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EXAMINER

TIBBITS, PIA FLORENCE

ART UNIT PAPER NUMBER

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MAIL DATE DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

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OCT 14 2011

CENTRAL REEXAMINATION UNIT

**Transmittal of Communication to Third Party Requester
Inter Partes Reexamination**

REEXAMINATION CONTROL NO. : 95000475

PATENT NO. : 7179999

TECHNOLOGY CENTER : 3999

ART UNIT : 3992

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified Reexamination proceeding. 37 CFR 1.903.

Prior to the filing of a Notice of Appeal, each time the patent owner responds to this communication, the third party requester of the inter partes reexamination may once file written comments within a period of 30 days from the date of service of the patent owner's response. This 30-day time period is statutory (35 U.S.C. 314(b)(2)), and, as such, it cannot be extended. See also 37 CFR 1.947.

If an ex parte reexamination has been merged with the inter partes reexamination, no responsive submission by any ex parte third party requester is permitted.

All correspondence relating to this inter partes reexamination proceeding should be directed to the Central Reexamination Unit at the mail, FAX, or hand-carry addresses given at the end of the communication enclosed with this transmittal.

PTOL-2070(Rev.07-04)

Transmittal of Communication to Third Party Requester Inter Partes Reexamination	Control No.	Patent Under Reexamination	
	95/000,475	7179999	
	Examiner	Art Unit	
	PIA TIBBITS	3992	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address. --

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If an *ex parte* reexamination has been merged with the *inter partes* reexamination, no responsive submission by any *ex parte* third party requester is permitted.

All correspondence relating to this *inter partes* reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of the communication enclosed with this transmittal.

ACTION CLOSING PROSECUTION (37 CFR 1.949)	Control No.	Patent Under Reexamination
	95/000,475	7179999
	Examiner	Art Unit
	PIA TIBBITS	3992

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address. --

Responsive to the communication(s) filed by:
Patent Owner on 25 July, 2011
Third Party(ies) on 24 August, 2011

Patent owner may once file a submission under 37 CFR 1.951(a) within 1 month(s) from the mailing date of this Office action. Where a submission is filed, third party requester may file responsive comments under 37 CFR 1.951(b) within 30-days (not extendable- 35 U.S.C. § 314(b)(2)) from the date of service of the initial submission on the requester. **Appeal cannot be taken from this action.** Appeal can only be taken from a Right of Appeal Notice under 37 CFR 1.953.

All correspondence relating to this inter partes reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this Office action.

PART I. THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☒ Notice of References Cited by Examiner, PTO-892
- ☒ Information Disclosure Citation, PTO/SB/08
- ☐ _____

PART II. SUMMARY OF ACTION:

- ☒ Claims 1-36 are subject to reexamination.
- ☐ Claims _____ are not subject to reexamination.
- ☐ Claims _____ have been canceled.
- ☐ Claims _____ are confirmed. [Unamended patent claims]
- ☐ Claims _____ are patentable. [Amended or new claims]
- ☒ Claims 1-36 are rejected.
- ☐ Claims _____ are objected to.
- ☐ The drawings filed on _____ ☐ are acceptable ☐ are not acceptable.
- ☐ The drawing correction request filed on _____ is: ☐ approved. ☐ disapproved.
- ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119 (a)-(d). The certified copy has:
☐ been received. ☐ not been received. ☐ been filed in Application/Control No _____
- ☐ Other _____

DETAILED ACTION

This is an Office action on the claims 1-20 of United States Patent 7,179,999 to Clark et al. [hereinafter the '999 patent] for which a Substantial New Question of patentability (SNQ) has been raised and determined to exist on July 17, 2009 in response to a reexamination proceeding filed by a Third Party Requestor. NEW claims 21-29 were added via an amendment filed February 24, 2010. NEW claims 30-42 were added via an amendment filed December 6, 2010.

This action is in reply to the Patent Owner's response filed July 25, 2010 (canceling new claims 37-42) (hereafter "the Response"), and Third Party Requester's comments filed August 24, 2011, which have also been considered.

This action follows a Non-final action mailed May 24, 2011, and a petition decision mailed June 24, 2011.

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CLAIM STATUS

- (1) Claims canceled: 37-42
- (2) Claims amended: 23
- (3) Claims newly proposed: 21-36
- (4) Claims active: 1-36
- (5) Claims not subject to reexamination: none

CLAIM DEPENDENCY

The dependency table for the claims of the '999 patent is as follows¹:

Claim number	First Level of Dependency	Second LoD	Third LoD	Fourth LoD	Fifth LoD	Sixth LoD	Seventh LoD

¹-Independent claims are indicated in bold.

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1							
2	1						
3	1						
4		3					
5	1						
6	1						
7	1						
8	1						
9	1						
10	1						
11	1						
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30 NEW	23						
31 NEW		30					

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32 NEW		30					
33 NEW			31				
34 NEW			32				
35 NEW				33			
36 NEW				34			
37 NEW (canceled)					35		
38 NEW (canceled)					36		
39 NEW (canceled)						37	
40 NEW (canceled)						38	
41 NEW (canceled)							39
42 NEW (canceled)							40

STATUS OF AMENDMENTS

The original United States Patent 7179999 to Clark et al. included claims 1-20.

The amendment filed February 24, 2010 added claims 21-29.

The amendment filed December 6, 2010 added claims 29-42.

A supplemental response was filed December 6, 2010 allegedly to provide additional evidence supporting the patentability of the claims.

A revised response was filed March 25, 2011.

A response filed July 25, 2011 canceled claims 37-42.

All responses by Patentee have been entered.

REFERENCES

Third Party Requester-provided references:

(1) German patent **DE-29719866** [hereinafter the Backmann '866 patent], entitled "Multi-core data communication cable e.g. for communications networks has number of twisted wire pairs within a protective sheath that includes metal foil screening " published December 18, 1997.

(2) **US** patent **5670748** [hereinafter the Gingue '748 patent], entitled "Flame retardant and smoke suppressant composite electrical insulation, insulated electrical conductors and jacketed plenum cable formed therefrom" issued September 23, 1997.

(3) European patent **EP-569217** [hereinafter the Weinberg '217 patent], entitled "Fiberglass cloth resin tape insulation" published November 10, 1993, which has a **US** equivalent patent

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number **5274196** [hereinafter the Weinberg '196 patent], same title, issued December 28, 1993.

(4) Japanese patent **JP-43-15470** [hereinafter the Yanagida '470 patent], entitled "Alternatedly stranded cable" published June 28, 1968.

(5) **US** patent **5789711** [hereinafter the Gaeris '711 patent], entitled "High-performance data cable" issued August 4, 1998.

(6) **US** patent **6074503** [hereinafter the Clark '503 patent], entitled "Making enhanced data cable with cross-twist cabled core profile" issued June 13, 2000.

(7) **US** patent **3622683** [hereinafter the Roberts '683 patent], entitled "Telephone Cable with Improved Crosstalk Properties" issued November 23, 1971.

(8) the publication "Fiber Optic Cable – A Lightguide" by **James J. Refi**, entitled "Web registration control system" published in 1991, and constitutes prior art under § 102(b).

Patent Owner-provided references:

(9) **US** patent **4385485** to **Yonechi**, entitled "Methods and apparatus for fabricating optical fiber cables" issued May 31, 1983, and constitutes prior art under § 102(b).

(10) **Sterling et al.** "Premises Cabling", 3rd edition, 2006.

CLAIM REJECTIONS - 35 USC § 112

(A) The following is a quotation of the first paragraph of 35 U.S.C. 112:

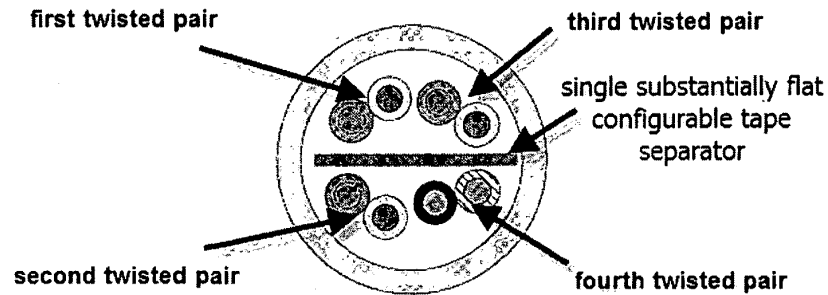
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

NEW amended claims 23-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

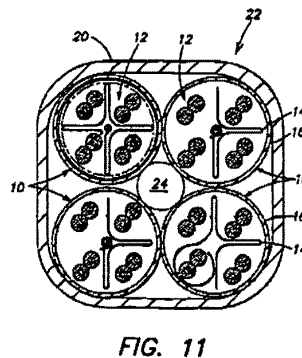
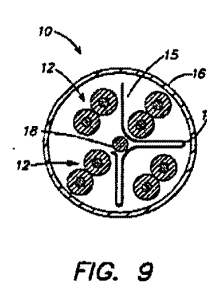
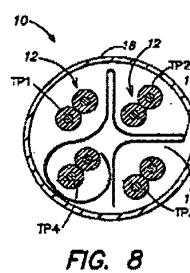
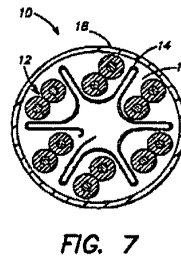
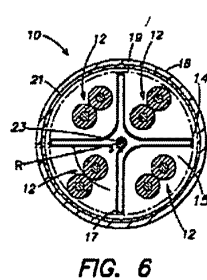
Newly-added independent claim 23 recites:

*"An unshielded twisted pair communications cable comprising: exactly four twisted pairs of insulated conductors including a first twisted pair of insulated conductors, a second twisted pair of insulated conductors, a third twisted pair of insulated conductors and a fourth twisted pair of insulated conductors;
a single substantially flat configurable tape separator disposed within the unshielded twisted pair communications cable between the between the first and third twisted pairs of insulated conductors on one side of the configurable tape separator and the second and fourth twisted pairs of insulated conductors on the other side of the configurable tape separator and arranged so as to separate the first and third twisted pair of conductors from the second and fourth twisted pair of conductors;"(emphasis added)*

The following illustration would depict a cable satisfying these claim elements:



Patentee claims support for these elements in Figures 6-9, and 11, which do not show this configuration. **Further, none of the embodiments depicted in the '999 patent show two twisted pairs not separated from each other by the "configurable tape separator".**



Nothing in the '999 Patent shows that the inventors invented a cable comprising exactly four twisted pairs of insulated conductors with the first and third pairs separated by a single flat separator from the second and fourth pairs, without at least the first and third pairs or second and fourth pairs separated from one another.

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In an application of the written description doctrine, the Court noted: *"The purpose of the written description requirement is to prevent an applicant from later asserting that he invented that which he did not; the applicant for a patent is therefore required 'to recount his invention in such detail that his future claims can be determined to be encompassed within his original creation.'"* *Amgen Inc. v. Hoechst Marion Roussel Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003) (citing *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1561 (Fed. Cir. 1991)). See also *Tronzo v. Biomet, Inc.*, 156 F.3d 1154 (Fed. Cir. 1998).

The '999 patent fails to adequately describe the broad configuration. One of ordinary skill in the art would not recognize that the inventor was in possession of the broadly claimed cable of claim 23 based on the disclosure of the '999 Patent. See *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc) (internal citations omitted) (*"[T]he description must 'clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.' In other words, the test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date."*).

Before the prior art can be applied, the Patent Office must consider the scope of the claims. During reexamination, patent claims are to be given the "broadest reasonable interpretation" in light of the specification. MPEP § 2258(G); see also § 2111 (citing *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed.Cir.2005)).

The specification of the '999 patent also mentions "cross talk isolation" relating to Fig.6 (cited by Patentee as providing support for amended new claim 23), and there is no explanation as to how "crosstalk isolation", or *"alien cross talk as it is known in the industry"* is achieved when two of the twisted pairs are not isolated from one another, as recited in amended claim 23:

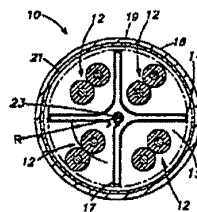


FIG. 6

*"With this embodiment, the four enclosed channels are isolated from one another to provide **desired crosstalk isolation**. In addition, another benefit of the embodiment of the cable is that a cable adjacent this cable will have reduced coupling with the cable of the invention, or in other words, reduced alien cross talk as it is known in the industry."* (emphasis added)

Further, Patentee's own predecessor patent, US 6074503 to Clark et al. states in pertinent part,

"One common type of conventional cable for high-speed data communications includes multiple twisted pairs. When twisted pairs are closely placed, such as in a cable, electrical energy may be transferred from one pair of a cable to

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another. Such energy transferred between pairs is undesirable and referred to as crosstalk. The Telecommunications Industry Association and Electronics Industry Association have defined standards for crosstalk, including TIA/EIA-568A. The International Electrotechnical Commission has also defined standards for data communication cable crosstalk, including ISO/IEC 11801."

(emphasis added) [the '503 patent, 1:16-26]

Additionally, the reference to Sterling et al. "Premises Cabling", provided by Patentee, mentions TIA-568 and ISO/IEC 11801 defining cable configurations, and that *"it is very important...to test the performance of cable after it is installed and to unambiguously specify what configuration was measured"* (see page 159). The same reference describes at page 44,

*"All the parameters we have discussed are working between all the pairs at the same time in a cable. The interactions can be quite complex... You can see that both types of crosstalk are coupling between all the pairs... An important thing to remember about **specifications setting limits on crosstalk**, attenuation, return losses, and other effects is that they are worst-case requirements. The assumption is that most pairs will perform better, but that no pairs will perform worse. If you consider **pair-to-pair crosstalk** in a cable, **if one combination fails, the cable fails** -- it doesn't meet specifications."*

Therefore, it seems that the elements of claim 23, as amended, do not conform to topologies dictated by standards providing recommended practices for the design and installation of cabling systems that will support a wide variety of existing and future services.

Examiner notes that the effective filing date for the '503 patent is **April 27, 1997**, while the earliest effective filing date that the '999 patent under reexamination could claim is **February 25, 1999**. The '503 patent and the '999 patent share 2(two) inventors, who at the time of the invention must have been aware of the prevailing standards, as evidenced by the predecessor '503 patent.

(B) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 23-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

New amended independent claim 23 recites:

"An unshielded twisted pair communications cable comprising: exactly four twisted pairs of insulated conductors including a first twisted pair of insulated conductors, a second twisted pair of insulated conductors, a third twisted pair of insulated conductors and a fourth twisted pair of insulated conductors;

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a single substantially flat configurable tape separator disposed within the unshielded twisted pair communications cable between the first and third twisted pairs of insulated conductors on one side of the configurable tape separator and the second and fourth twisted pairs of insulated conductors on the other side of the configurable tape separator and arranged so as to separate the first and third twisted pair of conductors from the second and fourth twisted pair of conductors;

a jacket enclosing the four twisted pairs of insulated conductors and the configurable tape separator;

wherein the four twisted pairs of insulated conductors and the configurable tape separator are cabled about a common axis to form the unshielded twisted pair communications cable: and wherein the configurable tape separator is substantially non-conductive." (emphasis added)

The terms "unshielded", "non-conductive", and "substantially non-conductive" are not described in the specification of the '999 patent.

Furthermore, the Patent Owner's argument that "non-conductive" and "unshielded" mean the same thing (Patent Owner's Revised Response, March 25, 2011, pages 39-40) must fail under the doctrine of claim term differentiation.

"Therefore, whether or not a separator is "substantially non-conductive" can be judged according to whether it will provide substantial shielding... Thus, a person of ordinary skill reading the '999 patent would understand that the very purpose of conductive separators between twisted pairs is to provide shielding, and that this shielding is provided whenever there is a metallic layer, even if covered by plastic."

See Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc., 381 F.3d 1111, 1119-20 (Fed. Cir. 2004) ("when an applicant uses different terms in a claim it is permissible to infer that he intended his choice of different terms to reflect a differentiation in the meaning of those terms. See *Bancorp Servs., L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1373 (Fed. Cir. 2004); *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 93 F.3d 1572, 1579 (Fed. Cir. 1996).")

If "substantially non-conductive" means "unshielded", then the claims of the '999 Patent contain redundant elements.

STATUTE

The following is a quotation of **35 U.S.C. 103(a)** which forms the basis for all obviousness rejections set forth in this Office action.

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

REJECTIONS

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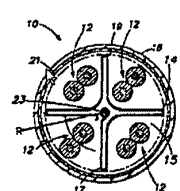
(A) Claims 1-7, 13-16, 20 and NEW claim 23 are rejected under 35 USC 103(a) as being unpatentable over the US patent 4385485 to Yonechi, as evidenced by the US patent 6074503 to Clark et al., in view of the Refi reference.

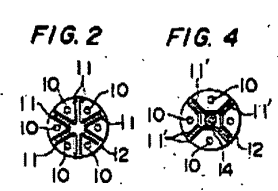
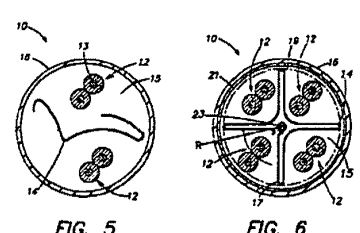
CLAIM 1	YONECHI, CLARK '503, REFI
An unshielded twisted pair communications cable comprising:	Yonechi discloses a communications cable [1:10-12]. <i>"The present invention relates to optical fiber cable constructions and to methods and apparatus for fabricating the same."</i> It is also noted that Patentee's own predecessor patent, US 6074503 to Clark et al. stated in pertinent part at 1:16-17, <u>"One common type of conventional cable for high-speed data communications includes multiple twisted pairs."</u> The prosecution of the Clark '503 patent² specifically teaches "bunching" and "twisting...to close the cable". [A]s explained above, both bunching and twisting are known [amendment, November 26, 1999, page 5] with regard to claim 17 of application 08841440 [now US patent 6074503], and therefore could be applied to the Yonechi communications cable, A method of producing a cable, comprising steps of: passing a plurality of transmission media and a core through a first die which aligns the plurality of transmission media with surface features of the core and prevents twisting motion of the core; bunching the aligned plurality of transmission media and core using a second die which forces each of the plurality of transmission media into contact with the surface features of the core which maintain a spatial relationship between each of the plurality of transmission media; twisting the bunched plurality of transmission media and core to close the cable; and jacketing the closed cable. Examiner notes that the effective filing date for the '503 patent is April 27, 1997, while the earliest effective filing date that the '999 patent under reexamination could claim is February 25, 1999. The '503 patent and the '999 patent share 2(two) inventors.
a plurality of twisted pairs of insulated	The '999 patent under reexamination describes at 4:16-33, <i>"A number of embodiments of a data communications cable according</i>

² The '999 patent under reexamination and the Clark '503 patent share 2 (two) inventors.

Art Unit: 3992

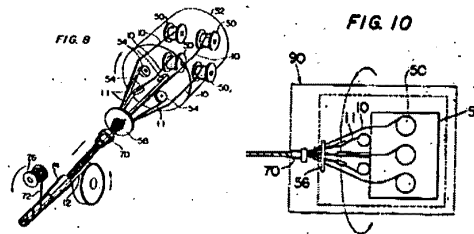
conductors including a first twisted pair of insulated conductors and a second twisted pair of insulated conductors;	<i>to the invention will now be described in which the cable is constructed with a plurality of twisted pairs of insulated conductors and a core made from a configurable, dielectric pair separator. However, it is to be appreciated that the invention is not limited to any number of twisted pairs or any profile for the configurable, dielectric pair separator illustrated in any of these embodiments. The inventive principles can be applied to cables including greater or fewer numbers of twisted pairs and having different core profiles of the configurable dielectric pair separator. In addition, although these embodiments of the invention are described and illustrated in connection with twisted pair data communication media, it is to be appreciated that other high-speed data communication media can be used instead of twisted pairs of conductors in the constructions of the cable according to the invention, such as, for example, <u>fiber optic media</u>."</i> (emphasis added) Yonechi discloses optical fibers 10. The Refi reference discloses that copper pairs may substitute for optical fibers in a communications cable. The Refi reference discloses that "cables can be made by substituting <u>twisted copper pairs</u> for the fibers in a slot"[the Refi reference, left column, second paragraph, p.79], and "cables are constructed by substituting twisted copper pairs for the fibers in a slot..."[the Refi reference, paragraph bridging p. 79-80]. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to replace <i>fiber optic media</i> disclosed by Yonechi '485 patent with the <i>copper pairs of conductors</i> disclosed the Refi reference in the constructions of the cable because: a) both are very well known, alternate types of cables which will perform the same function, if one is replaced with the other, of transmitting signals, as already suggested by the '499 patent and the Refi reference, and b) the use of this particular type of cables is considered to be nothing more than the use of one of numerous and well known alternate types of cables that a person having ordinary skill in the art would have been able to provide using routine experimentation in order to transmit signals, as already suggested by the Refi reference and the '999 patent and the Refi reference, as being interchangeable: <i>"it is to be appreciated that <u>other high-speed data communication media can be used instead of twisted pairs</u> of conductors in the constructions of the cable according to the invention, such as, for example, <u>fiber optic media</u>"[the '999 patent, 4:29-33].</i> <i>"The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."</i>
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	<i>KSR Int'l Co. v. Teleflex Inc.</i> , 550 U.S. 398, 416 (2007).		
a configurable tape separator disposed between the plurality of twisted pairs of conductors in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair of insulated conductors from the second twisted pair of insulated conductors; and	The '999 patent under reexamination describes the term "<i>configurable pair separator 14</i>" as follows at 5:40-48 and Fig.6: "FIG. 6 depicts a cross-sectional view of a preferred embodiment of the data cable 10 of this invention. The cable includes the low-dielectric constant, low-dissipation factor polymer pair separator 14 formed into a cable core in such a way as to physically separate the four twisted pairs 12, thereby decreasing field coupling between the twisted pairs, providing a desired opposite twisted pair-to-pair physical distance, as well as providing a desired adjacent pair separation."  FIG. 6 Further, Patentee stated on the record during litigation regarding the definition of a "<i>configurable tape separator</i>" as a "<i>product (that) employs a cross-web separator between the twisted conductor pairs</i>". [Appendix to Belden's Second Supplemental Responses to Interrogatories, March 9, 2009, page 39] <table border="1"> <tr> <td>a configurable tape separator disposed between the plurality of twisted pairs of conductors in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair of insulated conductors from the second twisted pair of insulated conductors;</td><td> The product employs a cross-web separator between the twisted conductor pairs. See, e.g., 10Gain Category 6A CMR/CMP product brochure ("Web Separator"). </td></tr> </table> Yonechi and Refi disclose a configurable tape separator 11 disposed between the plurality of twisted pairs of conductors 10 in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair of insulated conductors from the second twisted pair of insulated conductors [Figures 2 and 4, 3:8-39].	a configurable tape separator disposed between the plurality of twisted pairs of conductors in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair of insulated conductors from the second twisted pair of insulated conductors;	The product employs a cross-web separator between the twisted conductor pairs. See, e.g., 10Gain Category 6A CMR/CMP product brochure ("Web Separator").
a configurable tape separator disposed between the plurality of twisted pairs of conductors in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair of insulated conductors from the second twisted pair of insulated conductors;	The product employs a cross-web separator between the twisted conductor pairs. See, e.g., 10Gain Category 6A CMR/CMP product brochure ("Web Separator").		

