN THE ART

144. I understand that a person of ordinary skill in the art is determined by considering (1) the type of problems encountered in the art, (2) prior art solutions to those problems, (3) the rapidity with which innovations are made, (4) the sophistication of the technology, and (5) the educational level of active workers in the field.

145. I understand that I must evaluate the ’030 Patent and the Petitioner Prior Art from the perspective of a person of ordinary skill in the art. That is, the ’030 Patent and the Petitioner Prior Art must be evaluated through the eyes of a person with ordinary skill in the relevant art at the time of the invention of this patent

(“POSITA”).

146. I understand that the earliest application to which the '030 Patent claims priority was a provisional application (No. 61/894,728) filed on October 23, 2013. I have been asked to assume that the invention date of the Challenged Claims is October 23, 2013 (*i.e.*, the time of the invention).

147. In my First Declaration, I set forth my opinion regarding the education and experience of a POSA. EX2001 ¶¶24-27.

148. My opinions in this Declaration are based on the perspective of a person of ordinary skill in the art in the 2013 timeframe. This is true even if the testimony is stated in the present tense.

V. THE CHALLENGED CLAIMS ARE NOT ANTICIPATED OR OBVIOUS.

A. COOK AS THE PRIMARY REFERENCE (GROUNDS 1 & 2)

149. In my First Declaration, I explained that Cook (EX-1010) does not disclose or render obvious in combination with Glew (EX-1008) any shield layer (or barrier tape) with conductive material contained between two layers of a dielectric material and extending to each lateral edge of the two layers of the dielectric material. EX-2001 ¶¶34-55, 100-103.

150. In that analysis, I explained that a POSITA reading Cook and Application No. 12/653,804 that issued as U.S. Patent No. 8,450,606 B2 (“McNutt”) (EX-2006)) that was incorporated by reference in Cook (Cook 6:59-7:1) would be

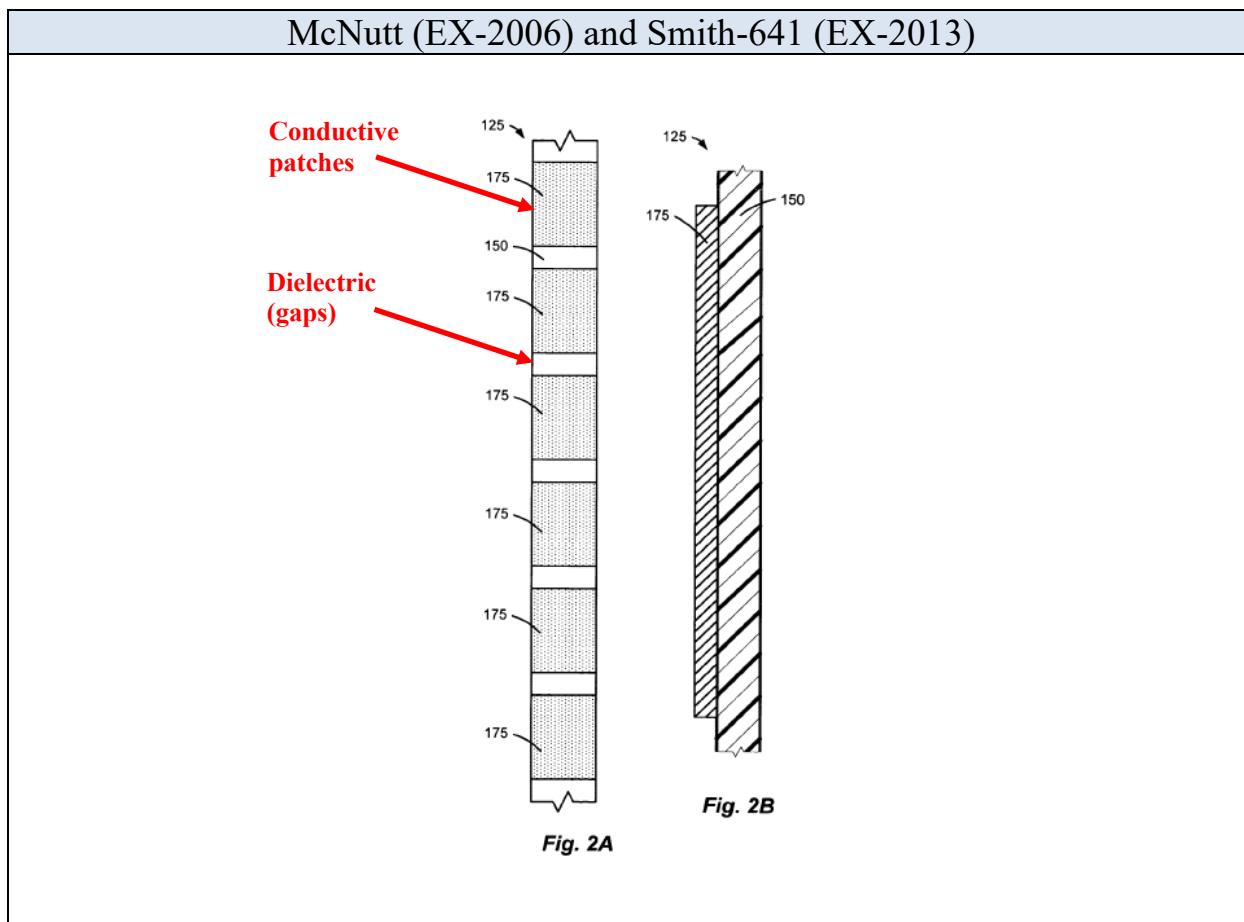
discouraged from using a continuous shield instead of the relatively continuous shield of FIG. 8D. EX-2001 ¶¶45-47.

151. In addition, that same section of Cook also incorporates by reference U.S. Patent Application No. 12/313,914 that issued as U.S. Patent No. 7,923,641 (“Smith-641”) (EX-2013). Like McNutt, Smith-641 shares a common inventor to Cook (Christopher W. McNutt) and teaches the benefits of a discontinuous shield describing various disadvantages of such a continuous shield.

152. Both patents incorporated by reference into Cook teach that “complications can arise when a cable is encased by a shield that is electrically continuous between the two ends of the cable.” McNutt 1:63-2:4; Smith-641 1:42-50. One of the disadvantages is that the “continuous shield can inadvertently carry voltage along the cable” such that “[i]f a person contacts the shielding, the person may receive a shock if the shielding is not properly grounded.” McNutt 2:5-15; Smith-641 1:51-61. Another complication is that “a continuous shield can also set up standing waves of electromagnetic energy based on signals received from nearby energy sources” that “can radiate electromagnetic energy, somewhat like an antenna, that may interfere with wireless communication devices or other sensitive equipment operating nearby. McNutt 2:16-21; Smith-641 1:62-67.

153. Rather than use a continuous shield, McNutt and Smith-641 disclose a tape that “can be a shield that is electrically discontinuous or exhibits a high level of

resistance between opposite ends of a cable.” McNutt 2:39-60, Abstract (“patches of electrical conductive material ... provide a shield that is electrically discontinuous”), 2:26-31 (“effectively suppresses crosstalk and/or other interference without providing an electrically conductive path between opposite ends of the cable”), 3:30-34, 4:20-36 (“The present invention supports shielding a communication cable, wherein at least one break or discontinuity in a shielding material electrically isolates shielding at one end of the cable from shielding at the other end of the cable.”), 5:12-15, 6:10-20, 6:35-42 (“each patch 175 is electrically isolated from the other patches 175. That is, the respective physical separations between the patches 175 can impede the flow of electricity between adjacent patches 175”), 8:28-30 (“the segmented tape 125 encircles or encases the conductors 105 in discontinuous, conductive patches”), 11:8-12 (“an electrically discontinuous shield that protects against electromagnetic interference”), FIGS. 2A-2B; Smith-641 Title (“Communication Cable Comprising Electrically Isolated Patches Of Shielding Material”), Abstract, 2:15-45, 2:66-3:3, 3:48-54; 3:58-63, 4:36-39, 5:18-28, 5:43-50, 7:32-34, 10:16-20, FIGS. 2A-2B.



154. McNutt also teaches that “continuous cable shields are typically grounded at both ends of the cable to reduce shock hazards and loop currents that can interfere with transmitted signals.” McNutt 2:12-15. Unlike a continuous cable shield, the “relatively continuous” conductive layer disclosed in Cook FIG. 8D can be optionally grounded and if so only at either end of the cable (*i.e.*, not both ends of the cable like a continuous shield).