	Yonechi '485 The '999 patent
	 FIG. 2 FIG. 4  FIG. 5 FIG. 6 "Referring now to FIG. 2, the first embodiment of the optical fiber cable construction of the present invention will now be described. A plurality of optical fibers 10 are accommodated in the recesses provided in a plurality of V-shaped folded splicing tapes 11. <u>It should be noted that optical fibers 10 can be provided with an appropriate coating if desired.</u> Because of the recesses provided by folding splicing tapes 11 into a V-shape in the longitudinal direction, the optical fibers 10 can be accommodated in a loosely-fitted fashion therein. As shown in FIG. 2, each of the fibers 10 is accommodated in a separate recess provided by a folded splicing tape 11... In the construction of FIG. 2, each of the splicing tapes 11 is shaped or folded to have a groove in the longitudinal direction and each splicing tape so shaped or folded has a symmetrical transverse cross-section. Splicing tapes 11 are arranged, as shown in FIG. 2, in a radial fashion with respect to the center-line of the optical fiber cable formed thereby. <u>The material for splicing tapes 11 is preferably a rather rigid material that is easily shaped or folded but which retains the shape or fold provided thereby.</u> One example of a suitable material for splicing tape 11 is a thick polyester having a thickness, for example, of about 0.1 mm. Another suitable material for splicing tape 11 is aluminum. Of course, additional materials are equally suitable for splicing tape 11." (emphasis added) Since the separator 11 is made from "a rather rigid material that is easily shaped or folded but which retains the shape or fold ", Yonechi discloses a configurable tape separator.
a jacket enclosing the plurality of twisted pairs of insulated conductors and the configurable tape separator;	Yonechi and Refi disclose a jacket 12 enclosing the plurality of twisted pairs of insulated conductors/optical fibers/copper pairs 10 and the configurable tape separator 11 [6:32-33, Figures 2-7]. <i>"The assembled cable core is preferably covered with an outer tape 12."</i>
wherein the plurality of twisted pairs of insulated conductors	Yonechi and Refi disclose wherein the plurality of twisted pairs of insulated conductors/optical fibers/copper pairs 10 and the configurable tape separator 11 are cabled about a common axis to form the

and the configurable tape separator are cabled about a common axis to form the unshielded twisted pair communications cable; and

unshielded twisted pair communications cable [Figures 8 and 10, 6:65-7:8].



"In the second embodiment of the method and apparatus of the present invention the system surrounded by the dotted chain line 90 of FIG. 10 is integrally rotated. The rotation of the assemblage die 70 can be easily realized by a mechanical and integral connection between the die 70 to the guide plate 56 and the rotary cage 52. Alternatively, instead of the mechanical linkage therebetween, the die 70 can be integrally rotated with the rotary cage 52 by supporting the die 70 by means of a bearing to permit free rotation thereof. Incidentally, the system surrounded by the broken line shows a conventional rotation system."

Both, Figures 8 and 10, of Yonechi describe a twisted cable cabled "about a common axis".

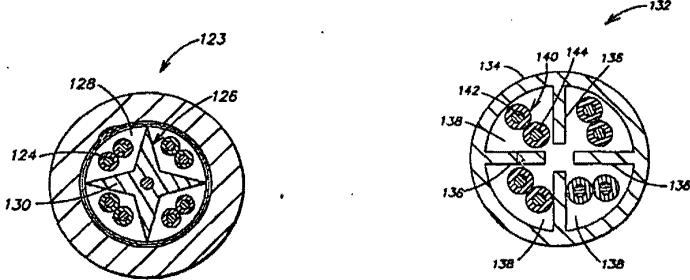
The prosecution of the Clark '503 patent³ specifically teaches "bunching" and "twisting...to close the cable". [A]s explained above, both bunching and twisting **are known** [amendment, November 26, 1999, page 5] with regard to claim 17 of application 08841440 [now US patent 6074503], and therefore could be applied to the Yonechi and Refi communications cable,

A method of producing a cable, comprising steps of:

- passing a plurality of transmission media and a core through a first die which aligns the plurality of transmission media with surface features of the core and prevents twisting motion of the core;
- bunching the aligned plurality of transmission media and core using a second die which forces each of the plurality of transmission media into contact with the surface features of

³ The '999 patent under reexamination and the Clark '503 patent share 2 (two) inventors.

	the core which maintain a spatial relationship between each of the plurality of transmission media; twisting the bunched plurality of transmission media and core to close the cable; and jacketing the closed cable. With regard to having a plurality of twisted pairs of insulated conductors, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a plurality of twisted pairs of insulated conductors in order to accommodate an application's specifics, since it has been held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. <i>In re Harza</i>, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) and MPEP 2144.04.
wherein the configurable tape separator is substantially non-conductive.	Yonechi describes the configurable tape separator may be made of "a suitable material for splicing tape 11 is a thick polyester having a thickness, for example, of about 0.1 mm"[3:35-37]. Since the separator 11 is made from "a polyester ... <u>"a rather rigid material that is easily shaped or folded but which retains the shape or fold"</u>", Yonechi discloses a substantially non-conductive configurable tape separator. [Yonechi '485, 3:32-34].

CLAIM 2	YONECHI, CLARK '503, REFI
The unshielded twisted pair communications cable as claimed in claim 1,	Yonechi, Clark '503 and Refi disclose the unshielded twisted pair communications cable as claimed in claim 1, <i>supra</i> .
wherein the configurable pair separator is arranged so as to define at least two channels and wherein the first twisted pair of insulated conductors is disposed at least partially within a first channel and the	The '999 patent under reexamination discloses that positioning "a twisted pair within grooves or channels 128 formed by the support" is known ["Related Art", Figures 2 and 3, 2:26-50]. 

second twisted pair of insulated conductors is disposed at least partially within a second channel.

"Another cable implementation which addresses the problem of twisted pairs lying too closely together within the cable is described, for example, in U.S. Pat. No. 5,789,711 and is illustrated in FIG. 2. In particular, the cable includes, for example, four twisted pairs **124** disposed about a central pre-shaped support **126**, wherein the support positions a twisted pair within grooves or channels 128 formed by the support. In particular, the support provides the grooves or channels which keep the twisted pairs at fixed positions with respect to each other. The support can have any of a number of shapes, including, for example, a standard "X", a "+", or the separator as is illustrated in FIG. 2....Still another known industry cable implementation **132** is illustrated in FIG. 3. The cable utilizes a jacket **134** with inward protrusions **136** that form **138** within the cable. A twisted pair **140** of conductors **142**, **144** is disposed within each channel."

Further, the '999 patent under reexamination does not describe "dispos(ing) at least partially within a first channel", and only recites it in the claims.

If the applicant has not demonstrated the criticality of a specific limitation, it would be appropriate to rely solely on case law as the rationale to support an obviousness rejection". See **MPEP 2144.04**.

Yonechi clearly shows in Figures 2 and 4 this configuration.

FIG. 2

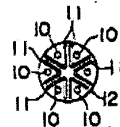
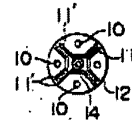
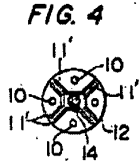
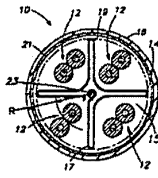


FIG. 4

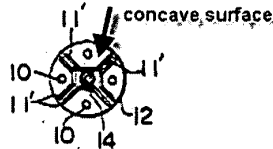


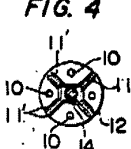
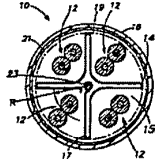
The limitation "wherein the first twisted pair of insulated conductors is disposed at least partially within a first channel and the second twisted pair of insulated conductors is disposed at least partially within a second channel" is a design choice, and therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Yonechi's cable and dispose the second twisted pair of insulated conductors "at least partially within a first channel" for a specific application, as the courts held that this would be a matter of design choice as the '999 patent specification is virtually silent on the matter of any purported advantage for this configuration.

CLAIM 3	YONECHI, CLARK'503, REFI
The unshielded	Yonechi, Clark'503 and Refi disclose the unshielded twisted pair

twisted pair communications cable as claimed in claim 1,	communications cable as claimed in claim 1, <i>supra</i> .
wherein, prior to cabling, the configurable tape separator comprises a substantially flat tape.	The '999 patent under reexamination describes the configurable tape separator as a "<i>polymer tape</i>"[5:2], and a "<i>woven fiberglass tape</i>" [5:10]. Yonechi describes the configurable tape separator may be made of "<i>a suitable material for splicing tape 11 is a thick polyester having a thickness, for example, of about 0.1 mm</i>" [3:35-37], while a "polyester" is a category of polymers which contain the ester functional group in their main chain. The configurations of the configurable tape separator in Figures 2 and 4 of Yonechi are "substantially flat", as the separator can have a different form based on whether the jacket is present or not. Since the separator is made of polyester or polyethylene tape, the tape would naturally resume a substantially flat form upon removal of the jacket. Moreover, compare Fig.4 of Yonechi to Fig.6 of the '999 patent disclosing a "flat" separator. <u>The Yonechi '485 patent</u>  FIG. 4 <u>The '999 patent</u>  FIG. 6

CLAIM 4	YONECHI, CLARK'503, REFI
The unshielded twisted pair communications cable as claimed in claim 3,	Yonechi, Clark'503 and Refi disclose the unshielded twisted pair communications cable as claimed in claim 3, <i>supra</i> .
wherein, after cabling, the configurable tape separator is	The '999 patent under reexamination discloses that positioning " <i>a twisted pair within grooves or channels 128 formed by the support</i> " is known [Figures 2 and 3, 2:26-50][see also rejection under claim 2, <i>supra</i>].

arranged so as to provide at least one concave surface defining a channel, and wherein the first twisted pair of insulated conductors is disposed at least partially within the channel.	Yonechi discloses four tapes, each with no more than one concave surface. The concave surface provides a groove for an optical fiber [see Fig.4]. FIG. 4 
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CLAIM 5	YONECHI, CLARK'503, REFI
The unshielded twisted pair communications cable as claimed in claim 1,	Yonechi, Clark'503 and Refi disclose the unshielded twisted pair communications cable as claimed in claim 1, <i>supra</i>.
wherein the separator is constructed such that when a portion of the jacket is removed from an end of the cable to expose the plurality of twisted pairs and the separator, the exposed separator is substantially flat.	US 7179999 under reexamination does not show "<i>an end of the cable</i>" and does not describe the limitation "<i>a portion of the jacket is removed from an end of the cable</i>". The configurations of Figures 2 and 4 in Yonechi are "<i>substantially flat</i>", as the separator can have a different form based on whether the jacket is present or not. Since the separator is made of polyester or polyethylene tape, the tape would naturally resume a substantially flat form upon removal of the jacket. Moreover, compare Fig.4 of Yonechi to Fig.6 of the '999 patent disclosing a "flat" separator. <u>The Yonechi '485 patent</u> FIG. 4  <u>The '999 patent</u>  FIG. 6

CLAIM 6	YONECHI, CLARK'503, REFI
The unshielded twisted pair communications cable as claimed in	Yonechi, Clark'503 and Refi disclose an unshielded twisted pair communications cable as claimed in claim 1, <i>supra</i>.

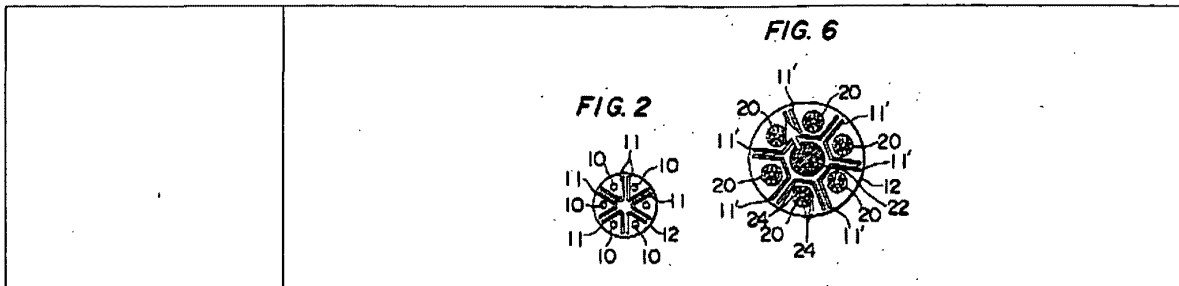
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claim 1, wherein the configurable tape separator occupies less than approximately 50% of a core area between the plurality of twisted pairs of insulated conductors.	US 7179999 under reexamination does not describe the limitation "<i>wherein the configurable tape separator occupies less than approximately 50% of a core area between the plurality of twisted pairs of insulated conductors</i>" in the specification, and only mentions it in original claims 6 and 16. "If the applicant has not demonstrated the criticality of a specific limitation, it would be appropriate to rely solely on case law as the rationale to support an obviousness rejection". See MPEP 2144.04. This claim is <i>prima facie</i> obvious without showing that the claimed range achieves unexpected results relative to the prior art range. In the same field of endeavor, it would have been obvious to one of ordinary skill to determine the thickness of the compliant layer (see <i>In re Aller, Lacey, and Hall</i> (10 USPQ 233-237). It is not inventive to discover optimum or workable ranges by routine experimentation. Note that the specification contains no disclosure of either the critical nature of the claimed ranges or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical (see <i>In re Woodruff</i>, 919f.2d 1575, 1578, 16 USPQ 2d 1934, 1936 (Fed. Cir. 1990)). See also <i>In re Huang</i>, 40 USPQ2d 1685, 1688(Fed. Cir. 1996)(claimed ranges of a result effective variable, which do not overlap the prior art ranges, are unpatentable unless they produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art). See also <i>In re Boesch</i>, 205 USPQ 215 (CCPA) (discovery of optimum value of result effective variable in known process is ordinarily within skill of art) and <i>In re Aller</i>, 105 USPQ 233 (CCPA 1955) (selection of optimum ranges within prior art general conditions is obvious). See also MPEP § 2144.05 titled "Rebuttal of <i>Prima Facie</i> Case of Obviousness": <i>"Applicants can rebut a prima facie case of obviousness based on overlapping ranges by showing the criticality of the claimed range. "The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990).</i> Further, broad language in the disclosure, including the abstract, omitting an allegedly critical feature, tends to rebut the argument of criticality.
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CLAIM 7	YONECHI, CLARK'503, REFI
The unshielded twisted pair communications cable as claimed in claim 1,	Yonechi, Clark'503 and Refi disclose an unshielded twisted pair communications cable as claimed in claim 1, <i>supra</i> .
wherein the configurable tape separator occupies approximately 32% of a core area of the cable between the plurality of twisted pairs of insulated conductors.	US 7179999 under reexamination does not describe the criticality of the limitation "<i>the configurable tape separator occupies approximately 32% of a core area of the cable between the plurality of twisted pairs of insulated conductors</i>", and only mentions it once in the specification, and then claim 7. The '999 patent, 5:30-33. <i>"In a preferred embodiment, approximately 32% of the overall core area between the four twisted pairs of the cable is filled with such a filler and shaped as described herein."</i> "If the applicant has not demonstrated the criticality of a specific limitation, it would be appropriate to rely solely on case law as the rationale to support an obviousness rejection". See MPEP 2144.04. This claim is <i>prima facie</i> obvious without showing that the claimed range achieves unexpected results relative to the prior art range. In the same field of endeavor, it would have been obvious to one of ordinary skill to determine the thickness of the compliant layer (see In re Aller, Lacey, and Hall (10 USPQ 233-237). It is not inventive to discover optimum or workable ranges by routine experimentation. Note that the specification contains no disclosure of either the critical nature of the claimed ranges or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical (see In re Woodruff, 919f.2d 1575, 1578, 16 USPQ 2d 1934, 1936 (Fed. Cir. 1990)). See also In re Huang, 40 USPQ2d 1685, 1688(Fed. Cir. 1996) (claimed ranges of a result effective variable, which do not overlap the prior art ranges, are unpatentable unless they produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art). See also In re Boesch, 205 USPQ 215 (CCPA) (discovery of optimum value of result effective variable in known process is ordinarily within skill of art) and In re Aller, 105 USPQ 233 (CCPA 1955) (selection of optimum ranges within prior art general conditions is obvious). See also MPEP § 2144.05 titled "Rebuttal of <i>Prima Facie</i> Case of Obviousness": <i>"Applicants can rebut a prima facie case of obviousness based on</i>

	<i>overlapping ranges by showing the criticality of the claimed range. "The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990).</i> Further, broad language in the disclosure, including the abstract, omitting an allegedly critical feature, tends to rebut the argument of criticality.
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CLAIM 13	YONECHI, CLARK'503, REFI
The unshielded twisted pair communications cable as claimed in claim 1,	Yonechi, Clark'503 and Refi disclose an unshielded twisted pair communications cable as claimed in claim 1, <i>supra</i> .
wherein the configurable tape separator is disposed so as to prevent direct physical contact between the first twisted pair and the jacket.	The '999 patent under reexamination describes in Fig.7 and at 7:3-10, FIG. 7 <i>"FIG. 7 depicts a cable 10 wherein six twisted pairs 12 are encased within the jacket assembly 16, and are separated from each other by the configurable pair separator 14. The pair separator 14 is configured in a somewhat "*" shape that provides support and placement of the twisted pairs so that the twisted pairs 12 have a desired spacial arrangement and do not come into direct physical contact with each other."</i> Yonechi shows in Figures 2 and 6 a similar configuration:



Independent claim 14 recites substantially the same limitations as independent claim 1, minus the limitation "and wherein the configurable tape separator is substantially non-conductive".

CLAIM 14	YONECHI, CLARK'503, REFI
An unshielded twisted pair communications cable comprising:	Yonechi discloses a communications cable [1:10-12]. <i>"The present invention relates to optical fiber cable constructions and to methods and apparatus for fabricating the same."</i> It is also noted that Patentee's own predecessor patent, US 6074503 to Clark et al. stated in pertinent part at 1:16-17, <u>"One common type of conventional cable for high-speed data communications includes multiple twisted pairs."</u> The prosecution of the Clark '503 patent⁴ specifically teaches "bunching" and "twisting...to close the cable". [A]s explained above, both bunching and twisting are known"[amendment, November 26, 1999, page 5] with regard to claim 17 of application 08841440 [now US patent 6074503], and therefore could be applied to the Yonechi communications cable,  A method of producing a cable, comprising steps of: passing a plurality of transmission media and a core through a first die which aligns the plurality of transmission media with surface features of the core and prevents twisting motion of the core; bunching the aligned plurality of transmission media and core using a second die which forces each of the plurality of transmission media into contact with the surface features of

⁴ The '999 patent under reexamination and the Clark '503 patent share 2 (two) inventors.

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	the core which maintain a spatial relationship between each of the plurality of transmission media; twisting the bunched plurality of transmission media and core to close the cable; and jacketing the closed cable. Examiner notes that the effective filing date for the '503 patent is April 27, 1997, while the earliest effective filing date that the '999 patent under reexamination could claim is February 25, 1999. The '503 patent and the '999 patent share 2(two) inventors.
a plurality of twisted pairs of insulated conductors including a first twisted pair of insulated conductors and a second twisted pair of insulated conductors;	The '999 patent under reexamination describes at 4:16-33, <i>"A number of embodiments of a data communications cable according to the invention will now be described in which the cable is constructed with a plurality of twisted pairs of insulated conductors and a core made from a configurable, dielectric pair separator. <u>However, it is to be appreciated that the invention is not limited to any number of twisted pairs or any profile for the configurable, dielectric pair separator illustrated in any of these embodiments.</u> The inventive principles can be applied to cables including greater or fewer numbers of twisted pairs and having different core profiles of the configurable dielectric pair separator. In addition, although these embodiments of the invention are described and illustrated in connection with twisted pair data communication media, it is to be appreciated that other high-speed data communication media can be used instead of twisted pairs of conductors in the constructions of the cable according to the invention, such as, for example, <u>fiber optic media</u>."</i> (emphasis added) Yonechi discloses optical fibers 10. The Refi reference discloses that twisted copper pairs may substitute for optical fibers in a communications cable. The Refi reference discloses that <i>"cables can be made by substituting <u>twisted copper pairs</u> for the fibers in a slot"</i>[the Refi reference, left column, second paragraph, p.79], and <i>"cables are constructed by substituting twisted copper pairs for the fibers in a slot..."</i>[the Refi reference, paragraph bridging p. 79-80]. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to substitute <i>fiber optic media</i> in Yonechi '485 patent with the <i>copper pairs of conductors</i> disclosed the Refi reference in the construction of the cable because: a) both are very well known, alternate types of cables which will perform the same function, if one is replaced with the other, of

[illegible]

a configurable tape separator disposed between the plurality of twisted pairs of conductors in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair of insulated conductors from the second twisted pair of insulated conductors;

The product employs a cross-web separator between the twisted conductor pairs.