155. Cornelison’s own patent (U.S. Patent No. 8,927,866) (EX-2014) also teaches the advantages of using a discontinuous conductive layer in a shield. EX-2014 Abstract (“discontinuous conductive segments”), 1:45-52 (“while gaps

between the conductive segments reduce the emission of electromagnetic energy from the conductive material and also reduce the susceptibility of the conductive material to radiated electromagnetic energy”), 2:60-3:13, 3:21-24 (“two barrier layers 35 and 37 of discontinuous conductive material are used”), 3:31-33 (“The discontinuous nature of the conductive segments 34 and 38 reduces or eliminates radiation from the barrier layers 35 and 37”), 4:43-47, FIGS. 2-4.

156. A POSITA reviewing the entirety of Cook, including McNutt and Smith-641, which are both incorporated by reference, would not understand that the “relatively continuous shield” made with a “patch” of conductive material was actually a continuous shield (and would be discouraged from making the “relatively continuous shield” shown in FIG. 8D a continuous shield). A POSITA would understand that the discontinuous shield provides the appropriate electrical characteristics for controlling interference while avoiding the well understood disadvantages of continuous shields (e.g. creation of a shock hazard, potential ground loops that act as an antenna).

B. GLEW AS THE PRIMARY REFERENCE. (GROUNDS 3 AND 4)

157. In my First Declaration, I explained that Glew (EX-1008) does not disclose or render obvious alone or in combination with Cook (EX-1010) a barrier tape with conductive material extending to each lateral edge of two layers of dielectric material. EX2001 ¶¶56-73, 85-103.

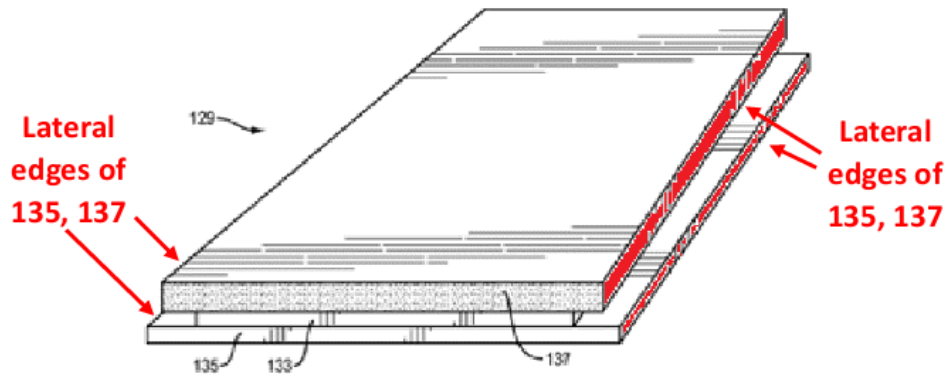


FIG. 13C

158. I also discussed several examples (i.e., Roberts, Kroushl, NEPTAPE®) of foil-free edge tapes, where just like the tape disclosed in Glew FIG. 13C (reproduced above with annotations), the width of the conductive layer of the tape was intentionally and advantageously narrower than the dielectric layers to avoid the disadvantages of having an exposed conductive edge. EX-2001 ¶¶88-97. Accordingly, a POSITA would understand that having layers with different widths to avoid having the conductive layer exposed would have several advantages.

159. Cornelison alleges that “a POSITA would understand that when a three-layer tape, such as shown in FIG. 13C, is manufactured for use in a cable that the three layers would be aligned along the side edges.” EX-1006 ¶138. I disagree.

160. During his deposition (EX-2011 85:13-88), Cornelison acknowledged that Glew discloses that several different conventional manufacturing techniques could be used to manufacture the tape shown in FIG. 13C with different widths for the three layers. Glew ¶¶[0195], [0199] (“The multi-layer tapes discussed above can

be manufactured in a variety of ways.”).

The various layers, e.g., polymeric substrate layer, nonwoven fabric layer, and metallic layer can be bonded to their adjacent layer using various techniques. In some embodiments, the layers can be bonded using an adhesive or other bonding agents. In other embodiments, the layers can be mechanically affixed or bonded to one another. For example, the metallic layer can be joined to a nonwoven layer by needlepunching, as discussed in more detail below. For another example, the polymeric layer and/or the nonwoven fabric layer can be thermally bonded to each other or to the metallic layer by selectively heating portions of the layers to a temperature sufficient to melt the polymer components, e.g., by ultrasonic welding or calender bonding. *Glew ¶[0199]*.

In other examples, the polymeric layer and/or the nonwoven fabric layer can be thermally bonded to each other or to the metallic layer by ultrasonic bonding. For example, the layers of material can be drawn between a horn, which provides high frequency sound waves, and a rotary calendar, referred to as an anvil. The sound energy can generate localized heat through mechanical vibration at the embossing points of the anvil, thereby fusing the material. *Glew ¶[0200]*.

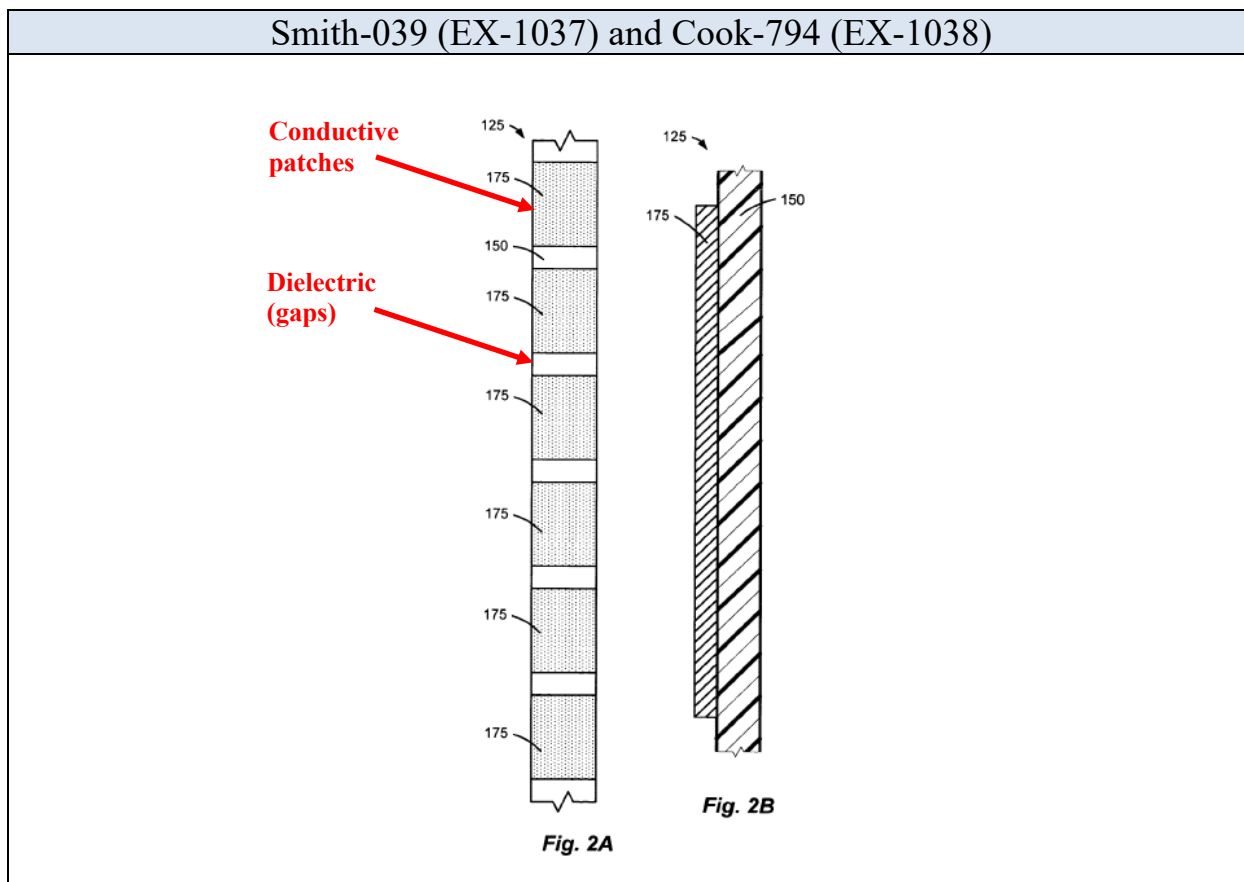
161. Cornelison relied upon two prior art references for the disclosure of the allegedly advantageous slitting process (Smith-039 (EX-1037) and Cook-794 (EX-1038)). But he admitted that both references are used for manufacturing tapes with discontinuous metallic layers, where there is a less of concern of having exposed

conductive edges. EX-1006 ¶¶138 (Smith-039 “shows slitting three-layer tapes where the conductive layer is discontinuous”), 176 (same), 183; EX-2011 89:12-100:8.