See, e.g., 10Gbit Category 6A CMR/CMP product brochure ("Web Separator").

Yonechi and Refi disclose a configurable tape separator **11** that, prior to cabling, comprises a substantially flat, non-conductive tape disposed between the plurality of twisted pairs of conductors/optical fibers/copper pairs **10** and that is arranged so as to separate the first twisted pair of insulated conductors from the second twisted pair of insulated conductors [Figures 2 and 4, 3:8-39].

FIG. 2

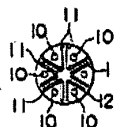
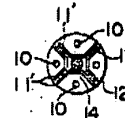


FIG. 4



"Referring now to FIG. 2, the first embodiment of the optical fiber cable construction of the present invention will now be described. A plurality of optical fibers **10** are accommodated in the recesses provided in a plurality of V-shaped folded splicing tapes **11**. It should be noted that optical fibers **10** can be provided with an appropriate coating if desired. Because of the recesses provided by folding splicing tapes **11** into a V-shape in the longitudinal direction, the optical fibers **10** can be accommodated in a loosely-fitted fashion therein. As shown in FIG. 2, each of the fibers **10** is accommodated in a separate recess provided by a folded splicing tape **11**...

In the construction of FIG. 2, each of the splicing tapes **11** is shaped or folded to have a groove in the longitudinal direction and each splicing tape so shaped or folded has a symmetrical transverse cross-section. Splicing tapes **11** are arranged, as shown in FIG. 2, in a radial fashion with respect to the center-line of the optical fiber cable formed thereby. The material for splicing tapes **11** is preferably a rather rigid material that is easily shaped or folded but which retains the shape or fold provided thereby. One example of a suitable material for splicing tape **11** is a thick polyester having a thickness, for example, of about 0.1 mm. Another suitable material for splicing tape **11** is aluminum. Of

	<i>course, additional materials are equally suitable for splicing tape 11."</i> (emphasis added) Since the separator 11 is made from <i>"a rather rigid material that is easily shaped or folded but which retains the shape or fold"</i>, Yonechi discloses a configurable tape separator.
wherein the plurality of twisted pairs of insulated conductors and the configurable pair separator are cabled about a common axis to form the unshielded twisted pair communications cable.	Yonechi and Refi disclose wherein twisted pairs of insulated conductors / optical fibers/copper pairs 10 and the configurable tape separator 11 are cabled about a common axis to form the unshielded twisted pair communications cable [Figures 8 and 10, 6:65-7:8]. FIG. 8 is a perspective view of a cable assembly. It shows a central core with multiple twisted pairs of conductors (10) and a separator (11) arranged around a common axis. The assembly is shown in a cross-section view with various components labeled with reference numerals (e.g., 10, 11, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100). FIG. 10 is a cross-sectional view of the cable assembly. It shows a central core with multiple twisted pairs of conductors (10) and a separator (11) arranged around a common axis. The assembly is shown in a cross-section view with various components labeled with reference numerals (e.g., 10, 11, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100). The diagrams illustrate the arrangement of the twisted pairs and the separator around a common axis, and the rotation of the assembly. <i>"In the second embodiment of the method and apparatus of the present invention the system surrounded by the dotted chain line 90 of FIG. 10 is integrally rotated. The rotation of the assemblage die 70 can be easily realized by a mechanical and integral connection between the die 70 to the guide plate 56 and the rotary cage 52. Alternatively, instead of the mechanical linkage therebetween, the die 70 can be integrally rotated with the rotary cage 52 by supporting the die 70 by means of a bearing to permit free rotation thereof. Incidentally, the system surrounded by the broken line shows a conventional rotation system."</i> Both, Figures 8 and 10, of Yonechi describe a twisted cable cabled "about a common axis". The prosecution of the Clark '503 patent⁵ specifically teaches <i>"bunching" and "twisting...to close the cable" [A]s explained above, both bunching and twisting are known</i> [amendment, November 26, 1999, page 5] with regard to claim 17 of application 08841440 [now US patent 6074503], and therefore could be applied to the Yonechi and Refi communications cable,

⁵ The '999 patent under reexamination and the Clark '503 patent share 2 (two) inventors.

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	~~17~~ A method of producing a cable, comprising steps of: passing a plurality of transmission media and a core through a first die which aligns the plurality of transmission media with surface features of the core and prevents twisting motion of the core; bunching the aligned plurality of transmission media and core using a second die which forces each of the plurality of transmission media into contact with the surface features of the core which maintain a spatial relationship between each of the plurality of transmission media; twisting the bunched plurality of transmission media and core to close the cable; and jacketing the closed cable. With regard to having a plurality of twisted pairs of insulated conductors, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a plurality of twisted pairs of insulated conductors in order to accommodate an application's specifics, since it has been held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. <i>In re Harza</i>, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) and MPEP 2144.04.
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CLAIM 15	YONECHI, CLARK'503, REFI
	Dependent claim 15 recites substantially the same limitations as dependent claim 2, and therefore, for remarks and rejection see claim 2, <i>supra</i> .

CLAIM 16	YONECHI, CLARK'503, REFI
	Dependent claim 16 recites substantially the same limitations as dependent claim 6, and therefore, for remarks and rejection see claim 6, <i>supra</i> .

CLAIM 20	YONECHI, CLARK'503, REFI
An unshielded twisted pair communications cable comprising:	Yonechi discloses a communications cable [1:10-12]. <i>"The present invention relates to optical fiber cable constructions and to methods and apparatus for fabricating the same."</i> It is also noted that Patentee's own predecessor patent, US 6074503 to Clark et al. stated in pertinent part at 1:16-17,

	<u>"One common type of conventional cable for high-speed data communications includes multiple twisted pairs."</u> The prosecution of the Clark '503 patent⁶ specifically teaches " <i>bunching</i>" and " <i>twisting...to close the cable</i>". [A]s explained above, both <i>bunching</i> and <i>twisting are known</i>"[amendment, November 26, 1999, page 5] with regard to claim 17 of application 08841440 [now US patent 6074503], and therefore could be applied to the Yonechi communications cable, A method of producing a cable, comprising steps of: passing a plurality of transmission media and a core through a first die which aligns the plurality of transmission media with surface features of the core and prevents twisting motion of the core; bunching the aligned plurality of transmission media and core using a second die which forces each of the plurality of transmission media into contact with the surface features of the core which maintain a spatial relationship between each of the plurality of transmission media; twisting the bunched plurality of transmission media and core to close the cable; and jacketing the closed cable. Examiner notes that the effective filing date for the '503 patent is April 27, 1997, while the earliest effective filing date that the '999 patent under reexamination could claim is February 25, 1999. The '503 patent and the '999 patent share 2(two) inventors.
a plurality of twisted pairs of insulated conductors including a first twisted pair and a second twisted pair;	The '999 patent under reexamination describes at 4:16-33, <i>"A number of embodiments of a data communications cable according to the invention will now be described in which the cable is constructed with a plurality of twisted pairs of insulated conductors and a core made from a configurable, dielectric pair separator. <u>However, it is to be appreciated that the invention is not limited to any number of twisted pairs or any profile for the configurable, dielectric pair separator illustrated in any of these embodiments.</u> The inventive principles can be applied to cables including greater or fewer numbers of twisted pairs and having different core profiles of the configurable dielectric pair separator. In addition, although these embodiments of the invention are described and illustrated in connection with twisted pair data</i>

⁶ The '999 patent under reexamination and the Clark '503 patent share 2 (two) inventors.

	<i>communication media, it is to be appreciated that other high-speed data communication media can be used instead of twisted pairs of conductors in the constructions of the cable according to the invention, such as, for example, <u>fiber optic media</u>.</i>" (emphasis added) Yonechi discloses optical fibers 10. The Refi reference discloses that copper pairs may substitute for optical fibers in a communications cable. The Refi reference discloses that <i>"[h]ybrid cables are constructed by substituting copper pairs for the fibers in a slot"</i> [Refi reference, pages 79-80]. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to replace <i>fiber optic media</i> disclosed by Yonechi '485 patent with the <i>copper pairs of conductors</i> disclosed the Refi reference in the constructions of the cable because: a) both are very well known, alternate types of cables which will perform the same function, if one is replaced with the other, of transmitting signals, as already suggested by the '499 patent and the Refi reference, and b) the use of this particular type of cables is considered to be nothing more than the use of one of numerous and well known alternate types of cables that a person having ordinary skill in the art would have been able to provide using routine experimentation in order to transmit signals, as already suggested by the Refi reference and the '999 patent and the Refi reference, as being interchangeable: <i>"it is to be appreciated that <u>other high-speed data communication media</u> can be used instead of <u>twisted pairs</u> of conductors in the constructions of the cable according to the invention, such as, for example, <u>fiber optic media</u>"</i> [the '999 patent, 4:29-33]. <i>"The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."</i> <i>KSR Int'l Co. v. Teleflex Inc.</i>, 550 U.S. 398, 416 (2007).
a separator disposed among the plurality of twisted pairs of insulated conductors so as to separate the first twisted pair from the second twisted pair; and	The '999 patent under reexamination describes the term "<i>configurable pair separator 14</i>" as follows at 5:40-48 and Fig.6: <i>"FIG. 6 depicts a cross-sectional view of a preferred embodiment of the data cable 10 of this invention. The cable includes the low-dielectric constant, low-dissipation factor polymer pair separator 14 formed into a cable core in such a way as to physically separate the four twisted pairs 12, thereby decreasing field coupling between the twisted pairs, providing a desired opposite twisted pair-to-pair physical distance, as well as providing a desired adjacent pair separation."</i>

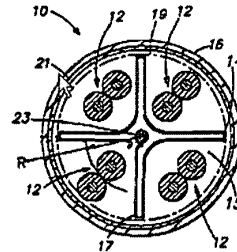


FIG. 6

Further, Patentee stated on the record during litigation as to defining a "configurable tape separator" as a "product (that) employs a cross-web separator between the twisted conductor pairs". Appendix to Belden's Second Supplemental Responses to Interrogatories, March 9, 2009, page 39.

a configurable tape separator disposed between the plurality of twisted pairs of conductors in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair of insulated conductors from the second twisted pair of insulated conductors;	The product employs a cross-web separator between the twisted conductor pairs. See, e.g., 10Gain Category 6A CMR/CMP product brochure ("Web Separator").
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Yonechi discloses a separator **11** disposed among the plurality of twisted pairs of insulated conductors /optical fibers/copper pairs **10** in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair from the second twisted pair [Figures 2 and 4, 3:8-39].

FIG. 2

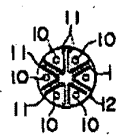
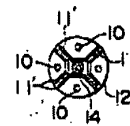
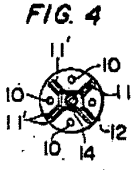
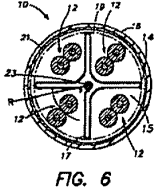


FIG. 4



"Referring now to FIG. 2, the first embodiment of the optical fiber cable construction of the present invention will now be described. A plurality of optical fibers **10** are accommodated in the recesses provided in a plurality of V-shaped folded splicing tapes **11**. It should be noted that optical fibers **10** can be provided with an appropriate coating if desired. Because of the recesses provided by folding splicing tapes **11** into a V-

	shape in the longitudinal direction, the optical fibers 10 can be accommodated in a loosely-fitted fashion therein. As shown in FIG. 2, each of the fibers 10 is accommodated in a separate recess provided by a folded splicing tape 11... In the construction of FIG. 2, each of the splicing tapes 11 is shaped or folded to have a groove in the longitudinal direction and each splicing tape so shaped or folded has a symmetrical transverse cross-section. Splicing tapes 11 are arranged, as shown in FIG. 2, in a radial fashion with respect to the center-line of the optical fiber cable formed thereby. <u>The material for splicing tapes 11 is preferably a rather rigid material that is easily shaped or folded but which retains the shape or fold provided thereby.</u> One example of a suitable material for splicing tape 11 is a thick polyester having a thickness, for example, of about 0.1 mm. Another suitable material for splicing tape 11 is aluminum. Of course, additional materials are equally suitable for splicing tape 11." (emphasis added)
a jacket enclosing the plurality of twisted pairs of insulated conductors and the separator;	Yonechi discloses a jacket 12 enclosing the plurality of twisted pairs of insulated conductors / optical fibers/copper pairs 10 and the separator 11 [6:32-33, Figures 2-7]. "The assembled cable core is preferably covered with an outer tape 12."
wherein the separator is substantially non-conductive and is constructed such that, when a portion of the jacket is removed from an end of the cable to expose the plurality of twisted pairs and the separator, the exposed separator is substantially flat.	US 7179999 under reexamination does not show "an end of the cable" and does not describe the limitation "a portion of the jacket is removed from an end of the cable". The configurations of Figures 2 and 4 in Yonechi are "substantially flat", as the separator can have a different form based on whether the jacket is present or not. Since the separator is made of polyester or polyethylene tape, the tape would naturally resume a substantially flat form upon removal of the jacket. Moreover, compare Fig.4 of Yonechi to Fig.6 of the '999 patent disclosing a "flat" separator. <u>The Yonechi '485 patent</u>  FIG. 4 <u>The '999 patent</u>  FIG. 6

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CLAIM 23	YONECHI, REFI, CLARK'503
	Independent claim 23 is interpreted to recite the same limitations as independent claim 1, <i>supra</i>, and therefore, for remarks and rejection, see claim 1, <i>supra</i>. See also rejections under 35 USC 112, <i>supra</i>. <i>MPEP 2143.02 states under "LIMITATIONS WHICH DO NOT FIND SUPPORT IN THE ORIGINAL SPECIFICATION MUST BE CONSIDERED"</i> <i>When evaluating claims for obviousness under 35 U.S.C. 103, all the limitations of the claims must be considered and given weight, including limitations which do not find support in the specification as originally filed (i.e., new matter). Ex parte Grasselli, 231 USPQ 393 (Bd. App. 1983) aff'd mem. 738 F.2d 453 (Fed. Cir. 1984).</i> <i>A claim limitation which is considered indefinite cannot be disregarded. If a claim is subject to more than one interpretation, at least one of which would render the claim unpatentable over the prior art, the examiner should reject the claim as indefinite under 35 U.S.C. 112, second paragraph (see MPEP § 706.03(d)) and should reject the claim over the prior art based on the interpretation of the claim that renders the prior art applicable. Ex parte Ionescu, 222 USPQ 537 (Bd. Pat. App. & Inter. 1984).</i>

(B) Claims 8, 10-12, 17, 19, and NEW claims 24, 26, 27 and 29 of the '999 patent are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonechi, Clark'503, and Refi, as described *supra*, in view of US patent 5670748 to Gingue et al.

CLAIM 8	YONECHI, CLARK'503, REFI, GINGUE
The unshielded twisted pair communications cable as claimed in claim 1,	Yonechi, Clark'503 and Refi disclose an unshielded twisted pair communications cable as claimed in claim 1, <i>supra</i> .
wherein the configurable tape separator includes a foamed polymer.	Yonechi describes the configurable tape separator may be made of "a suitable material for splicing tape 11 is a thick polyester having a thickness, for example, of about 0.1 mm" [3:35-37], while a "polyester" is a category of <u>polymers</u> which contain the ester functional group in their main chain. Yonechi, Clark and Refi do not disclose specifically wherein the configurable tape separator includes a foamed polymer. The Gingue '748 patent discloses "[B]ecause of concerns that flame and smoke could travel along the extent of a plenum area in the event the electrical conductors and cable were involved in a fire, the National Fire Protection Association ("NFPA") has developed a standard

	<i>to reduce the amount of flammable material incorporated into insulated electrical conductors and jacketed cables. Reducing the amount of flammable material would, according to the NFPA, diminish the potential of the insulating and jacket materials from spreading flames and evolving smoke to adjacent plenum areas and potentially to more distant and widespread areas throughout a building”[1:35-45].</i> <i>The Gingue '748 patent further discloses “the electrical performance of an insulating material is enhanced by foaming or expanding the corresponding solid material. Foaming also decreases the amount of flammable material employed for a given volume of material. Accordingly, a <u>foamed material is preferably employed to achieve a favorable balance of electrical properties and flame retardancy</u>”[3:20-25].</i> <i>Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use “foamed polymer” in the Yonechi, Clark and Refi references, as the configurable tape separator, given the industry trend of enhancing the <u>electrical performance of an insulating material</u>, and “in order to <u>achieve a favorable balance of electrical properties and flame retardancy</u>.” [The Gingue '748 patent, 3:11-25] as design incentives and/or market forces provided a reason for the adaptation, and the invention resulted from application of the prior knowledge in a predictable manner. <i>KSR International Co. v. Teleflex, Inc.</i>, No 04-1350 (U.S. April 30, 2007).</i> <i>“The strongest rationale for combining references is a recognition, expressly or impliedly in the prior art or drawn from a convincing line of reasoning based on established scientific principles or legal precedent that some advantage or expected beneficial result would have been produced by their combination”. In re Sernaker, 702 F.2d 989, 994-95, 217 USPQ 1, 5-6 (Fed. Cir. 1983). >See also <i>Dystar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick</i>, 464 F.3d 1356, 1368, 80 USPQ2d 1641, 1651 (Fed. Cir. 2006) (“Indeed, we have repeatedly held that an implicit motivation to combine exists not only when a suggestion may be gleaned from the prior art as a whole, but when the improvement is technology-independent and the combination of references results in a product or process that is more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient. Because the desire to enhance commercial opportunities by improving a product or process is universal—and even common-sensical—we have held that there exists in these situations a motivation to combine prior art references even absent any hint of suggestion in the references themselves.”). <i>MPEP</i> § 2144.</i>
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CLAIM 10	YONECHI, CLARK'503, REFI, GINGUE
The unshielded twisted pair communications cable as claimed in claim 1,	Yonechi, Clark'503 and Refi disclose an unshielded twisted pair communications cable as claimed in claim 1, <i>supra</i> .
wherein the cable is suitable for plenum applications and wherein the configurable tape separator comprises at least one of a solid low-dielectric constant fluoropolymer, fluoroethylenepropylene, a foamed fluoropolymer, and polyvinyl chloride.	Yonechi describes the configurable tape separator may be made of "a suitable material for splicing tape 11 is a thick polyester having a thickness, for example, of about 0.1 mm" [3:35-37], while a "polyester" is a category of <u>polymers</u> which contain the ester functional group in their main chain. Yonechi, Clark and Refi do not disclose specifically wherein the cable is suitable for plenum applications and wherein the configurable tape separator comprises at least one of a solid low-dielectric constant fluoropolymer, fluoroethylenepropylene, a foamed fluoropolymer, and polyvinyl chloride. See the rejection of claim 8, <i>supra</i>. Further, the Gingue '748 patent describes "[F]luorinated ethylenepropylene polymers exhibit electrical performance comparable to non-halogenated to olefin polymers, such as polyethylene", and shows in Table 1 electrical performance and flame retardancy characteristics of several polymeric materials, <i>inter alia</i>, fluorinated ethylenepropylene (FEP).

CLAIM 11	YONECHI, CLARK'503, REFI, GINGUE
The unshielded twisted pair communications cable as claimed in claim 1,	Yonechi, Clark'503 and Refi disclose an unshielded twisted pair communications cable as claimed in claim 1, <i>supra</i> .
wherein the configurable tape separator includes a flame-retardant, low-dielectric constant, foamed polymer tape.	Yonechi describes the configurable tape separator may be made of "a suitable material for splicing tape 11 is a thick polyester having a thickness, for example, of about 0.1 mm" [3:35-37], while a "polyester" is a category of <u>polymers</u> which contain the ester functional group in their main chain. Yonechi, Clark and Refi do not disclose specifically wherein the configurable tape separator includes a flame-retardant, low-dielectric constant, foamed polymer tape. See the rejection of claim 8, <i>supra</i>. Further, the Gingue '748 patent discloses "the electrical performance of an insulating material is enhanced by foaming or expanding the corresponding solid material. Foaming also decreases the amount of flammable material employed for a given volume of material. Accordingly, a <u>foamed material is preferably employed to achieve a favorable balance of electrical properties and flame retardancy</u>" [3:20-25].

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CLAIM 12	YONECHI, CLARK'503, REFI, GINGUE
The unshielded twisted pair communications cable as claimed in claim 11,	Yonechi, Clark'503 and Refi disclose an unshielded twisted pair communications cable as claimed in claim 11, <i>supra</i> .
wherein the configurable tape separator comprises at least one of a foamed flame-retardant cellular polyolefin, a foamed flame-retardant fluoropolymer material, foamed fluorinated ethylene propylene, and foamed polyvinyl chloride.	Yonechi describes the configurable tape separator may be made of "a suitable material for splicing tape 11 is a thick polyester having a thickness, for example, of about 0.1 mm" [3:35-37], while a "polyester" is a category of <u>polymers</u> which contain the ester functional group in their main chain. Yonechi, Clark and Refi do not disclose specifically wherein the configurable tape separator comprises at least one of a foamed flame-retardant cellular polyolefin, a foamed flame-retardant fluoropolymer material, foamed fluorinated ethylene propylene, and foamed polyvinyl chloride. See the rejection of claim 10, <i>supra</i> . Further, the Gingue '748 patent describes "[F]luorinated ethylenepropylene polymers exhibit electrical performance comparable to non-halogenated to olefin polymers, such as polyethylene", and shows in Table 1 electrical performance and flame retardancy characteristics of several polymeric materials, <i>inter alia</i> , fluorinated ethylenepropylene (FEP).