162. Smith-039 and Cook-794 teach the benefits of a discontinuous shield and discourage using a continuous shield. They both describe the disadvantages of a continuous shield. For example, both teach that “complications can arise when a cable is encased by a shield that is electrically continuous between the two ends of the cable.” Smith-039 ¶[0004], Cook-794 1:20-28. One of the disadvantages is that the “continuous shield can inadvertently carry voltage along the cable” such that “[i]f a person contacts the shielding, the person may receive a shock if the shielding is not properly grounded.” Smith-039 ¶[0005], Cook-794 1:34-46. Another complication is that “a continuous shield can also set up standing waves of electromagnetic energy based on signals received from nearby energy sources” that “can radiate electromagnetic energy, somewhat like an antenna, that may interfere with wireless communication devices or other sensitive equipment operating nearby.” Smith-039 ¶[0006].

163. To avoid those disadvantages of a continuous shield, Smith-039 and Cook-794 disclose a tape with “a shield that is electrically discontinuous between opposite ends of the cable.” Smith-039 Abstract, Title (“Electrically Discontinuous Shield”), ¶¶[0002], [0007] (“without providing an electrically conductive path

between ends of the cable”), ¶[0009] (“the conductive areas are electrically isolated from one another”), [0010] (“the shield discontinuities can inhibit electricity from flowing in the shielding material along the full or axial length of the cable”), [0017], [0022] (“at least one break or discontinuity in the shielding along the cable electrically isolates the shielding at one end of the cable from the shielding at the other end of the cable”, “an alternative to forming a continuous or contiguous conductive path, the tape can be segmented or can comprise intermittently conductive patches”), [0023], [0025], [0029], [0034], [0036] (“the respective physical separations between the patches 175 can impede the flow of electricity between adjacent patches 175”), [0046] (“the segmented tape 125 encircles or encases the conductors 105 in discontinuous, conductive patches”), ¶[0067] (“an electrically discontinuous shield that protects against electromagnetic interference”), FIGS. 2A-2B; Cook-794 Abstract, 1:6-9, 1:51-54, 1:66-2:15, 2:20-27, 2:51-55, 3:20-31, 3:36-41, 4:5-8, 4:50-60, 5:9-16, 6:63-65, 9:9-12, FIGS. 2A-2B.



164. In Smith-039 and Cook-794, as shown in FIGS. 2A and 2B (reproduced above with annotations), since the conductive shield is discontinuous, there are no concerns with having the conductive layer exposed at the edge of the tape, unlike in the tape shown in Glew FIG. 13C that intentionally keeps the continuous conductive layer from being exposed at the edges of the tape.

165. Cornelison relies upon Smith-039 and Cook-794 for his argument that a POSITA would understand that tapes like that shown in FIG. 13C are typically manufactured by “first making wider sheets or films of multi-layer tape, and then feeding those sheets through a slitting machine that slits the wider sheet into several

many narrower strips along the length of the sheet to make tapes of various widths to correspond to different diameter cables.” EX-1006 ¶¶138, 176, 183. I disagree.

166. Smith-039 and Cook-794 disclose that “[w]hile the illustrated embodiment of Process 300 creates conductive patches on a wide piece of film and then slits the resulting material into individual segmented tapes 125, that sequence is merely one possibility.” Smith-039 ¶[0060]; Cook-794 8:15-18. Included among those other manufacturing techniques disclosed in those references was a technique that could be used to produce the tape shown in Glew FIG. 13C, namely, applying the conductive patches to the desired narrow width of a dielectric layer. Smith-039 ¶[0060]; Cook-794 8:18-26.

167. McNutt (EX-2006), which was incorporated by reference into Cook, discloses that a shielding tape can be manufactured with a conductive layer that is narrower than the dielectric layer as disclosed in Glew FIG. 13C. McNutt 13:9-25, FIG. 5A (“[T]he dielectric substrate 150/film provides an adhesive-coated substrate that is wider than the [conductive] patches 175A to provide an adhesive strip running lengthwise along the tape 500.”)