CLAIM 17	YONECHI, CLARK'503, REFI, GINGUE
The unshielded twisted pair communications cable as claimed in claim 14,	Yonechi, Clark'503 and Refi disclose an unshielded twisted pair communications cable as claimed in claim 14, <i>supra</i> .
wherein the configurable pair separator includes a foamed polymer.	Yonechi describes the configurable tape separator may be made of "a suitable material for splicing tape 11 is a thick polyester having a thickness, for example, of about 0.1 mm" [3:35-37], while a "polyester" is a category of <u>polymers</u> which contain the ester functional group in their main chain. Yonechi, Clark and Refi do not disclose specifically wherein the configurable pair separator includes a foamed polymer. See the rejection of claim 11, <i>supra</i> . Further, the Gingue '748 patent further discloses "the electrical performance of an insulating material is enhanced by foaming or expanding the corresponding solid material. Foaming also decreases the amount of flammable material employed for a given volume of

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	<i>material. Accordingly, a foamed material is preferably employed to achieve a favorable balance of electrical properties and flame retardancy</i> "[3:20-25].
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CLAIM 19	YONECHI, CLARK'503, REFI, GINGUE
The unshielded twisted pair communications cable as claimed in claim 14,	Yonechi, Clark'503 and Refi disclose an unshielded twisted pair communications cable as claimed in claim 14, <i>supra</i> .
wherein the configurable pair separator comprises at least one of a foamed flame-retardant cellular polyolefin, a foamed flame-retardant fluoropolymer material, foamed fluorinated ethylene propylene, and a foamed polyvinyl chloride.	Yonechi describes the configurable tape separator may be made of "a suitable material for splicing tape 11 is a thick polyester having a thickness, for example, of about 0.1 mm" [3:35-37], while a "polyester" is a category of <u>polymers</u> which contain the ester functional group in their main chain. Yonechi, Clark and Refi do not disclose specifically wherein the configurable tape separator comprises at least one of a foamed flame-retardant cellular polyolefin, a foamed flame-retardant fluoropolymer material, foamed fluorinated ethylene propylene, and foamed polyvinyl chloride. See the rejection of claim 11, <i>supra</i> . Further, the Gingue '748 patent describes "[F]luorinated ethylenepropylene polymers exhibit electrical performance comparable to non-halogenated to olefin polymers, such as polyethylene", and shows in Table 1 electrical performance and flame retardancy characteristics of several polymeric materials, <i>inter alia</i> , fluorinated ethylenepropylene (FEP).

CLAIM 24	YONECHI, CLARK'503, REFI, GINGUE
	Dependent claim 24 recites substantially the same limitations as dependent claim 8, and therefore, for remarks and rejection see claim 8, <i>supra</i> .

CLAIM 26	YONECHI, CLARK'503, REFI, GINGUE
	Dependent claim 26 recites substantially the same limitations as dependent claim 10, and therefore, for remarks and rejection see claim 10, <i>supra</i> .

CLAIM 27	YONECHI, CLARK'503, REFI, GINGUE
	Dependent claim 27 recites substantially the same limitations as dependent claim 11, and therefore, for remarks and rejection see claim 11, <i>supra</i> .

CLAIM 29	YONECHI, CLARK'503, REFI, GINGUE
	Dependent claim 27 recites substantially the same limitations as dependent claim 12, and therefore, for remarks and rejection see claim 12, <i>supra</i> .

(C) Claims 9, 18 and NEW claim 25 of the '999 patent are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonechi, Clark '503 and Refi, as described *supra*, in view of the European patent EP-569217 to Weinberg.

European patent **EP-569217** [hereinafter the Weinberg '217 patent] "Fiberglass cloth resin tape insulation" published **November 10, 1993**, and has a **US** equivalent patent number **5274196** [hereinafter the Weinberg '196 patent], same title, issued **December 28, 1993**.

CLAIM 9	YONECHI, CLARK'503, REFI, WEINBERG
The unshielded twisted pair communications cable as claimed in claim 1,	Yonechi, Clark'503 and Refi disclose an unshielded twisted pair communications cable as claimed in claim 1, <i>supra</i> .
wherein the configurable tape separator includes a woven fiberglass tape.	Yonechi, Clark'503 and Refi do not disclose wherein the configurable tape separator includes a woven fiberglass tape. Weinberg '217, or Weinberg '196, disclose woven fiberglass tape that "<i>possesses excellent dielectric properties and heat dissipation properties.</i>" Weinberg '196, abstract. <i>"An improved electrical insulation tape is formed from a sheet of fiberglass cloth having a layer of thermoplastic resin bonded thereto. The thermoplastic resin layer is applied to the fiberglass sheet by melting the resin while contacting the fiberglass, and then the composite is cooled to bond the two components together. The composite sheet is then slit into tapes with substantially no unraveling of the fiberglass component at the slit edges of the tapes. The resultant tapes are easily wrapped on, and adhered to, conductors, such as magnet wire, or the like, by remelting and resolidifying the thermoplastic layer. <u>The tape possesses excellent dielectric properties and heat dissipation properties.</u> Alternatively, the fiberglass sheet may be impregnated with the melted thermoplastic component whereby a composite, rather than a relatively definitive two layer laminate, is formed."</i> Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use "woven fiberglass tape ", as taught by Weinberg, in the Yonechi, Clark and Refi references as the

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	configurable tape separator in order to enhance " <i>dielectric properties and heat dissipation properties</i> ." [The Weinberg '196 patent, abstract] as design incentives and/or market forces provided a reason for the adaptation, and the invention resulted from application of the prior knowledge in a predictable manner. <i>KSR International Co. v. Teleflex, Inc.</i> , No 04-1350 (U.S. April 30, 2007).
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CLAIM 18	YONECHI, CLARK'503, REFI, WEINBERG
	Dependent claim 18 recites substantially the same limitations as dependent claim 9, and therefore, for remarks and rejection, see claim 9, <i>supra</i> .

CLAIM 25	YONECHI, CLARK'503, REFI, WEINBERG
	Dependent claim 25 recites substantially the same limitations as dependent claim 9, and therefore, for remarks and rejection, see claim 9, <i>supra</i> .

(D) Claims 1-4, 6, 7 and 13-16 of the '999 patent are rejected under 35 U.S.C. 103 (a) as being unpatentable over the patent DE-29719866 to Backmann in view of the US patent 3622683 to Roberts et al. and the US patent 6074503 to Clark et al., as evidenced by the US patent 5789711 to Gaeris et al., and Admitted Prior Art

The rejection using the patent DE-29719866 to Backmann as a base reference was proposed by the Third Party Requester in the request for reexamination, and is adopted with modification, as detailed, *infra*.

First, Patentee emphasizes that DE 297 16 866 (hereafter "the '866 patent") is directed to a shielded data communication cable that includes a shielding of the pairs of conductors consisting of electrically conductive material as well as of an outer cable covering [Response filed July 12, 2010, p.26]. Original patent claims 1-20 recite an "unshielded twisted pair communications cable".

However, the '999 patent under reexamination states at 4:23-33,

*"The inventive principles can be applied to cables including greater or fewer numbers of twisted pairs and **having different core profiles** of the configurable dielectric pair separator. In addition, although these embodiments of the invention are described and illustrated in connection with twisted pair data communication media, it is to be appreciated that **other high-speed data communication media can be used instead of twisted pairs of conductors in the constructions of the cable** according to the invention, such as, for example, fiber optic media."*(emphasis added)

The above excerpt makes **no mention** of whether the cable is shielded **or** unshielded.

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Further, Fig.6 of the '999 patent under reexamination describes "*four electrically shielded, enclosed channels*" where "*The embodiment of FIG. 6 further illustrates a shield 21 may also be laterally wrapped around the binder 19; the shield is preferably made from a foil or metal. The shield may be applied over the cable before jacketing the cable with the jacket 16, and is also used to help reduce crosstalk between the twisted pairs, to reduce alien crosstalk, and prevent the cable from causing or receiving electromagnetic interference. It is to be appreciated that the shield can also be provided in lieu of the binder.*"

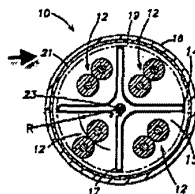


FIG. 6

The main difference between the claimed subject-matter of the '999 patent, which uses a rigid core member as a pair separator, and the '866 patent, is that the configurable and foldable pair separator of the latter has a conductive component, as the '866 patent describes the configurable tape separator may be made of a metal foil, such as aluminum, or a metal foil laminated by plastic [Translation of the '866 patent, p.3].

This screening technique is **known in the art** as a means to reduce cross-talk which is especially important for data transmission cables which comprise a plurality of conductors as e.g., the predecessor Clark '503 patent ⁷ [abstract, 4:14-21], filed in 1997, acknowledged that cross talk can be reduced by making the pair separator conductive,

*"A cable exhibiting reduced crosstalk between transmission media includes a core having a profile with a shape which defines spaces or channels to maintain a spacing between transmission media in a finished cable. The **core is formed of a conductive material to further reduce crosstalk**. A method of producing a cable introduces a core as described above into the cable assembly and imparts a cable closing twist to the assembly."⁸*

⁷ The '999 patent under reexamination and the Clark '503 patent share 2 (two) inventors.

⁸ Mr. Gareis, a Belden engineer who works with Mr. Clark (one of the inventors for the '999 patent under reexamination), on cross-examination admitted that even in his own work, he actually worked on a project where he started with a shielded cable. It was referred to as the 1711a cable. It was a **shielded** cable with a plus-shaped separator. That was the product already in existence. Mr. Gareis testified -- he called them Project A and Project B in his testimony -- that the concept here is the separator, and even though he had to do some engineering work to sort of make it commercially manufacturable, the concept was evident as a component in the project, the concept being, "*could do some work and put that separator in an **unshielded** cable.*" [Belden Technologies vs. Superior Essex proceedings, September 15, 2010, pages 1341-1343]. It might be the reason why Mr. Clark misquotes the 1711a cable as a cable with a **conductive** core [the '503 patent, 4:15].

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*"A conventional four-pair cable including a non-conductive core...reduces nominal crosstalk by up to 5dB over similar, four-pair cable without the core. By making the core conductive, crosstalk is **reduced** a further 5dB. Since both loading and jacket construction can affect crosstalk, these figures compare cables with similar loading and jacket construction."*

From the prior art, it becomes, therefore, evident that using a non-conductive separator would worsen the cross-talk characteristics of a cable. This **disadvantage** is known by a person of ordinary skill in the art and should be considered as **common knowledge**, especially as the Clark '503 patent and the '999 patent under reexamination share 2 (two) inventors.

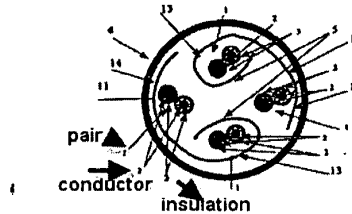
With regard to the patent using a non-conductive separator for the communications cable, by eliminating the conductive core, cited in the '866 patent, Patentee does not make it easier to reduce "alien cross talk", as cited in the disclosure [the '999 patent, 6:21]: Therefore, it would be obvious to one skilled in the art at the time the invention was made that the elimination of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before, in order to lessen the price point of the product, i.e., cable, and use the price elasticity as a marketing strategy. See *Ex parte Wu*, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989). See also *In re Larson*, 340 F.2d 965, 144 USPQ 347 (CCPA 1965) (Omission of additional framework and axle which served to increase the cargo carrying capacity of prior art mobile fluid carrying unit would have been obvious **if this feature was not desired**); and *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (deleting a prior art switch member and thereby eliminating its function was an obvious expedient).

Indeed, Patentee's and Declarant Baxter's own arguments at page 26, indicate that when the economy is not "*that great*", a company is not using the best performing cable, but rather the combination of price and performance.

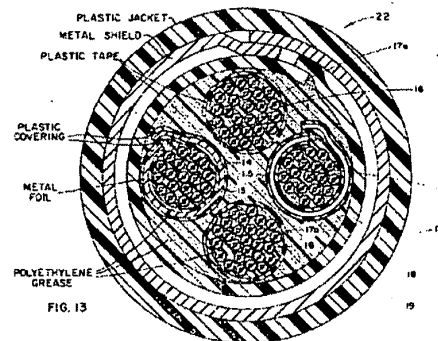
*"The "highest performance cables available" were **not** tape separator cables, **whose EMI performance was at least inferior to cross-web cables.** Because of this, one would have expected the cross-web cables to crowd out lower-performing tape separator cables. Yet the opposite has been the case: lower-priced and slightly lower performing tape separator cables have stolen share from out cross-web cables."*

CLAIM 1	BACKMANN '866, ROBERTS, CLARK '503, GAERIS
An unshielded twisted pair communications cable comprising:	Backmann '866 discloses a twisted pair communications cable. Translation of Backmann '866, pages 3-4, and Fig.1. <i>"An invention-specific data transmission cable is suitable for a maximum transmission frequency of 100 or 600 MHz, especially of 100 or 350 MHz. As an outer mechanical protection, an invention-specific transmission cable has a cable cover 4, which consists of customary thermoplastic cover materials. Especially EMC protective measures can <u>additionally</u> be taken by the application of metal foils and/or shielding</i>

plaits below the cable cover, which, however, is not depicted."



While Backmann '866 discloses wherein the configurable tape separator might be a metal foil laminated by plastic, the US patent 3622683 to **Roberts et al.** specifically discloses a plastic-only separator. Figure 13 of the '683 patent, reproduced below, discloses a cable with two plastic-only separators (elements 17a - "plastic tape"):



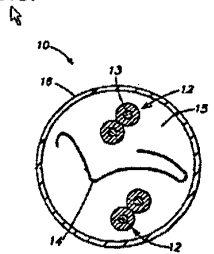
Similarly, claim 1 of U.S. Patent 3,622,683 recites:

"1. A cable comprising:

- a. a cable core having first and second groups of insulated electrical conductors;*
- b. a metal foil shield covered on both surfaces with a plastic, said metal foil shield peripherally surrounding said first group of electrical conductors but not said second group of electrical conductors;*
- c. a plastic tape peripherally surrounding said second group of electrical conductors, but not said first group of electrical conductors, and***
- d. a plastic sheath circumferentially surrounding said first and second groups of electrical conductors. "* (emphasis added)

The '683 patent teaches three options for separators -- foil, a composite of foil and plastic, or plastic-only. The '866 patent discloses two options for the separator -- foil or a composite of foil and plastic. Given these teachings, it would have been obvious to one of ordinary

	sill in the art to modify the teaching of the '866 patent to include the third option – a plastic-only separator. This plastic-only separator is a non-conductive separator. The '866 patent itself identifies a motivation of the invention being to improve performance while reducing manufacturing costs. Translation of the '866 patent, page 1 <i>"[T]he problem that is the basis for the present invention., is to configure it so that the manufacturing costs can be lowered, without the transmission properties., being impaired as compared to those cables with individually shielded conductor pairs."</i> One of ordinary skill in the art would have been motivated to try a plastic-only separator for a number of reasons. Removing the metal foil, as disclosed in the '683 patent, would reduce manufacturing costs. Consumers in the U.S. market prefer cables without metal foils (See Declaration of Baxter at paragraphs 12-13). The '683 patent discloses disadvantages of a metal foil that could be eliminated or mitigated by use of a plastic-only separator. <i>"Because a metal foil screen or shield is used, provisions should be made for preventing unwanted electrical energy, escaping from imperfections in the insulations around electrical conductors, from reaching the metal shield."</i> ('683 Patent at 13:37-40.) <i>"By using the concept of a firmly adhering plastic coating on a metal foil [rather than a metal only separator], the mechanical properties, i.e., resistance to flexing, bending or mechanical manipulations, can be improved."</i> ('683 Patent at 13:50-53). The resistance to flexing, bending or mechanical manipulations of a plastic-only separator would be even better than that of a plastic-coated foil. Therefore, the "non-conductive" separator limitation would have been obvious to try in the cable of the '866 patent, for all the reasons above. Clark '503 also discloses, <i>"A cable exhibiting reduced crosstalk between transmission media includes a core having a profile with a shape which defines spaces or channels to maintain a spacing between transmission media in a finished cable. The core is formed of a conductive material to further reduce crosstalk. A method of producing a cable introduces a core as described above into the cable assembly and imparts a cable</i>
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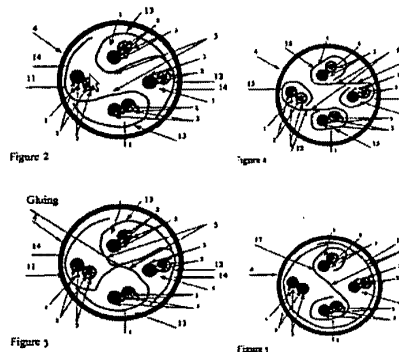
	<i>closing twist to the assembly."</i> [the '503 patent, abstract]. Even assuming, <i>arguendo</i>, the separator is conductive in the Backmann '866 reference, the elimination of an element and its function, and the use of a non-conductive separator, as suggested by Roberts and Clark '503, in a combination is an obvious expedient if the remaining elements perform the same functions as before in order to lessen the price point of the product, i.e., cable product, and use the price elasticity as a marketing strategy. See <i>Ex parte Wu</i>, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989), See also <i>In re Larson</i>, 340 F.2d 965, 144 USPQ 347 (CCPA 1965) (Omission of additional framework and axle which served to increase the cargo carrying capacity of prior art mobile fluid carrying unit would have been obvious if this feature was not desired); and <i>In re Kuhle</i>, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (deleting a prior art switch member and thereby eliminating its function was an obvious expedient).
a plurality of twisted pairs of insulated conductors including a first twisted pair of insulated conductors and a second twisted pair of insulated conductors;	Backmann '866 discloses a plurality of twisted pairs 1 of insulated conductors including a first twisted pair of insulated conductors 2 [see Fig.1] and a second twisted pair of insulated conductors 2 [see Fig.1], where element 3 is the insulation. Translation of Backmann '866, page 4, and Fig.1. <i>"However, not just four pairs 1 can be provided as depicted, but rather an invention-specific data transmission cable can have only two pairs of stranded conductors. An arbitrary number of n pairs may be present, where n is an even-numbered multiple of 1".</i>
a configurable tape separator disposed between the plurality of twisted pairs of conductors in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair of insulated conductors from the second twisted pair of insulated conductors; and	The '999 patent under reexamination describes the term "<i>configurable pair separator 14</i>" as follows at 4:43-47 and Fig.5: <i>"FIG. 5 depicts a cross-sectional view of an embodiment of the cable of FIG. 4. The configurable pair separator 14 runs along a longitudinal length of the cable, and is configured such that the twisted pairs are disposed within channels or grooves 15 of the pair separator along the length of the cable."</i>  FIG. 5

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Further, Patentee admitted on the record during litigation as to defining a "configurable tape separator" as a "product (that) employs a cross-web separator between the twisted conductor pairs". [Appendix to Belden's Second Supplemental Responses to Interrogatories, March 9, 2009, page 39].

a configurable tape separator disposed between the plurality of twisted pairs of conductors in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair of insulated conductors from the second twisted pair of insulated conductors;	The product employs a cross-web separator between the twisted conductor pairs. See, e.g., 10Gain Category 6A CMR/CMP product brochure ("Web Separator").
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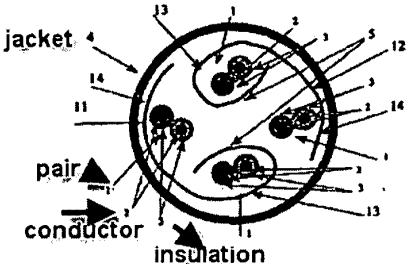
Backmann '866 discloses a configurable tape separator disposed between the plurality of twisted pairs **1** of conductors **2** in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair of insulated conductors [see Figures 2-5] from the second twisted pair of insulated conductors [see Figures 2-5]. Translation of Backmann '866, Figures 2-5.



a jacket enclosing the plurality of twisted pairs of insulated conductors and the configurable tape separator;

Backmann '866 discloses a jacket **4** enclosing the plurality of twisted pairs **1** of insulated conductors **2** and the configurable tape separator [see Figures 2-5]. Translation of Backmann '866, page 3, and Fig.1.