168. Cornelison states that “[i]t would take much more time and be more complex to make the layers offset from each other.” EX-1006 ¶[1038], 176. Cornelison also states that it would be “more ... costly to make the layers offset from each other.” He offers no support for his opinion, which I disagree with. The

conventional techniques disclosed is Glew (¶¶[0199]-[0200]) to manufacture the tape shown in FIG. 13 are not complex or expensive. As discussed by Glew and as would be known by a POSITA, these techniques include bonding, either with an adhesive, or thermally through selective heating (e.g. ultrasonic welding, calender bonding).

169. For these additional reasons, a POSITA would be discouraged from modifying Glew to provide a continuous conductive layer that extended to and was exposed at the lateral edges of the tape or that FIG. 13C actually disclosed such a design.

C. ROBERTS AS THE PRIMARY REFERENCE (GROUNDS 5-9)

170. In my First Declaration, I explained that Roberts (EX-1009) either alone or in combination with several other primary references did not anticipate or render obvious the Challenged Claims. EX-2001 ¶¶74-83, 85-91, 104-119.

171. With respect to the proposed combination of Roberts and Jachimowicz-036 (EX-1013), and in particular the shield 14 disclosed in Jachimowicz-036 (EX-1013 2:52-72), Cornelison states that “a POSITA would have a reasonable expectation of success, given Robert’s shield 18, can be corrugated and provide an electrical, as well as mechanical, shield” (citing EX-1013 2:52-72). I disagree.

172. For the same reasons why it would not have been obvious to use Roberts’ thin metal foil shield 15 for the metal armor shield 18 (which is designed

to be thicker than the foil shield to provide mechanical protection (Roberts 4:15-19)), it also would not have been obvious to use Jachimowicz-036's foil shield 14, which is also described as being a thin foil. Jachimowicz-036 1:41-45 ("the shield ... consists of a metallic strip such as aluminum or copper. The strip is relatively thin.") The section of Jachimowicz-036 cited by Cornelison does not provide any support that a POSITA would understand that the shield 14, which is described as having a "thin" protective film only to provide protection against corrosion (Jachimowicz-036 Title ("Corrosion Proof Shielding Tape"), 1:46-54 ("The polyethylene shields generally satisfy the requirements of resistivity and resistance to chemicals and moisture."), 1:65-70, 3:18-45), could be used to provide the armored mechanical protection desired in and provided by Roberts' metal armor shield 18.

D. CLARK-478 AS THE PRIMARY REFERENCE (GROUND 10)

173. In my First Declaration, I explained that Clark-478 (EX-1025) in combination with Roberts and Glew did not render obvious the Challenged Claims since none of the references alone or in combination disclose or render obvious a barrier tape with conductive material extending to each lateral edge of the two layers of the dielectric material. EX-2001 ¶¶120-127.

174. For Ground 10, Cornelison argued that a POSITA would be motivated to have a three-layer tape in Clark-478 to "provide a further benefit of having a

dielectric layer between the conductors and the metal layer, which would mitigate the risk of high voltage failures and the risk of current transferring from the conductors to the metal layer of the shield while maintaining internal cross-talk isolation characteristics.” EX-1006 ¶291. I disagree.

175. Clark-478 discourages this proposed modification, and instead teaches that it is desirable to have the metal layer of the shield facing and exposed to the conductors of the twisted pair (i.e., not isolated from the conductors of the twisted pair by a dielectric layer as Petitioner proposes).

In one embodiment, the separator may be conductive, for example, an aluminum/mylar tape, with an aluminum layer on a side of the tape facing the plurality of twisted pairs. In this case, the binder 74 may also be conductive, for example, also an aluminum/mylar tape, with the aluminum layer of the tape facing the plurality of twisted pairs 50a-d so that the combination of the binder 74 and the separator 72 provide four electrically shielded, enclosed channels. With this embodiment, the four enclosed channels are isolated from one another to provide desired crosstalk isolation.

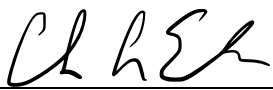
Clark-478 ¶[0047], FIG. 2.

176. For this additional reason, the combination of Clark-478, Roberts, and Glew does not render obvious any independent claims 1 and 18 or any of the dependent claims.

177. In signing this declaration, I understand that the declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I acknowledge that I may be subject to cross-examination in this case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination within the United States during the time allotted for cross-examination.

178. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: March 25, 2024

By: 

Charles A. Eldering, Ph.D.