*"As an outer mechanical protection, an invention-specific transmission cable has a cable cover **4**, which consists of customary thermoplastic cover materials. Especially EMC protective measures can additionally be taken by the application of metal foils and/or shielding plaites below the cable cover..."*

	
wherein the plurality of twisted pairs of insulated conductors and the configurable tape separator are cabled about a common axis to form the unshielded twisted pair communications cable; and	Backmann '866 discloses wherein the plurality of twisted pairs 1 of insulated conductors 2 and the configurable tape separator [see Figures 2-5] are cabled about a common axis to form the unshielded twisted/SZ stranded pair communications cable, where SZ stranding is a form of twisting to close a cable where the cable is alternatively twisted to the right and left about the central axis of the cable. Translation of Backmann '866, p.6 (third paragraph), claim 11. <i>"An invention-specific data transmission cable, as described above, can be manufactured so that the partial shieldings 11, 12 or 17, 18 can be applied together with the stranding of conductor pairs 1 and/or longitudinal reshaping of the conductor pairs 1. Especially with stranding of the conductor pairs in the <u>SZ stranding</u> procedure, the existing laying tools for the partial shieldings 11, 12 can support changing the stranding direction."</i> <i>"11. Data transmission cable according to one or more of claims 1 to 10, characterized in that the conductor pairs (1) are stranded to form helixes or are SZ-like."</i> While Backmann '866 discloses <i>"the conductor pairs 1 are stranded to form helixes or are SZ-like"</i>, the US patent 5789711 to Gaeris et al. specifically discloses <i>"The star separator may be cabled with a helixed or SZ configuration. In a helical shape, the splines extend helically along the length of the star separator as shown in FIG. 2. The helically twisted splines in turn define helically twisted conductor receiving grooves which accommodate the twisted pairs."</i> The '711 patent, 5:7-12. In fact the '999 patent under reexamination describes Fig.12 where, <i>"The plurality of twisted pairs are then <u>cabled</u> with the formed pair separator by a third die 42, in an operation referred to as "bunching". The third die places the twisted pairs in the channels 15 (see FIGS. 5 10) of the formed pair separator prior to twisting of the cable. It is to be appreciated that the cable can be twisted with any known twisting</i>

	<i>arrangement such as a helix, or an S-Z configuration. It is also to be appreciated that this method can be varied to include any of the components illustrated and discussed above, such as, for example, to include a drain wire, a binder, a shield, or central core filler."</i> <i>(emphasis added on "It is to be appreciated that the cable can be twisted with any known twisting arrangement such as a helix, or an S-Z configuration.")</i> [the '999 patent, 8:46-57]
wherein the configurable tape separator is substantially non-conductive.	Backmann '866 and the US patent 3622683 to Roberts et al. describe the configurable tape separator is non-conductive, i.e., made of plastic, as per the discussion, <i>supra</i>. Clark '503 also discloses, <i>"A cable exhibiting reduced crosstalk between transmission media includes a core having a profile with a shape which defines spaces or channels to maintain a spacing between transmission media in a finished cable. The core is formed of a conductive material to further reduce crosstalk. A method of producing a cable introduces a core as described above into the cable assembly and imparts a cable closing twist to the assembly."</i> [the '503 patent, abstract]. The '683 patent is not the only prior art that guides the person of ordinary skill in the art to try a dielectric separator consisting of a dielectric layer. The "related art" section of the '999 patent identifies that it was known in the art to provide physical separation between twisted pairs to achieve improved transmission performance, and further identifies two prior art examples of cables that use dielectric separators consisting of a dielectric layer. First, Fig.1 of the '999 patent, reproduced below, is an Admitted Prior Art cable identified in the '999 patent as disclosed in U.S. Patent No. 4,777,325, in which the twisted pairs are separated by a dielectric separator consisting of a dielectric layer. The '999 patent describes this cable as follows, <i>"In particular, a plurality of twisted pairs 104a-104b, 106a-106b, 108a-108b, and 110a-110b are positioned side-by-side, each in separate compartments 112, 114, 116, and 118 formed within a fiat hollow envelope of an extruded outer sheath 120. The cable is provided with separator ribs 122 between a top and a bottom of the sheath to divide the outer sheath into the separate compartments and to prevent lateral movement of the</i>

twisted pairs out of their respective compartments."

('999 patent at 2:10-25)

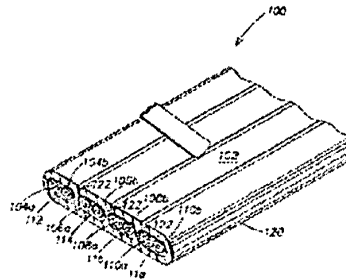


FIG. 1
(RELATED ART)

U.S. Patent No. 4,777,325 issued **October 11, 1988**, well before the priority data of the '999 patent.

Fig.3 of the '999 patent, reproduced below, discloses another prior art cable in which the twisted pairs are separated by a dielectric separator consisting of a dielectric layer. The '999 patent describes this cable as follows,

"Still another known industry cable implementation 132 is illustrated in FIG. 3. The cable utilizes a jacket 134 with inward protrusions 136 that form channels 138 within the cable. A twisted pair 140 of conductors 142, 144 is disposed within each channel. The protrusions are used to provide adequate pair separation." ('999 patent, 2:46-62)

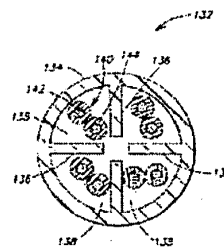


FIG. 3
(RELATED ART)

Those of ordinary skill in the art would have found several prior art examples of improving transmission properties by separating twisted

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	pairs with dielectric separators consisting of dielectric layers. Furthermore, as the Supreme Court identified in <i>KSR Int'l</i>, if trying the known options leads to the anticipated success, <i>the success is likely the product not of innovation, but of ordinary skill and common sense</i>. The example prior art cables given above in U.S. Patent 3,622,683 and in the Admitted Prior Art in the "related art" section of the '999 patent would lead one of ordinary skill in the art to anticipate success in trying a plastic-only separator. Even assuming, <i>arguendo</i>, the separator is conductive in the Backmann '866 reference, the elimination of an element and its function, and use of a non-conductive separator, as suggested by Roberts and Clark '503, in a combination is an obvious expedient if the remaining elements perform the same functions as before in order to lessen the price point of the product, i.e., cable, and use the price elasticity as a marketing strategy. See <i>Ex parte Wu</i>, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989). See also <i>In re Larson</i>, 340 F.2d 965, 144 USPQ 347 (CCPA 1965) (Omission of additional framework and axle which served to increase the cargo carrying capacity of prior art mobile fluid carrying unit would have been obvious if this feature was not desired); and <i>In re Kuhle</i>, 526 F.2d 553, 188 USPQ 7 (CCPA 1975). (deleting a prior art switch member and thereby eliminating its function was an obvious expedient).
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CLAIMS 2-7, 13, 23	BACKMANN '866, ROBERTS, CLARK '503, GAERIS
	The proposed rejections for dependent claims 2-7, 13 and 23 as being unpatentable over the patent DE-29719866 to Backmann, as a primary reference was proposed by the Third Party Requester in the request for reexamination, and is <u>adopted with modification</u>, as detailed, <i>supra</i>. The rejection was proposed by the Third Party Requester in the request for reexamination, and the examiner incorporates by reference the reasons set forth in the request for reexamination, and the explanation of pertinence and manner of applying prior art in Exhibit 3 of the request for the Backmann '866 reference, as evidenced by the US patent 5789711 to Gaeris et al., in view of the US patent 3622683 to Roberts et al. for claims 2-7, 13 and 23.

CLAIM 14	BACKMANN '866, ROBERTS, CLARK '503, GAERIS
	Independent claim 14 recites substantially the same limitations as independent claim 1, minus the limitation "<i>and wherein the configurable tape separator is substantially non-conductive</i>". Therefore, for remarks and rejection, see claim 1, <i>supra</i>. Further, the proposed rejection for claim 14 as being unpatentable over

	the patent DE-29719866 to Backmann, as evidenced by the US patent 5789711 to Gaeris et al., in view of the US patent 3622683 to Roberts et al. was proposed by the Third Party Requester in the request for reexamination, and the examiner incorporates by reference the reasons set forth in the request for reexamination, and the explanation of pertinence and manner of applying prior art in Exhibit 3 of the request for the Backmann '866 reference, as evidenced by the US patent 5789711 to Gaeris et al., in view of the US patent 3622683 to Roberts et al. for claim 14.
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CLAIMS 15, 16, 20-22	BACKMANN '866, ROBERTS, CLARK '503, GAERIS
	The proposed rejections for dependent claims 15, 16, 20-22 as being unpatentable over the patent DE-29719866 to Backmann, as evidenced by the US patent 5789711 to Gaeris et al., in view of the US patent 3622683 to Roberts et al. was proposed by the Third Party Requester in the request for reexamination, and the examiner incorporates by reference the reasons set forth in the request for reexamination, and the explanation of pertinence and manner of applying prior art in Exhibit 3 of the request for the Backmann '866 reference, as evidenced by the US patent 5789711 to Gaeris et al., in view of the US patent 3622683 to Roberts et al. for claims 15 and 16.

(E) Claims 8, 10-12, 17, 19, 24, 26, 27 and 29 are rejected under 35 USC 103(a) as being unpatentable over the '866 patent, the '683 patent, the Clark '503 patent and the '711 patent, as described *supra*, in view of the '748 patent

CLAIMS 8, 10-12, 17, 19, 24, 26, 27, 29	BACKMANN '866, ROBERTS, CLARK '503, GAERIS, GINGUE
	The proposed rejections for dependent claims 8-12 using the patent DE-29719866 to Backmann as a primary reference was proposed by the Third Party Requester in the request for reexamination, and is <u>adopted with modification</u> , as detailed, <i>supra</i> .

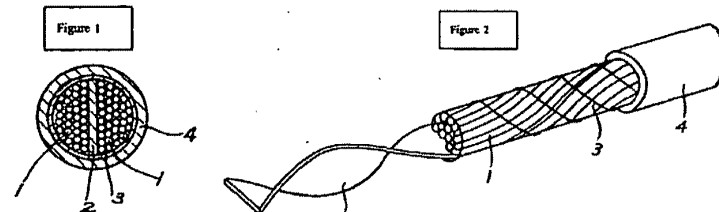
(F) Claims 9, 18, 25 are rejected under 35 USC 103(a) as being unpatentable over the '866 patent, the '683 patent, the Clark '503 patent and the '711 patent, as described *supra*, in view of the European patent EP-569217 to Weinberg

CLAIMS 9, 18, 25	BACKMANN '866, ROBERTS, CLARK '503, GAERIS, WEINBERG
	The proposed rejections for dependent claims 8-12 using the patent DE-

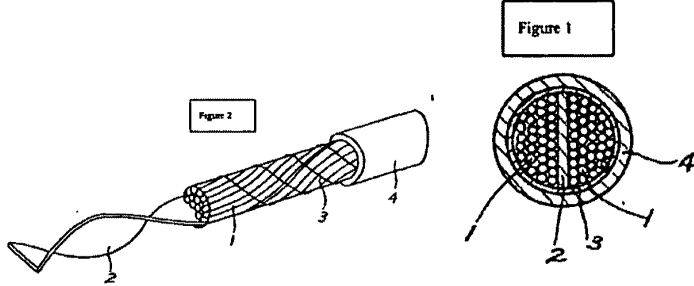
	29719866 to Backmann as a primary reference was proposed by the Third Party Requester in the request for reexamination, and is <u>adopted with modification</u> , as detailed, <i>supra</i> .
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(G) Claims 1, 3, 5-7, 14, 16, 20-23 and 28 of the '999 patent are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagida '470, as evidenced by the US patent 3622683 to Roberts et al., and as evidenced by the US patent 6074503 to Clark et al.

The rejection using the patent Yanagida '470 as a base reference was proposed by the Third Party Requester in the request for reexamination, and is adopted with modification, as detailed, *infra*, and as described *supra*, in the rejection using the '866 patent.

CLAIM 1	YANAGIDA '470, ROBERTS, CLARK '503
An unshielded twisted pair communications cable comprising:	Yanagida '470 discloses an unshielded twisted pair communications cable. Translation of Yanagida '470, Detailed Explanation of the Invention, and Figures 1 and 2. <i>"The present invention relates to a favorable alternately stranded cable; more specifically, it relates to an alternately stranded cable that prevents the unraveling of wire twisting. As communications cable, there is a tendency to use a plurality of either insulated element wires or else stranded pairs or stranded quad of such, or otherwise to use so-called alternately stranded cable with which units of the wires are stranded in a manner so that the stranding direction is reversed at points in time within a fixed cycle."</i> 
a plurality of twisted pairs of insulated conductors including a first twisted pair of insulated conductors and a second twisted pair of insulated	Yanagida '470 discloses a plurality of twisted pairs/stranded pairs of insulated conductors 1 including a first twisted pair of insulated conductors and a second twisted pair of insulated conductors [see Figures 1 and 2]. Translation of Yanagida '470, Detailed Explanation of the Invention, and Figures 1 and 2. <i>"The present invention relates to a favorable alternately stranded cable; more specifically, it relates to an alternately stranded cable that</i>

conductors;	<i>prevents the unraveling of wire twisting. As communications cable, there is a tendency to use a plurality of either insulated element wires or else stranded pairs or stranded quad of such, or otherwise to use so-called alternately stranded cable with which units of the wires are stranded in a manner so that the stranding direction is reversed at points in time within a fixed cycle."</i>
a configurable tape separator disposed between the plurality of twisted pairs of conductors in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair of insulated conductors from the second twisted pair of insulated conductors; and	Yanagida '470 discloses a configurable tape separator 2 disposed between the plurality of twisted pairs of conductors 1 in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair of insulated conductors from the second twisted pair of insulated conductors. Translation of Yanagida '470, Detailed Explanation of the Invention, and Fig.2. <i>"To explain this by illustrative working examples, reference numeral 1 constitutes an insulated element wire or stranded groupings of such; these are divided and longitudinally run along both surfaces of core material 2; roughly wound thread for applying pressure is then wound around the outer circumference of this, and cable sheath 4 is finally placed around this outer circumference. Core material 2 is most effectively shown in Figure 2; as shown therein, the material is formed into a reciprocatingly twisted state by slowly changing the facing of both surfaces as the material moves in the longitudinal direction. This can be achieved by twisting the facing direction of the plate body to the opposing direction at fixed intervals while maintaining the rigid plastic or other material of the horizontal plate at a prescribed temperature. Proximal to both surfaces of the core material obtained in this manner, in order to longitudinally run the insulated element wire while twisting it in the direction of those surfaces, the core material is caused to be inserted into a guide hole provided in the center of a revolving butt strap, and each group of insulated element wire is caused to be inserted into a guide hole provided on the fringe [of the revolving butt strap]; subsequently, while the tips of these are indexed through dies, reciprocating rotation should be conducted by combining the revolving butt strap with the twisting of the core material. To the outer circumference of the wire obtained in this manner, pressure rolling 3 and cable sheathing 4 are then applied by ordinary methods."</i>

	 Fig.1 of the '470 patent shows a cross section of the finished cable, showing the flat separator 2.
a jacket enclosing the plurality of twisted pairs of insulated conductors and the configurable tape separator;	Yanagida '470 discloses a jacket 4 enclosing the plurality of twisted pairs of insulated conductors 1 and the configurable tape separator 2. Translation of Yanagida '470, Detailed Explanation of the Invention, and Fig.2. <i>"To the outer circumference of the wire obtained in this manner, pressure rolling 3 and cable sheathing 4 are then applied by ordinary methods."</i>
wherein the plurality of twisted pairs of insulated conductors and the configurable tape separator are cabled about a common axis to form the unshielded twisted pair communications cable;	Yanagida '470 discloses wherein the plurality of twisted pairs of insulated conductors 1 and the configurable tape separator 2 are cabled about a common axis to form the unshielded twisted pair communications cable. Translation of Yanagida '470, Detailed Explanation of the Invention, and Fig.2. The '470 patent discloses a cable with a flat separator that is twisted about its central axis. The flat separator is formed by alternatively twisting the separator with the cable.
and wherein the configurable tape separator is substantially non-conductive.	Yanagida '470 discloses wherein the separator is "plastic": <i>"Core material 2 is most effectively shown in Figure 2; as shown therein, the material is formed into a reciprocatingly twisted state by slowly changing the facing of both surfaces as the material moves in the longitudinal direction. This can be achieved by twisting the facing direction of the plate body to the opposing direction at fixed intervals while maintaining the rigid plastic or other material of the horizontal plate at a prescribed temperature."</i> Yanagida '470 does not disclose the "plastic" is non-conductive. The US patent 3622683 to Roberts et al. specifically discloses "[W]hen

	<i>a signal is transmitted over any circuit in this cable, it is permissible to consider an electromagnetic field as spreading out from this circuit in the form of a wave motion. This wave reaches other conductors and may induce currents and electromotive forces in other circuits unless they are perfectly balanced"</i>[3:22-27], and to prevent that is using "plastic coating of the metal (aluminum) foil as a dielectric to keep unwanted currents [emitting from pinholes in the insulation of individual electrical conductors]"[3:28-51]. Further, Roberts discloses "[B]y dividing electrical conductor telephone pairs within a telephone cable structure with plastic-coated metal foil, the crosstalk properties are so vastly improved that a greater spacing between repeaters can be designed into a telephone cable system, as compared to a cable system employing prior art divided or undivided cable pairs"[abstract]. The Clark '503 patent ⁹[abstract], further acknowledges that cross talk can be reduced by making the pair separator conductive, <i>"A cable exhibiting reduced crosstalk between transmission media includes a core having a profile with a shape which defines spaces or channels to maintain a spacing between transmission media in a finished cable. The core is formed of a conductive material to further reduce crosstalk. A method of producing a cable introduces a core as described above into the cable assembly and imparts a cable closing twist to the assembly."</i> From the prior art, it becomes, therefore, evident that using a non-conductive separator would worsen the cross-talk characteristics of a cable. This disadvantage is known by a person of ordinary skill in the art and should be considered as common knowledge, especially as the Clark '503 patent and the '999 patent under reexamination share 2 (two) inventors. With regard to the patent using a non-conductive separator for the communications cable, by eliminating the conductive core, Patentee does not make it easier to reduce "alien cross talk", as cited in the disclosure [the '999 patent, 6:21]. Therefore it would be obvious to one skilled in the art at the time the invention was made that the elimination of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before. See <i>Ex parte Wu</i>, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989), See also <i>In re Larson</i>, 340 F.2d 965, 144 USPQ 347 (CCPA 1965) (Omission of
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⁹ The '999 patent under reexamination and the Clark '503 patent share 2 (two) inventors.

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	additional framework and axle which served to increase the cargo carrying capacity of prior art mobile fluid carrying unit would have been obvious if this feature was not desired); and <i>In re Kuhle</i> , 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (deleting a prior art switch member and thereby eliminating its function was an obvious expedient).
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CLAIM 3	YANAGIDA '470, ROBERTS, CLARK '503
The unshielded twisted pair communications cable as claimed in claim 1,	Yanagida '470, Roberts and Clark'503 disclose an unshielded twisted pair communications cable as claimed in claim 1, <i>supra</i> .
wherein, prior to cabling, the configurable tape separator comprises a substantially flat tape.	The '470 patent discloses a separator that is flat prior to cable twisting, and is configured during the twisting process. See '470 Patent Translation, Detailed Explanation of the Invention. <i>"Core material 2 is most effectively shown in Figure 2; as shown therein, the material is formed into a reciprocatingly twisted state by slowly changing the facing of both surfaces as the material moves in the longitudinal direction. This can be achieved by twisting the facing direction of the plate body to the opposing direction at fixed intervals while maintaining the rigid plastic or other material of the horizontal plate at a prescribed temperature the core material is caused to be inserted into a guide hole provided in the center of a revolving butt strap, and each group of insulated element wire is caused to be inserted into a guide hole provided on the fringe [of the revolving butt strap]; subsequently, while the tips of these are indexed through dies, reciprocating rotation should be conducted by combining the revolving butt strap with the twisting of the core material."</i>

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CLAIM 5	YANAGIDA '470, ROBERTS, CLARK '503
The unshielded twisted pair communications cable as claimed in claim 1,	Yanagida '470, Roberts and Clark '503 disclose an unshielded twisted pair communications cable as claimed in claim 1, <i>supra</i> .
wherein the separator is constructed such that when a portion of the jacket is removed from an end of the cable to expose the plurality of twisted pairs and the separator, the exposed separator is substantially flat.	US 7179999 under reexamination does not show "<i>an end of the cable</i>" and does not describe the limitation "<i>a portion of the jacket is removed from an end of the cable</i>". The configuration of Fig.1 in Yanagida '470 is "<i>substantially flat</i>", as the separator 2 can have a different form based on whether the jacket is present or not. Moreover, compare Fig.1 of Yanagida '470 to Fig.6 of the '999 patent disclosing a "flat" separator. <u>The Yanagida '470 patent</u> Figure 1 <u>The '999 patent</u> FIG. 6

CLAIM 6	YANAGIDA '470, ROBERTS, CLARK '503
The unshielded twisted pair communications cable as claimed in claim 1,	Yanagida '470, Roberts and Clark '503 disclose an unshielded twisted pair communications cable as claimed in claim 1, <i>supra</i> .
wherein the configurable tape separator occupies less than approximately 50% of a core area between the plurality of twisted pairs of insulated conductors.	US 7179999 under reexamination does not describe the limitation "<i>wherein the configurable tape separator occupies less than approximately 50% of a core area between the plurality of twisted pairs of insulated conductors</i>" in the specification, and only mentions it in original claims 6 and 16. "If the applicant has not demonstrated the criticality of a specific limitation, it would be appropriate to rely solely on case law as the rationale to support an obviousness rejection". See MPEP 2144.04. This claim is <i>prima facie</i> obvious without showing that the claimed range achieves unexpected results relative to the prior art range. In the same field of endeavor, it would have been obvious to one of ordinary skill to

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	determine the thickness of the compliant layer (see <i>In re Aller, Lacey, and Hall</i> (10 USPQ 233-237). It is not inventive to discover optimum or workable ranges by routine experimentation. Note that the specification contains no disclosure of either the critical nature of the claimed ranges or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical (see <i>In re Woodruff</i>, 919 F.2d 1575, 1578, 16 USPQ 2d 1934, 1936 (Fed. Cir. 1990)): See also <i>In re Huang</i>, 40 USPQ2d 1685, 1688 (Fed. Cir. 1996) (claimed ranges of a result effective variable, which do not overlap the prior art ranges, are unpatentable unless they produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art). See also <i>In re Boesch</i>, 205 USPQ 215 (CCPA) (discovery of optimum value of result effective variable in known process is ordinarily within skill of art) and <i>In re Aller</i>, 105 USPQ 233 (CCPA 1955) (selection of optimum ranges within prior art general conditions is obvious). See also MPEP § 2144.05 titled "Rebuttal of <i>Prima Facie</i> Case of Obviousness": <i>"Applicants can rebut a prima facie case of obviousness based on overlapping ranges by showing the criticality of the claimed range. "The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990).</i> Further, broad language in the disclosure, including the abstract, omitting an allegedly critical feature, tends to rebut the argument of criticality.
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CLAIM 7	YANAGIDA '470, ROBERTS, CLARK '503
The unshielded twisted pair communications cable as claimed in claim 1,	Yanagida '470, Roberts and Clark'503 disclose an unshielded twisted pair communications cable as claimed in claim 1, <i>supra</i> .
wherein the configurable tape separator occupies approximately 32% of a core area of the cable between the plurality of twisted	US 7179999 under reexamination does not describe the criticality of the limitation " <i>the configurable tape separator occupies approximately 32% of a core area of the cable between the plurality of twisted pairs of insulated conductors</i> ", and only mentions it once in the specification, and then claim 7. The '999 patent, 5:30-33. <i>"In a preferred embodiment, approximately 32% of the overall core area</i>

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pairs of insulated conductors.	<i>between the four twisted pairs of the cable is filled with such a filler and shaped as described herein."</i> "If the applicant has not demonstrated the criticality of a specific limitation, it would be appropriate to rely solely on case law as the rationale to support an obviousness rejection". See MPEP 2144.04. This claim is <i>prima facie</i> obvious without showing that the claimed range achieves unexpected results relative to the prior art range. In the same field of endeavor, it would have been obvious to one of ordinary skill to determine the thickness of the compliant layer (see In re Aller, Lacey, and Hall (10 USPQ 233-237). It is not inventive to discover optimum or workable ranges by routine experimentation. Note that the specification contains no disclosure of either the critical nature of the claimed ranges or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical (see In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ 2d 1934, 1936 (Fed. Cir. 1990)). See also In re Huang, 40 USPQ2d 1685, 1688 (Fed. Cir. 1996) (claimed ranges of a result effective variable, which do not overlap the prior art ranges, are unpatentable unless they produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art). See also In re Boesch, 205 USPQ 215 (CCPA) (discovery of optimum value of result effective variable in known process is ordinarily within skill of art) and In re Aller, 105 USPQ 233 (CCPA 1955) (selection of optimum ranges within prior art general conditions is obvious). See also MPEP § 2144.05 titled "Rebuttal of <i>Prima Facie</i> Case of Obviousness": <i>"Applicants can rebut a prima facie case of obviousness based on overlapping ranges by showing the criticality of the claimed range. "The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990).</i> Further, broad language in the disclosure, including the abstract, omitting an allegedly critical feature, tends to rebut the argument of criticality.
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CLAIM 14	YANAGIDA '470, ROBERTS, CLARK '503
	Independent claim 14 recites substantially the same limitations as independent claim 1, minus the limitation <i>"and wherein the configurable tape separator is substantially non-conductive"</i> . Therefore, for remarks and rejection, see claim 1, <i>supra</i> .

CLAIM 20	YANAGIDA '470, ROBERTS, CLARK '503
	Independent claim 20 recites substantially the same limitations as independent claim 1, and dependent claim 5, <i>supra</i> , and therefore, for remarks and rejection, see claims 1 and 5, <i>supra</i> .

CLAIM 21	YANAGIDA '470, ROBERTS, CLARK '503
	With regard to new dependent claim 21, <i>"wherein the separator is disposed substantially centrally within the cable and extends longitudinally along the length of the cable"</i> , Yanagida '470 describes in Fig.1, <i>supra</i> , <i>"wherein the separator is disposed substantially centrally within the cable and extends longitudinally along the length of the cable"</i> .

CLAIM 22	YANAGIDA '470, ROBERTS, CLARK '503
	With regard to new dependent claim 22, <i>"wherein the separator is disposed substantially centrally within the cable and extends longitudinally along the length of the cable"</i> , Yanagida '470 describes in Fig.1, <i>supra</i> , <i>"wherein the separator is disposed substantially centrally within the cable and extends longitudinally along the length of the cable"</i> .

CLAIM 23	YANAGIDA '470, ROBERTS, CLARK '503
	New independent claim 23 recites substantially the same limitations as independent claim 1, and therefore, for remarks and rejection, see claim 1, <i>supra</i> . See also rejections under 35 USC 112, <i>supra</i> .

CLAIM 28	YANAGIDA '470, ROBERTS, CLARK '503
	New dependent claim 28 recites substantially the same limitations as dependent claims 21 and 22, and therefore, for remarks and rejection, see claims 21 and 22, <i>supra</i> .

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(H) NEW claim 30 is rejected under 35 USC 103(a) as being unpatentable over the Yonechi, Clark '503 and Refi, or in the alternative as being unpatentable over the Backmann, Roberts, Clark '503 and Gaeris, , as described *supra*.

CLAIM 30	YONECHI, REFI, CLARK'503
	The proposed rejection for claim 30 as being unpatentable over the Yonechi, Clark '503 and Refi, or in the alternative as being unpatentable over the Backmann, Roberts, Clark '503 and Gaeris was proposed by the Third Party Requester in the response filed April 25 2011, and is <u>adopted</u> for the reasons set forth in the response. The examiner incorporates by reference the detailed explanation of the manner of applying the references for claim 30 (pages 34-35).

(I) NEW claims 31-36 are rejected under 35 USC 103(a) as being unpatentable over the Yonechi, Clark '503, Refi, and Gingue '748, or in the alternative as being unpatentable over the Backmann, Gaeris, Roberts, Clark '503 and Gingue '748, as described *supra*.

CLAIMS 31-36	YONECHI, REFI, CLARK'503, GINGUE '748
	The proposed rejection for claims 31-36 as being unpatentable over the Yonechi, Refi, Clark '503 and Gingue '748, or in the alternative as being unpatentable over the Backmann, Gaeris, Roberts, Clark '503 and Gingue '748 was proposed by the Third Party Requester in the response filed April 25 2011, and is <u>adopted</u> for the reasons set forth in the response. The examiner incorporates by reference the detailed explanation of the manner of applying the references for claims 31 and 32 (pages 35-41).

RESPONSE TO ARGUMENTS

The standard for reexamination is well established: claims must be given their broadest reasonable construction consistent with the specification. *See MPEP § 2258 I(G)*. This requirement was detailed in *In Re American Academy of Science Tech Center*, 367 F.3d 1359 (Fed. Cir. 2004). The Federal Circuit explained that "[g]iving claims their broadest reasonable construction 'serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified.'" *Id.* at 1364 (quoting *In Re Yamamoto*, 740 F. 2d 1569, 1571 (Fed. Cir. 1984)). The Federal Circuit further stated that "[c]onstruing claims broadly during prosecution is not unfair to the applicant (or in this case, the Appellant), because

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the applicant has the opportunity to amend the claims to obtain more precise claim coverage." *Id.* (citing *Yamamoto*, 740 F.2d at 1571).

Further in this regard, it is well settled that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed.Cir.1993). In this case, Patent Owner is trying to limit the scope of the claims by pointing to "examples" in the specification.

In this regard *MPEP 2258 G* states in pertinent part:

"During reexamination, claims are given the broadest reasonable interpretation consistent with the specification and limitations in the specification are not read into the claims (In re Yamamoto, 740 F.2d 1569, 222 USPQ 934 (Fed. Cir. 1984)). The statutory presumption of validity, 35 U.S.C. 282, has no application in reexamination (In re Etter, 756 F.2d 852, 225 USPQ 1 (Fed. Cir. 1985))."

Further during prosecution, *"the PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification."* *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

First, Examiner acknowledges that the '999 patent specification describes a **variety of configurations** for the alleged inventive cable, the configurations including both, **shielded and unshielded cables**, as well as both, **a conductive and non-conductive separator**. The following is a non-exclusive list of examples from the specification,

"The present invention relates to high-speed data communications cables using at least two twisted pairs of insulated conductors. More particularly, the invention relates to high-speed data communications cables having a light-weight, configurable core-filling isolation pair separator that provides geometrical separation between the twisted pairs of insulated conductors."[1:25-31]

*"A number of embodiments of a **data communications cable** according to the invention will now be described in which the cable is constructed with a plurality of twisted pairs of insulated conductors and a core made from a configurable, dielectric pair separator. However, it is to be appreciated that the invention is **not** limited to any number of twisted pairs or any profile for the configurable, dielectric pair separator illustrated in any of these embodiments. The inventive principles can be applied to cables including greater or fewer numbers of twisted pairs and having different core profiles of the configurable dielectric pair separator. In addition, although these embodiments of the invention are described and illustrated in connection with twisted pair data communication media, it is to be appreciated that other high-speed data communication media can be used instead of twisted pairs of conductors in the constructions of the cable according to the invention, such as, for example, **fiber optic media**."* (emphasis added) [4:16-33].

"Referring again to FIG. 6, the data communications cable may also be provided with a binder 19, as illustrated in phantom, that is wrapped around the configurable core pair

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separator 14 and the plurality of twisted pairs 12. For this embodiment, it is preferable that the **configurable core pair separator be an aluminum/mylar tape, with an aluminum layer on a side of the tape facing the plurality of twisted pairs.** In addition, **it is preferred that the binder be made of the aluminum/mylar tape,** with the aluminum layer of the tape facing the plurality of the twisted pairs **so that the combination of the binder and the configurable pair separator provide four electrically shielded, enclosed channels.** With this embodiment, the four enclosed channels are isolated from one another to provide desired crosstalk isolation. In addition, another benefit of the embodiment of the cable is that a cable adjacent this cable will have reduced coupling with the cable of the invention, or in other words, **reduced alien cross talk** as it is known in the industry."

The embodiment of FIG. 6 further illustrates **a shield 21 may also be laterally wrapped around the binder 19; the shield is preferably made from a foil or metal.** The shield may be applied over the cable before jacketing the cable with the jacket 16, and is also used to help reduce crosstalk between the twisted pairs, to reduce alien crosstalk, and prevent the cable from causing or receiving electromagnetic interference. It is to be appreciated that the shield can also be provided in lieu of the binder. In particular, greater crosstalk isolation between the twisted pairs of the cable, and reduced alien crosstalk may also be achieved by using a **conductive shield 21** that is, for example, a metal braid, a solid metal foil, or a conductive plastic that is in contact with ends of the protrusions 17 of the configurable filler 14. If the configurable pair separator is also conductive or semi-conductive as described above for the aluminum/mylar tape, then the combination of the pair separator and the shield forms conductive compartments that shield each twisted pair from the other twisted pairs." [6:4-40].

"FIG. 8 depicts still another embodiment of the data communications cable 10 having multiple twisted pairs 12 encased within the jacket assembly 16 and having at least one of the twisted pairs isolated by the pair separator 14, from the remainder of the twisted pairs. In particular, referring to FIG. 8, the twisted pairs have been labeled TP1, TP2, TP3 and TP4, wherein twisted pair TP4 is isolated from twisted pairs TP1, TP2 and TP3 by the pair separator 14...This embodiment of the cable according to the invention can be used, for example, to provide better isolation between a weakest one or a weakest combination of twisted pairs of cables, in an environment where there is known to be a low amount of isolation between a particular twisted pair and another twisted pair, or a plurality of twisted pairs." [7:11-43]

"The plurality of twisted pairs are then cabled with the formed pair separator by a third die 42, in an operation referred to as "bunching". The third die places the twisted pairs in the channels 15 (see FIGS. 5-10) of the formed pair separator prior to twisting of the cable. It is to be appreciated that the cable can be twisted with any known twisting arrangement such as a helix, or an S-Z configuration. **It is also to be appreciated that this method can be varied to include any of the components illustrated and discussed above, such as, for example, to include a drain wire, a binder, a shield, or central core filler.**" [8:46-57].

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While the '999 patent under reexamination describes "a number of embodiments" [the '999 patent, 4:16], both, shielded and unshielded, as well as both, having a conductive and a non-conductive separator, it does not describe the **criticality** of using one over the other, other than,

"Therefore, a need exists for a high-speed data cable having multiple twisted pair wires with desired crosstalk performance, improved handling and termination capabilities that is inexpensive, flexible and has a desired size. This invention provides an improved data cable."[the '999 patent, 3:3-7]

In fact, an artisan in the cable art would know to manipulate the various configurations, and make a design choice in order to achieve the desired results, i.e., desired crosstalk performance. Adaptation of the various configurations would involve nothing more than the expected skill in the art.

Mr. Baxter, a Declarant, based on his 20 years of experience, explained the very same thing,

*"Communications cables can be unshielded or they can be shielded, such as by having an overall foil or braided shield. In comparing an unshielded cable and shielded cable, certain cable parameters, such as insulating material, twist lays of the twisted pairs, and insulation thickness may vary. However, **one of ordinary skill in the art of the '999 Patent would be able to adjust these parameters when modifying a shielded cable to arrive at an unshielded cable. Calculations would be made to determine many of the parameter values.** These parameter values can be readily adjusted."*

[DECLARATION OF MR. LES BAXTER, P.E., November 18, 2009, page 2]

Second, before the prior art can be applied, the Patent Office must consider the scope of the claims. During reexamination, patent claims are to be given the "broadest reasonable interpretation" in light of the specification. MPEP § 2258(G); *see also* § 2111 (citing *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed.Cir.2005)).

The Federal Circuit Court has repeatedly held that **it is improper to interpret claims in a manner that excludes embodiments disclosed in the specification:**

"Claim term should not be interpreted in manner that excludes disclosed embodiments if term has multiple ordinary meanings consistent with intrinsic record..."

[*Helmsderfer v. Bobrick Washroom Equipment Inc.*, 87 USPQ2d 1216, Fed. Cir. 2008]

See also *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1305 [84 USPQ 2d 1609, Fed. Cir. 2007] (rejecting proposed claim interpretation that would exclude disclosed examples in the specification); *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1369 [66 USPQ2d 1631, Fed. Cir. 2003] (finding district court's claim construction erroneously excluded an embodiment)

described in an example in the specification, where the prosecution history showed no such disavowal of claim scope).

For this reason, Examiner's application of the "broadest reasonable interpretation standard" in prosecuting the '999 patent is consistent with precedent.

Third, it is telling that the 11/352850 application, that became the '999 patent, had a Notice of Allowance issued based on a **terminal disclaimer** with the claims 1-22 of previously issued US patent 6998537. However, the limitation "an **unshielded** communications cable" was only recited in dependent claim 11, and in the preamble of independent claim 19 of the '537 patent.

Fourth, the main difference between the claimed subject-matter of the '999 patent, which uses a rigid core member as a pair separator, and e.g., the '866 patent cited in a rejection described *supra*, is that the configurable and foldable pair separator of the latter has a **conductive** component, as the '866 patent describes the configurable tape separator may be made of a metal foil, such as aluminum, or a metal foil laminated by plastic [Translation of the '866 patent, p.3].

This screening technique is known in the art as a **means to reduce cross-talk** which is especially important for data transmission cables which comprise a plurality of conductors as e.g., the Clark '503 patent ¹⁰ [abstract], filed in **1997**, acknowledged that cross talk can be reduced by making the pair separator conductive,

*"A cable exhibiting reduced crosstalk between transmission media includes a core having a profile with a shape which defines spaces or channels to maintain a spacing between transmission media in a finished cable. **The core is formed of a conductive material to further reduce crosstalk.**"*

From the prior art, the Clark '503 patent, it becomes, therefore, evident that using a non-conductive separator would be going back in the art, and worsening the cross-talk characteristics of a cable. This disadvantage is known by a person of ordinary skill in the art and should be considered as **common knowledge**, especially as the Clark '503 patent and the '999 patent under reexamination share 2 (two) inventors.

Further, a "**conventional four-pair cable including a non-conductive core**"[the Clark '503 patent, abstract, 4:14-21] was known in **April 1997** (the filing date of the '503 patent), which antedates the earliest priority date the '999 patent under reexamination may claim, **February 1999**, based on its continuation status.

With regard to the patent using a **non-conductive separator** for the communications cable, by eliminating the conductive core, cited e.g., in the '866 patent, Patentee does not make it easier to "reduce(d) alien cross talk", as cited in the disclosure [the '999 patent, 6:21], and as previously recited in newly added independent claim 23. Therefore it would be obvious to one skilled in the art at the time the invention was made that the elimination of an element and its function in a combination is an obvious expedient if the remaining elements perform the same

¹⁰ The '999 patent under reexamination and the Clark '503 patent share 2 (two) inventors.

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functions as before in order to achieve a more marketable price point. See *Ex parte Wu*, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989), *In re Larson*, 340 F.2d 965, 144 USPQ 347 (CCPA 1965) and *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975).

Mr. Baxter, a Declarant, based on his 20 years of experience, further explained that **shields** are popular in Germany and other areas of the world, but they're not at all popular here, because they're expensive.

*"In parts of Europe, including Germany, the cable industry developed a preference for shielded cables. In contrast, other markets such as the United States favors unshielded cables. These preferences represent a **design choice** for the industry. Both shielded and unshielded cables can be designed to perform comparably, including satisfying Category 6 requirements based on TIA/EIA -568-B.2.*

Given the preference for unshielded cables in the United States and the fact that unshielded cables can be made to perform comparably to shielded cables, one of ordinary skill in the art of the '999 Patent would have been motivated to try to modify the separator disclosed in DE 29719866 to Backmann by removing the foil from the foil/plastic laminate separator to arrive at an unshielded cable. One specific reason to try is to make a cable more attractive to the U.S. market."

[DECLARATION OF MR. LES BAXTER, P.E., November 18, 2009, pages 2-3]

Mr. Gareis, a Belden engineer who works with Mr. Clark (one of the inventors for the '999 patent under reexamination), on cross-examination admitted that even in his own work, he actually worked on a project where he started with a shielded cable. It was referred to as the 1711a cable. It was a **shielded** cable with a plus-shaped separator. That was the product already in existence. Mr. Gareis testified -- he called them Project A and Project B in his testimony -- that the concept here is the separator, and even though he had to do some engineering work to sort of make it commercially manufacturable, the concept was evident as a component in the project, the concept being, "could do some work and put that separator in an **unshielded** cable."

[Belden Technologies vs. Superior Essex proceedings, September 15, 2010, pages 1341-1343]

Moreover, Mr. Gareis stated,

*"7. **Design choices** available to the developer of data cables having twisted pairs include physical attributes, such as: conductor size; insulation material on the conductor; insulation thickness; twist lays; a jacket; particulars of any jacket that may be provided, such as its material, thickness, configuration and electricals; a filler; particulars of any fillers that may be provided, such as its material, geometry and shape; a **shield particulars** of any shielding that may be provided, such as its material composition, thickness, coating, shape and configuration; a drain wire and particulars of any drain wires that may be provided, such as its material, gauge and outer pitch.*

8. During the development or modification of data cables having twisted pairs, one

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*or more physical attributes are chosen or otherwise modified to achieve a desired result, such as meeting various data cable performance parameters. **There is more than one way to meet electricals through physical relationships of all cable components. The optimal physical relationship strives to meet the smallest size, and / or least expensive relationship of all cable components.***

[DECLARATION OF GALEN GAREIS UNDER 37 C.F.R. §1.132, October 19, 2009]

MPEP 2144.02 cites in pertinent part,

*"In appropriate circumstances, it might not be unreasonable to take...notice of the fact that it is desirable to make something faster, **cheaper**, better, or stronger without the specific support of documentary evidence. "*

In re Zurko, 258 F.3d 1379, 1385, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001); *Ahlert*, 424 F.2d at 1092, 165 USPQ at 421."

I. Person of Ordinary Skill In the Art

Patentee argues,

"The invention claimed in the '999 patent was in no way obvious when viewed from the perspective of a person of ordinary skill in the art. This section addresses the person of ordinary skill in the art, and how he or she would have viewed the problems to be solved and the relevant prior art."

[Response filed July 25, 2011, p.4]

MPEP 2141.03 cites in pertinent part,

***>The person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art at the time of the invention. Factors that may be considered in determining the level of ordinary skill in the art may include: (A) "type of problems encountered in the art;" (B) "prior art solutions to those problems;" (C) "rapidity with which innovations are made;" (D) "sophistication of the technology; and" (E) "educational level of active workers in the field. In a given case, every factor may not be present, and one or more factors may predominate." In re GPAC*, 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995); *Custom Accessories, Inc. v. Jeffrey-Allan Industries, Inc.*, 807 F.2d 955, 962, 1 USPQ2d 1196, 1201 (Fed. Cir. 1986); *Environmental Designs, Ltd. V. Union Oil Co.*, 713 F.2d 693, 696, 218 USPQ 865, 868 (Fed. Cir.1983).

"A person of ordinary skill in the art is also a person of ordinary creativity, not an automaton." KSR International Co. v. Teleflex Inc., 550 U.S. ___, ___, 82 USPQ2d 1385, 1397 (2007). "[I]n many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." *Id.* Office personnel may also take into account "the inferences and creative steps that a person of ordinary skill in the art would employ." *Id.* at , 82 USPQ2d at 1396. <

The determination of obviousness must consider, *inter alia*, whether a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and whether there would have been a reasonable expectation of success in doing so. *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1125 (Fed. Cir. 2000).

As quoted *supra*, Mr. Gareis, a Belden engineer who works with Mr. Clark, one of the inventors of the '999 patent, believes,

"There is more than one way to meet electricals through physical relationships of all cable components. The optimal physical relationship strives to meet the smallest size, and / or least expensive relationship of all cable components."

[DECLARATION OF GALEN GAREIS UNDER 37 C.F.R. §1.132, October 19, 2009, para.8]

Applicable Law

Patentee argues,

"The perspective of a person of ordinary skill, of course, governs the obviousness evaluation. See 35 U.S.C. § 103(a); KSR Int'l, v. Teleflex, Inc., 127 S.Ct. 1727, 1734 (2007). The considerations relevant to a person of ordinary skill in the art must be taken into account, even if these considerations are not expressly recited in the claims."

[Response filed July 25, 2011, p.4]

MPEP 2144.02 cites in pertinent part,

*"In appropriate circumstances, it might not be unreasonable to take...notice of the fact that it is desirable to make something faster, **cheaper**, better, or stronger without the specific support of documentary evidence. "*
In re Zurko, 258 F.3d 1379, 1385, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001); *Ahlert*, 424 F.2d at 1092, 165 USPQ at 421."

In concert with Patentee's arguments, MPEP 2144.02, and as quoted *supra*, Mr. Gareis, a Belden engineer who works with Mr. Clark, one of the inventors of the '999 patent, believes,

"There is more than one way to meet electricals through physical relationships of all cable components. The optimal physical relationship strives to meet the smallest size, and / or least expensive relationship of all cable components."

[DECLARATION OF GALEN GAREIS UNDER 37 C.F.R. §1.132, October 19, 2009, para.8]

Contrary to the position taken by the Patent Owner in its Response, neither the Examiner nor the Third Party Requester has argued that a person of ordinary skill in the art would not be concerned with performance standards, **cost**, or usability. The issue, rather, is that the claims

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of the '999 patent do not recite performance standards, or cost, or usability, and the specification of the '999 patent does not teach how to achieve performance standards, or cost, or usability. That is because the person of ordinary skill in the art would understand how to take the components present in the prior art and meet performance standards, cost, and usability. Because those concerns would be within the grasp of one of ordinary skill in the art, the Patent Owner's arguments that the prior art combinations are improper because they do not address those issues are themselves flawed.

Patentee further argues,

"The Court of Appeals for the Federal Circuit made this clear in the case Preemption Devices vs. 3M Company. In Preemption, the court upheld the validity of a patent based on the advantages of the invention. "

[Response filed July 25, 2011, p.5]

However, an analysis of *Preemption Devices* opinions shows that the Patentee's reliance on this case is misplaced and fails to support Patentee's position.

Appellant, Preemption Devices Inc., filed for appeal after a bench trial in a declaratory judgment action brought by appellant to declare invalid the William H. Long Reissue Patent No. 28,100 for "Traffic Signal Remote Control System" owned by appellee, Minnesota Mining and Manufacturing Company (3M), which counterclaimed for infringement of the patent.

The appellate court's opinion was discussed with regard to,

"A. Sale or Public Use" where the appellate court stated,

"We do not find in appellant's arguments on this point anything more than a general disagreement with the trial judge's appraisal of the evidence on the basis of well-established law of which the judge had a thorough grasp. We find a total failure by appellants to establish error on these two issues. We find particularly unconvincing its argument based on the declaration filed in connection with the application to register the trademark OPTICOM, stating the dates of first use and first use in commerce. Those statements were not made with respect to the use of the invention but the use of the mark. The description of goods in the registration is very general and defines no particular apparatus."

"B. Printed Publication" where the appellate court stated,

"Appellant has said nothing to contradict the court's holding that the dissemination of six copies to an individual was not a "publication" under Sec. 102(b) or to show error in its third conclusion of law, "Opticom was not described in a printed publication before the critical date."

"C. Obviousness" where the appellate court stated,

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"The trial court made it clear that the main argument on obviousness was based on Ramsey patent No. 3,114,127 and a Shepherd patent. There are three Shepherd patents of record and we presume No. 2,355,607 is principally relied on. These patents were considered by two different examiners in the Patent Office who allowed the claims as patentable over them, first in the original patent and again in the reissue. Indeed, these patents are acknowledged in the specification of the patent in suit as prior art. The trial court correctly treated this consideration and action by the examiners as strong evidence of non-obviousness under Third and Seventh Circuit precedents."

"In appellant's four pages of argument on the legal issue of obviousness, we fail to find any showing of error in any finding underlying that issue that could give us a "definite and firm conviction that a mistake has been committed" or that there is any error of law in the trial judge's conclusion.

Appellant's Reply Brief attempts further to fault the trial judge on the ground he "does not understand the significance of patent claims" because he "never once mentions the claims of the patent in contest" in his opinion and also on the ground that he relied on "sales pitch features" which was allegedly error because they are not recited in the claims of the patent in contest. It is regrettable that we should have to remind counsel that attacking the judge as lacking in skill or understanding or legal competence, as has repeatedly been done in this case, is improper argument and wholly ineffective, if not counterproductive. It has no tendency to prove anything. As for putting advantages or "sales pitch features" in claims, counsel should know that they do not properly belong in claims, the sole function of which is to point out distinctly the process, machine, manufacture, or composition of matter which is patented, 35 U.S.C. Sec. 101, 112, not its advantages. It is entirely proper, nevertheless, in evaluating nonobviousness, for a court to take into account advantages directly flowing from the invention patented. After all, those advantages are the foundation of that "commercial success" which may be evidence of nonobviousness. Graham v. John Deere Co., supra.

The decision of the trial court that the invention defined by the claims in suit would not have been obvious within the meaning of Sec. 103 must stand.

"D. Fraud in the Patent's Prosecution" where the appellate court stated,

"The trial judge said he was "unable to find any intentional, material misstatements or omissions made in the Patent Office" and, having read all appellant has to say, we are likewise unable to find any. The gist of this argument is that the patent applicant should have brought to the attention of the examiner some of the documentation, referred to above, on which appellant has unsuccessfully relied in this case to show the three alleged bars under Sec. 102(b) and obviousness under Sec. 103.

Far from the allegation that it "smacks of outright fraud," we have rarely seen a less meritorious presentation of this much-abused and too often last-resort allegation. It merits no further comment."

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In summation, the Appellate Court affirmed the District Court's judgment of non-obviousness of the claimed invention based on Patent Office's decision to issue the claims over asserted Prior Art.

Patentee's conclusory statement with regard to *Preemption Devices* is, therefore, misplaced and fails to support Patentee's position,

"In other words, device claims are only required to recite structural features. Those structural features lead to advantages and unexpected results. In turn, these advantages and unexpected results can lead to commercial success. However, neither the advantages /results nor the commercial success are required to be expressly claimed."

[Response filed July 25, 2011, p.5]

The section of *Preemption Devices* quoted by the Patent Owner in its Response merely states that commercial success is a secondary consideration to be considered in an obviousness evaluation [Response filed July 25, 2011, p.5].

The Considerations Relevant To a Person of Ordinary Skill

The Person of Ordinary Skill was Concerned with Meeting or Exceeding Performance Standards

Patentee further argues,

"The person of ordinary skill at the time of the invention desired to at least meet (and if possible, exceed) industry standards of performance, while at the same time maintaining acceptable cost and usability. Performance below the standards was not a practical option, while performance above the standards could lead to success, depending on the cost and usability of the product."

[Response filed July 25, 2011, p.5].

The above statement, presumably supporting "the unshielded twisted pair communications cable" configuration having a non-conductive core, claimed in the '999 patent under reexamination seems to contradict the Clark '503 patent ¹¹ [abstract, 4:14-21], filed in 1997, acknowledging that cross talk can be reduced by making the pair separator conductive,

*"A cable exhibiting reduced crosstalk between transmission media includes a core having a profile with a shape which defines spaces or channels to maintain a spacing between transmission media in a finished cable. **The core is formed of a conductive material to further reduce crosstalk.**"*

*"A **conventional four-pair cable including a non-conductive core**,... reduces nominal crosstalk by up to 5dB over similar, four-pair cable without the core. By making the core conductive, crosstalk is reduced a further 5dB. Since both loading*

¹¹ The '999 patent under reexamination and the Clark '503 patent share 2 (two) inventors.

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and jacket construction can affect crosstalk, these figures compare cables with similar loading and jacket construction."

From the prior art, it becomes, therefore, evident that using a non-conductive separator would be going back in the art, and worsening the cross-talk characteristics of a cable. This disadvantage is known by a person of ordinary skill in the art and should be considered as **common knowledge**, especially as the Clark '503 patent and the '999 patent under reexamination share 2 (two) inventors.

Further, a "**conventional four-pair cable including a non-conductive core**" [the Clark '503 patent, abstract, 4:14-21] was known in **April 1997** (the filing date of the '503 patent), which antedates the earliest priority date the '999 patent under reexamination may claim, **February 1999**, based on its continuation status.

With regard to the patent using a **non-conductive separator** for the communications cable, by eliminating the conductive core, cited e.g., in the '866 patent, Patentee does not make it easier to "reduce(d) alien cross talk", as cited in the disclosure [the '999 patent, 6:21], and as previously recited in newly added independent claim 23. Therefore it would be obvious to one skilled in the art at the time the invention was made that the elimination of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before in order to achieve a more marketable price point. See *Ex parte Wu*, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989), *In re Larson*, 340 F.2d 965, 144 USPQ 347 (CCPA 1965) and *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975).

Patentee's argument;

"The Office is therefore requested to reconsider its discounting of the performance advantages of the invention."

[Response filed July 25, 2011, p.7].

must be taken in view of MPEP 716.01(b) stating,

*"To be given substantial weight in the determination of obviousness or nonobviousness, evidence of secondary considerations must be relevant to the subject matter as claimed, and therefore the examiner must determine whether there is a **nexus** between the merits of the claimed invention and the evidence of secondary considerations. Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 305 n.42, 227 USPQ 657, 673-674 n. 42 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986). The term "nexus" designates a factually and legally sufficient connection between the objective evidence of nonobviousness and the claimed invention so that the evidence is of probative value in the determination of nonobviousness. Demaco Corp. v. F. Von Langsdorff Licensing Ltd., 851 F.2d 1387, 7 USPQ2d 1222 (Fed. Cir.), cert. denied, 488 U.S. 956 (1988)."* (emphasis added)

Examiner acknowledged, *supra*, that the '999 patent specification describes a **variety of configurations** for the alleged inventive cable, the configurations including both, shielded and unshielded cables with conductive and non-conductive core.

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Examiner further acknowledged, *supra*, that the '999 patent under reexamination describes "a number of embodiments" [the '999 patent, 4:16], both, shielded and unshielded, with conductive and non-conductive core, but does not describe the **criticality** of using one over the other.

Examiner also noted, *supra*, that the '850 application, that became the '999 patent, had a Notice of Allowance issued based on a **terminal disclaimer** with claims 1-22 of the previously issued US patent 6998537. However, the limitation "an **unshielded** communications cable" was only recited in dependent claim 11, and in the preamble of independent claim 19 of the '537 patent.

Mr. Baxter, a Declarant, based on his 20 years of experience, further explained that **shields** are popular in Germany and other areas of the world, but they're not at all popular here, because they're expensive.

*"In parts of Europe, including Germany, the cable industry developed a preference for shielded cables. In contrast, other markets such as the United States favors unshielded cables. These preferences represent a **design choice** for the industry. Both shielded and unshielded cables can be designed to perform comparably, including satisfying Category 6 requirements based on TIA/EIA -568-B.2.*

*Given the preference for unshielded cables in the United States and the fact that unshielded cables can be made to perform comparably to shielded cables, one of ordinary skill in the art of the '999 Patent would have been motivated to try to modify the **separator** disclosed in DE 29719866 to Backmann by removing the foil from the foil/plastic laminate separator to arrive at an unshielded cable. One specific reason to try is to make a cable more attractive to the U.S. market."*

[DECLARATION OF MR. LES BAXTER, P.E., November 18, 2009, pages 2-3]

Mr. Gareis, a Belden engineer who works with Mr. Clark (one of the inventors for the '999 patent under reexamination), on cross-examination admitted that even in his own work, he actually worked on a project where he started with a shielded cable. It was referred to as the 1711a cable. It was a **shielded** cable with a plus-shaped separator. That was the product already in existence. Mr. Gareis testified -- he called them Project A and Project B in his testimony -- that the concept here is the separator, and even though he had to do some engineering work to sort of make it commercially manufacturable, the concept was evident as a component in the project, the concept being, "*could do some work and put that separator in an **unshielded** cable.*"

[Belden Technologies vs. Superior Essex proceedings, September 15, 2010, pages 1341-1343]

Moreover, Mr. Gareis stated,

*"7. **Design choices** available to the developer of data cables having twisted pairs include physical attributes, such as: conductor size; insulation material on the conductor; insulation thickness; twist lays; a jacket; particulars of any jacket that may be provided, such as its material, thickness, configuration and electricals; a filler;*

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*particulars of any fillers that may be provided, such as its material, geometry and shape; a **shield** particulars of any shielding that may be provided, such as its material composition, thickness, coating, shape and configuration; a drain wire and particulars of any drain wires that may be provided, such as its material, gauge and outer pitch.*

*8. During the development or modification of data cables having twisted pairs, one or more physical attributes are chosen or otherwise modified to achieve a desired result, such as meeting various data cable performance parameters. **There is more than one way to meet electricals through physical relationships of all cable components. The optimal physical relationship strives to meet the smallest size, and / or least expensive relationship of all cable components.***

[DECLARATION OF GALEN GAREIS UNDER 37 C.F.R. §1.132, October 19, 2009]

It seems, therefore, that "**meet(ing) the smallest size, and / or least expensive relationship of all cable components**", would be a substitute for an inventive limitation in Patentee's view.

The Person of Ordinary Skill was Concerned with Cost and Usability

Patentee argues,

"Cost, price and usability were, of course, also relevant goals in the design of twisted pair cables at the time of the invention. This is also evidenced by testimony of the Requester's employees and consultants cited at pages 13-17 of the response submitted March 25, 2011. The Patent Owner further refers to the '999 patent at col. 2, lines 40-45, as well as well as other patents relating to similar issues.⁴ The Requester's DataGain brochure emphasizes "value" and aspects of usability in its sales pitch. The declaration of Gregory Niemiera, submitted October 19, 2009, at ¶¶4-6, provides further evidence."

[Response filed July 25, 2011, p.7].

Patentee cites for support the Niemiera declaration, as follows,

"1. For the past 26 years, I have worked for various U.S. manufacturers of high-speed data communications cable products. I am currently a Director of Technical Support and Field Services within the family of subsidiary companies owned by Belden, Inc., (collectively, "Belden"). During the last 5 years, I have served either in my current capacity or as a Technical Support Manager for Belden...

3. At the priority date of the above-identified patent (i.e., February 25, 1999), a goal in the high-speed cable industry was to maintain appropriate levels of crosstalk isolation even as cable products needed to meet ever increasing data transmission rate requirements.

4. According to conventional wisdom at the time, a preferred approach, exemplified by the AdvanceNet product of the time designed and manufactured by Mohaw!4CDT (now part of Belden, Inc.), for meeting the higher data transmission rate requirements while achieving the levels of crosstalk performance stipulated by evolving industry standards,

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*such as TIA/EIA-568-B.2-1, was to employ a central pre-shaped support within the cable to achieve geometric separation between the twisted pairs. Here, the support was typically in the shape of a "+" which would provide grooves or channels to keep the twisted pairs at fixed positions with respect to each other (hereinafter, "cross-web separators"). But while-products with cross-webs were capable of delivering superior technical performance, they were relatively expensive to make given the high cost of the component; materials comprising the **cross-web separators**.*

5. Other preferred prior art approaches at that time suffered from certain technical drawbacks and disadvantages. For example, cable products made without separators, or with so-called rod-fillers, were oftentimes able to achieve only limited cross-talk isolation, and/or they depended upon relatively first twist lays that increased copper usage and concomitant expense.

Alternatively, cables that utilized inward protrusions from their jackets to form isolating channels often were unable to maintain the stability of the protrusions, thereby failing to provide adequate separation between the twisted pairs such that the performance repeatability of those cables remained an issue. As for approaches employing a wide, flat configuration where separator ribs were used to position the twisted pairs in separate compartments, these products tended to be relatively rigid and inflexible which made them: (i) difficult to install, particularly in conduits and around bends; (ii) unwieldy at the point of termination with hardware connectors; and (iii) less capable of being packaged and sold in boxes as preferred by end-use customers.

The presence of the separator ribs in this wide configuration also served to increase the overall size of the cable which had the unwanted effect of expanding the cable's fill-ratio foot-print when used in conduits, trays, racks, and other cable management devices.

*6. Accordingly, at the priority date of the above-identified patent; the high-speed cable industry had been experiencing a long-felt and persistent need to: find a viable alternative that could satisfy Category 6 performance requirements, but without the expense and other technical disadvantages associated with the various prior art approaches. These prior approaches to varying degrees all represented failed attempts to **strike this desired price/performance balance**."*

[DECLARATION OF GREGORY NIEMIERA UNDER 37 C.F.R. §1.132, November 19, 2009]

First, Mr. Niemiera is a Belden employee, i.e., Patentee's. It is unclear how an employee of a corporation could not have a vested interest in the outcome of proceedings that affect the very patents used to protect their future employment. Examiner respectfully submits that the foregoing evidence at least appears to demonstrate the potential for bias in the Niemiera Declaration. Therefore, Examiner suggests that the interest in the outcome of these proceedings remains unknown, absent a statement attested to by the declarant himself -- not speculation by Patentee.

Second, Mr. Niemiera merely discusses industry requirements and prior art approaches, already described in the "DISCUSSION OF THE RELATED ART" section of the '999 patent.

Third, Mr. Niemiera does not provide any **nexus** between these facts and the patented invention, as is evident in the quotation, *supra*, other than to "find a viable alternative that

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could satisfy Category 6 performance requirements, but without the expense and other technical disadvantages associated with the various prior art approaches."

When commercial success is asserted to support nonobviousness, there must be a **nexus** (i.e., a legally and factually sufficient relationship) between the commercial success and the claimed invention. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988).

Such evidence, however, *"must be commensurate in scope with the claims which the evidence is offered to support."* *In re Tiffin*, 448 F.2d 791,792 (CCPA 1971).

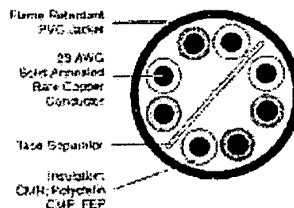
Fourth, the above statement, presumably backing up *"the unshielded twisted pair communications cable"* configuration, i.e., having a *non-conductive core*, claimed in the '999 patent under reexamination seems to support the Clark '503 patent ¹² [abstract], filed in 1997, acknowledging that improved crosstalk isolation is desirable in the industry,

*"A cable exhibiting reduced crosstalk between transmission media includes a core having a profile with a shape which defines spaces or channels to maintain a spacing between transmission media in a finished cable. **The core is formed of a conductive material to further reduce crosstalk.** A method of producing a cable introduces a core as described above into the cable assembly and imparts a cable closing twist to the assembly."*

From the prior art, the Clark '503 patent, it becomes, therefore, evident that using a non-conductive separator would be going back in the art, and worsening the cross-talk characteristics of a cable. This disadvantage is known by a person of ordinary skill in the art and should be considered as **common knowledge**, especially as the Clark '503 patent and the '999 patent under reexamination share 2 (two) inventors.

Further, a *"conventional four-pair cable including a non-conductive core"* [the Clark '503 patent, abstract, 4:14-21] was known in **April 1997** (the filing date of the '503 patent), which antedates the earliest priority date the '999 patent under reexamination may claim, **February 1999**, based on its continuation status.

Fifth, the Requester's DataGain product brochure shows a structure of the cable, which resembles the configuration of amended NEW claim 23, and therefore a new topology, as described in the rejection under 35 USC 112, *supra*.



¹² The '999 patent under reexamination and the Clark '503 patent share 2 (two) inventors.

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As Amended NEW claim 23 was introduced in the Response filed **December 6, 2010**, and introduced this new topology, a "nexus" cannot be established between the merits of the claimed invention and the evidence of secondary considerations in order for the evidence to be given substantial weight as far back as 2003, as none of the embodiments depicted in the '999 patent show two twisted pairs not separated from each other by the "configurable tape separator".

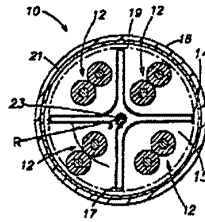


FIG. 6

If evidence of commercial success is relied upon, the Appellant must offer proof "that the sales were a direct result of the unique characteristics of the claimed invention -- as opposed to other economic and commercial factors unrelated to the quality of the patented subject matter." *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996). The evidence must also demonstrate commercial success in the relevant market. *See Id.* In addition, there must be a **nexus** between the commercial success and merits of the claimed invention. *Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1026 (Fed. Cir. 1985).

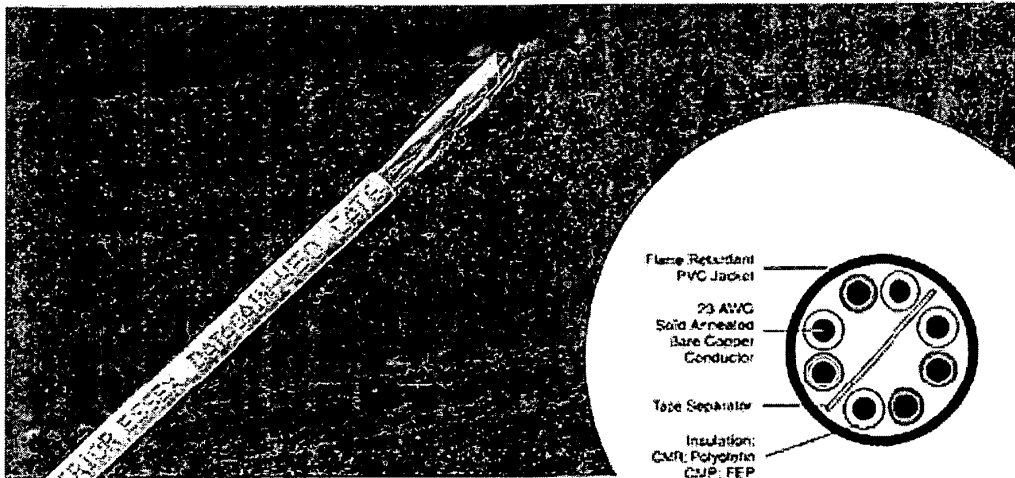
II. Unpredictability of Results

Patentee argues,

"The Patent Owner refers the Examiner to the admissions of the Requester (see evidence cited at pages 17-19 of the response submitted March 25, 2011), evidence of the Requester's own conduct (see evidence cited at pages 19-22 of the response submitted March 25, 2011), which indicates that, long after the application leading to the '999 patent was filed, the Requester tried several less successful iterations of the DataGain cable before it began using the claimed invention. The Examiner is also referred to the Requester's own DataGain brochure (see Exhibit 14 to Response of March 25, 2011), which touts the invention as "innovative" and having "the best combination value and performance", as well as other competitors' products touting both performance and price of the invention."

[Response filed July 25, 2011, p.9].

The Requester's DataGain Products brochure is shown below,



DataGain™ 450 cable provides the best combination of value and performance in Category 6 cables on the market today. The innovative design provides more flexibility than comparable cables utilizing the cross web filler. The advantageous design yields exceptional performance that exceeds TIA/EIA

Category 6 specifications. DataGain™ 450 cables are tested from 1-450 MHz to ensure support for future high-bandwidth applications.

FEATURES

- Guaranteed NEXT, PS NEXT, ELFEXT, PS ELFEXT, ACR, PS ACR, and RL values greater than industry requirements
- Round design with flexible separator
- QuickCount® marking system
- Color coded box labels
- Warranted with numerous connectivity manufacturers
- Positive Identification (PI) striping on 100% of the conductor length

BENEFITS

- Greater assurance of exceptional overall channel performance at a great value
- Reduces installation time
- Eliminates guess work of footage in box or reel
- Easily identifiable jacket colors
- Offers flexibility in selection of connectivity solutions
- Easily identifiable conductor mates

"[C]opying of a claimed invention can be evidence of nonobviousness." *Pentec*, 776 F.2d at 317. Such copying, however, must be limited to the claimed invention, rather than one in the public domain. *Specialty Composites v. Cabot Corp.*, 845 F.2d 981,991 (Fed. Cir. 1988). Evidence of copying can be especially probative where the copyist has tried and failed to develop a device embodying the claimed invention. See *Adv. Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1285-86 (Fed. Cir. 2000) (citations omitted); see also *Vandenberg v. Dairy Equip. Co.*, 740 F.2d 1560, 1567 (Fed. Cir. 1984).

The mere fact of copying by another, however, is itself not determinative of nonobviousness. *Genmark*, 770 F.2d at 1028. The copying may be attributable to other factors, such as a general lack of concern or contempt for patents, the ability or willingness of the patentee to enforce the patent right, or the accepted practices in the industry. *Id.* "Even widespread copying could weigh toward opposite conclusions ..."*Id.*

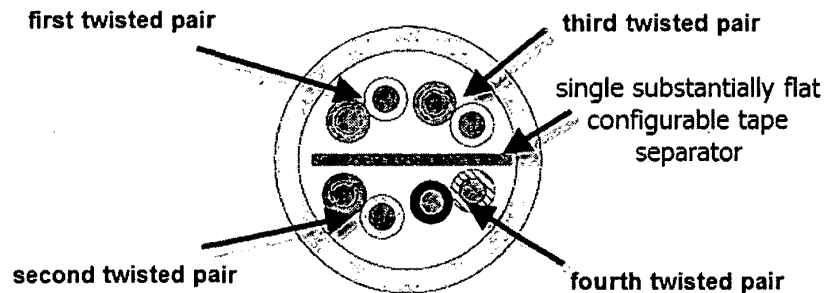
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The DataGain brochure is **not** copying any of the embodiments disclosed in figures 4-13B of the '999 patent, as none of the embodiments depicted in the '999 patent, **as issued**, show two twisted pairs not separated from each other by the "configurable tape separator".

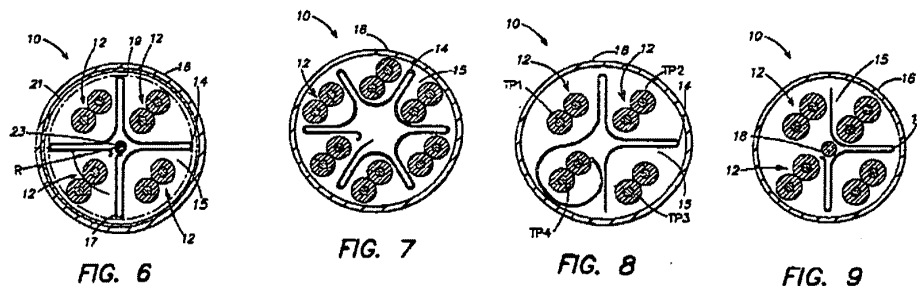
It seems, however, that Patentee is trying to remedy this situation via newly-added independent claim 23 reciting,

"An unshielded twisted pair communications cable comprising: exactly four twisted pairs of insulated conductors including a first twisted pair of insulated conductors, a second twisted pair of insulated conductors, a third twisted pair of insulated conductors and a fourth twisted pair of insulated conductors; a single substantially flat configurable tape separator disposed within the unshielded twisted pair communications cable (between the) between the first and third twisted pairs of insulated conductors on one side of the configurable tape separator and the second and fourth twisted pairs of insulated conductors on the other side of the configurable tape separator and arranged so as to separate the first and third twisted pair of conductors from the second and fourth twisted pair of conductors;"(emphasis added)

The following illustration would depict a cable satisfying these claim elements:



Patentee claims support for these elements in Figures 6-9 and 11, which do not show this configuration. Further, none of the embodiments depicted in the '999 patent show **two twisted pairs not separated from each other by the "configurable tape separator"**.



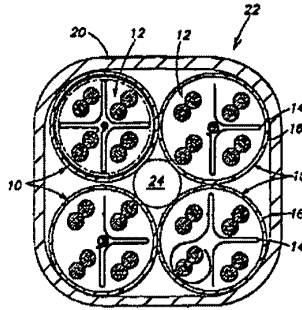


FIG. 11

Nothing in the '999 Patent shows that the inventors invented a cable comprising exactly four twisted pairs of insulated conductors with the first and third pairs separated by a single flat separator from the second and fourth pairs, without at least the first and third pairs or second and fourth pairs separated from one another.

In an application of the written description doctrine, the Court noted: "*The purpose of the written description requirement is to prevent an applicant from later asserting that he invented that which he did not; the applicant for a patent is therefore required 'to recount his invention in such detail that his future claims can be determined to be encompassed within his original creation.'*" *Amgen Inc. v. Hoechst Marion Roussel Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003) (citing *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1561 (Fed. Cir. 1991)). See also *Tronzo v. Biomet, Inc.*, 156 F.3d 1154 (Fed. Cir. 1998).

The '999 patent fails to adequately describe the broad configuration. One of ordinary skill in the art would not recognize that the inventor was in possession of the broadly claimed cable of claim 23 based on the disclosure of the '999 Patent. See *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc) (internal citations omitted) ("*[T]he description must 'clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.'*" In other words, the test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.").

Further, Patentee has not demonstrated that any alleged copying or adopting of an industry standard could not have resulted from copying or adopting from the earlier published references, mentioned in the art rejections, *supra*, rather than from the '999 patent.

As evidenced by the Clark '503 patent ¹³ [abstract, 4:14-21], filed in 1997, "[A] conventional four-pair cable including a non-conductive core" was known,

"A cable exhibiting reduced crosstalk between transmission media includes a core having a profile with a shape which defines spaces or channels to maintain a spacing

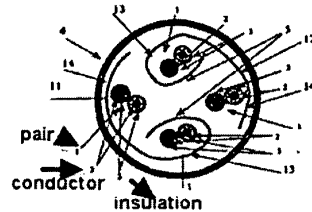
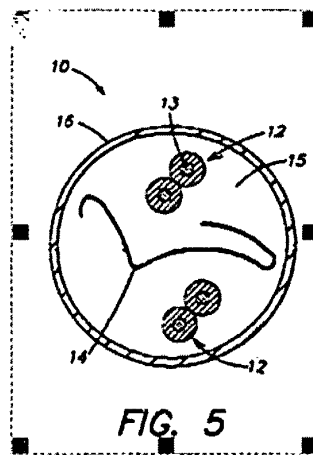
¹³ The '999 patent under reexamination and the Clark '503 patent share 2 (two) inventors.

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between transmission media in a finished cable. **The core is formed of a conductive material to further reduce crosstalk.** A method of producing a cable introduces a core as described above into the cable assembly and imparts a cable closing twist to the assembly."

"A **conventional four-pair cable including a non-conductive core**,... reduces nominal crosstalk by up to 5dB over similar, four-pair cable without the core. By making the core conductive, crosstalk is reduced a further 5dB. Since both loading and jacket construction can affect crosstalk, these figures compare cables with similar loading and jacket construction."

The '999 patent under reexamination describes the term "**configurable pair separator 14**" in Fig.5, while Backmann '866 discloses a twisted pair communications cable in Fig.1.



Backmann '866 Fig.1

It then seems that the "**configurable pair separator**" was known in **1998** (per Backmann '866).

"The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." KSR, 550 U.S. at 416.

Under these circumstances, any commercial success stems from what was known in the prior art so that there can be **no** nexus. *Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358, 1369 (Fed. Cir. 2011) ("If commercial success is due to an element in the prior art, no nexus exists."); *Ormco Corp. v. Align Technology, Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006) ("[I]f the feature that creates the commercial success was known in the prior art, the success is not pertinent.").

III. Objective Evidence that the Invention Was Not Obvious

Patentee argues,

"In the present case, two things occurred after the patent specification was published. First, the Requester began touting the tape separator design as innovative and selling its own tape separator cables. Second, the tape separator cables achieved substantial commercial success. These two results of the invention corroborate the pre-invention evidence of non-obviousness. "

[Response filed July 25, 2011, pages 11-12].

*When commercial success is asserted to support nonobviousness, there must be a **nexus** (i.e., a legally and factually sufficient relationship) between the commercial success and the claimed invention. Demaco Corp. v. F. Von Langsdorff Licensing Ltd., 851 F.2d 1387, 1392 (Fed. Cir. 1988). Such evidence, however, "must be commensurate in scope with the claims which the evidence is offered to support." In re Tiffin, 448 F.2d 791,792 (CCPA 1971).*

*A prima facie case of **nexus** can be refuted by showing that the commercial success was due to extraneous factors other than the claimed invention, such as advertising, superior workmanship, etc. Demaco, 851 F.2d at 1392. Furthermore, the commercial success of a claimed embodiment may be due entirely to improvements or modifications made by others; such success, however, is inapposite to non-obviousness. In re Vamco Machine & Tool Inc., 752 F.2d 1564, 1577 n.5 (Fed. Cir. 1985).*

"[E]vidence related solely to the number of units sold provides a very weak showing of commercial success, if any[,]" since such evidence provides no indication of whether these sales are substantial with respect to the market. In re Huang, 100 F.3d 135, 140 (Fed. Cir. 1996) (citations omitted). See also Cable Elec. Prods., Inc. v. Genmark, Inc., 770 F.2d 1015, 1026-27 (Fed. Cir. 1985), overruled on other grounds by Midwest Indus., Inc. v. Karavan Trailers, Inc., 175 F.3d 1356, 1358-59 (Fed. Cir. 1999) (noting that sales of five million units with profits of at least fifty cents per unit represent a minimal showing of commercial success because "[w]ithout further economic evidence, it would be improper to infer that the reported sales represent a substantial share of any definable market or whether the profitability per unit is anything out of the ordinary in the industry involved.").

There is no mention in Patentee's argument with regard to the "**unshielded** communications cable", which is the only element not specifically disclosed in Backmann '866.

Evidence of Commercial Success

Patentee argues,

*"The Patent Owner respectfully requests reconsideration. The Patent Owner presented significant evidence including sales data and other data which would establish **commercial success**. In this regard, the Patent Owner refers the Examiner to the Patent Owner's sales data presented by the Niemiera declaration (submitted October 19, 2009), as well as the Requester's sales data explained at pages 23-26 of the March 25, 2010 Response and supported by the trial testimony of the Requester's own Vice-President." (emphasis added)*

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[Response filed July 25, 2011, pages 13-14].

The relevant paragraph from the Niemiera declaration reads as follows,

*"8. My employers - previously CDT and now Belden – have at all times been the owners of the above-identified patent and its related family of patents and patent applications. We have enjoyed **tremendous, commercial success** in selling cable products that embody the claimed tape separator inventions in a marketplace where customers are free to choose many competing alternatives. With respect to our so-called Mohawk product lines which are my primary area of responsibility, year-over-year sales for our 6LAN product including a tape separator tripled in 2006. In the three years since then, this 6 LAN product with a tape separator has gone on to become **our single biggest selling product**, now accounting for approximately 50% of the total sales revenues for all our unshielded Category 6 product lines. From 2006 to the present, sales of our 6 LAN and related tape separator products have produced over \$67 million in revenues. Notably, **these figures are substantially understated** because they do not reflect several other non-Mohawk tape separator products lines sold by Belden."*(emphasis added)

[DECLARATION OF GREGORY NIEMIERA UNDER 37 C.F.R. §1.132, November 19, 2009]

MPEP 716.03(b)(1) states:

In considering evidence of commercial success, care should be taken to determine that the commercial success alleged is directly derived from the invention claimed, in a marketplace where the consumer is free to choose on the basis of objective principles, and that such success is not the result of heavy promotion or advertising, shift in advertising, consumption by purchasers normally tied to applicant or assignee, or other business events extraneous to the merits of the claimed invention, etc. In re Mageli, 470 F.2d 1380, 176 USPQ 305 (CCPA 1973) (conclusory statements or opinions that increased sales were due to the merits of the invention are entitled to little weight); In re Noznick, 478 F.2d 1260, 178 USPQ 43 (CCPA 1973).

MPEP 716.03(g) states:

An affidavit or declaration attributing commercial success to a product or process "constructed according to the disclosure and claims of [the] patent application" or other equivalent language does not establish a nexus between the claimed invention and the commercial success because there is no evidence that the product or process which has been sold corresponds to the claimed invention, or that whatever commercial success may have occurred is attributable to the product or process defined by the claims. Ex parte Standish, 10 USPQ2d 1454, 1458 (Bd. Pat. App. & Inter. 1988).

The objective evidence is not commensurate in scope (coextensive) with the claimed subject matter as it fails to mention the "unshielded communications cable" or performance data, which may be responsible for any commercial success or praise. See *Joy Technologies Inc. v. Manbeck*, 751 F. Supp. 225, 229-30, 17 USPQ2d 1257, 1259-60 (D.D.C. 1990) (numerous cases

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therein), *aff'd*, 459 F.2d 226, 22 USPQ2d 1153 (Fed. Cir. 1992). The instant claimed invention does not even mention the *Mohawk product lines*, as described *supra*.

As stated *supra*, claims in the instant proceeding are currently rejected on multiple grounds under **35 USC 103**.

Once a *prima facie* case of obviousness has been established, objective evidence of secondary considerations, when present, must be considered in making an obviousness decision. See *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538-39 (Fed. Cir. 1983). Any initial obviousness determination is reconsidered anew in view of the proffered evidence of nonobviousness. See *In re Rinehart*, 531 F.2d 1048, 1052 (CCPA 1976); *In re Eli Lilly & Co.*, 902 F.2d 943,945 (Fed. Cir. 1990); *Ex Parte Quist*, No. 2008-001183, at 10-11 (BPAI June 2, 2010) (Precedential) (available at <http://www.uspto.gov/ip/boards/bpai/decisions/prec/fd08001183.pdf>).

The ultimate determination of whether a claimed invention would have been obvious or non-obvious is a legal conclusion, which is made based on considering and weighing all of the facts in evidence. See *In re Oetiker*, 977 F.2d 1443, 1445 (Fed.Cir.1992).

A "**nexus**" must be established between the merits of the claimed invention and the evidence of secondary considerations in order for the evidence to be given substantial weight. See *In re GPAC, Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995). The scope of the "objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support." *In re Tiffin*, 448 F.2d 791,792 (CCPA 1971); see also *In re Peterson*, 315 F.3d 1325, 1329-31 (Fed. Cir. 2003).

Note that opinions, beliefs, recollections, and the like are, at best, opinion evidence. In this regard, it has been held, that although factual evidence is preferable to opinion testimony, such testimony is entitled to consideration and some weight so long as the opinion is not on the ultimate legal conclusion at issue. While an opinion as to a legal conclusion is not entitled to any weight, the underlying basis for the opinion may be persuasive. *In re Chilowsky*, 306 F.2d 908,134 USPQ 515 (CCPA 1962) (expert opinion that an application meets the requirements of 35U.S.C. 112 is not entitled to any weight; however, facts supporting a basis for deciding that the specification complies with 35 U.S.C. 112 are entitled to some weight); *In re Lindell*, 385 F.2d 453, 155 USPQ 521 (CCPA 1967) (Although an affiant's or declarant's opinion on the ultimate legal issue is not evidence in the case, "some weight ought to be given to a persuasively supported statement of one skilled in the art on what was not obvious to him." 385 F.2d at 456, 155 USPQ at 524). In this case, any opinions of the declarants as to the ultimate legal conclusion of obviousness are not entitled to "any weight".

Further in this regard it has been held, "[i]n assessing the probative value of an expert opinion, the examiner must consider the nature of the matter sought to be established, [1] the strength of any opposing evidence, [2] the interest of the expert in the outcome of the case, and [3] the presence or absence of factual support for the expert's opinion." *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986). (Emphasis added.)

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The "**nature of the matter sought to be established**" is that no combination of any references of record would have been obvious to one of ordinary skill in the cable art based upon opinions of the Declarant and, in some instances, based on the perception of commercial success [See Patent Owner's Response, filed July 25, 2011, p.13].

As will be demonstrated herein below, [1] there exists strong opposing evidence to the "nature of the matter sought to be established"; [2] the declaration provides no information regarding the interests of the Declarants in the outcome of the case; and [3] the declaration fail to provide "factual support" for the [D]eclarant's perception (opinion) that the commercial success was, in fact, due to the thing claimed in each specific claim of the '999 patent, an **unshielded** communications cable. Examiner will be receptive to any timely filed, additional evidence to address the deficiencies shown herein below.

With respect to [2], as directed to the declaration above, Mr. Niemiera is a Belden employee.

MPEP 716.01(c)(III) states,

*"In assessing the probative value of an expert opinion, the examiner must consider the nature of the matter sought to be established, the strength of any opposing evidence, **the interest of the expert in the outcome of the case**, and the presence or absence of factual support for the expert's opinion. **Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.**, 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986)."*(emphasis added.)

Examiner submits that an employee in a corporation that receives profit from the very licensing and/or sales of the patent in question would be highly unlikely to say anything disparaging about said patent from which their corporation enjoys revenue. To do so may result in undermining that very revenue and any bonuses resulting therefrom and any job security resulting therefrom. Would a corporation continue to employ one saying something disparaging in a very public venue about the very patents from which the corporation enjoys profits? In Examiner's opinion, these are *personal* interests of a hypothetical employee in the aforementioned situation.

While Examiner is not making accusations as to the truthfulness of the Declarant's information, Examiner is saying that the propensity for **bias appears** to exist, for the reasons just indicated.

This determination is a requirement of Examiner under MPEP 716.01(c)(III). For these reasons, Examiner maintains that the interest of Mr. Niemiera in the outcome of these proceedings **remains unknown**, absent an attested to statement from the Declarant himself -- not speculation by Patentee.

The Niemiera declaration fails to provide **factual support** for commercial success for anything other than the *Mohawk product lines*.

This is merely the **opinion** of Mr. Niemiera, and therefore, fails to provide "factual support" of commercial success. Evidence that there were no options is debatable, based upon the references applied above to reject the claims. Moreover, Mr. Niemiera only opines to the

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commercial success of the *Mohawk product lines*. What were the other factors that contributed? If there are other factors, how can it be determined if the perceived commercial success resulted from that claimed in claims 1-36 of the '999 patent or from other factors?

Further, in the Memorandum Opinion of August 12, 2011, in *Belden Technologies v. Superior Essex*, the District court judge stated,¹⁴

"Furthermore, there is no indication that the Category 6 and 6A data cables are responsible for a significant portion of plaintiffs' total copper cable sales. Even if there were such indication, plaintiffs' total copper cable sales itself represents a small portion of plaintiffs' total sales. In 2009, plaintiffs had a combined \$111 million in copper cable sales. This number is insignificant in relation to their total revenue of nearly \$1.4 billion." (emphasis added)

[*Belden Technologies v. Superior Essex*, Memorandum Opinion, August 12, 2011, p.33]

Moreover, Belden and Superior Essex are direct competitors, but are **not** the only competitors *"in the twisted pair copper network cable market...Further, plaintiffs and defendants together only comprise 25% of the market and, as such, are not individually major market players."*¹⁵ [*Belden Technologies v. Superior Essex*, Memorandum Opinion, August 12, 2011, p.35] (emphasis added)

Therefore, it seems that the *"tremendous, commercial success in selling cable products"* avowed by Mr. Niemiera in his declaration, and by Patentee in his arguments, is exaggerated.

IV. The "Nexus" Requirement

Patentee argues,

"The Office Action properly observed that a nexus is required between the objective evidence of non-obviousness and the claimed invention. However, it is unclear how the Office Action applied the nexus." (emphasis added)

[Response filed July 25, 2011, page 14].

To briefly summarize the discussion, *supra*, as evidenced by the Clark '503 patent ¹⁶ [abstract], filed in **1997**, "[A] conventional four-pair cable including a non-conductive core" was known,

¹⁴ Defendants (Superior Essex) identified seventeen companies that compete in the U.S. market for the products at issue (Twisted-Pair Copper Cable Market) - ADC Krone, Belden, Berk-Tek, Black Box, CommScope, General Cable, Hitachi, Hubbell, Mohawk, Molex, Ortronics, Panduit, Siemon, Superior Essex, Systimax, Tyco Electronics, Uniprise, and others.

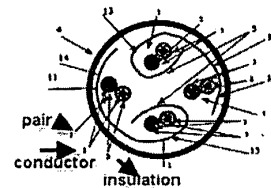
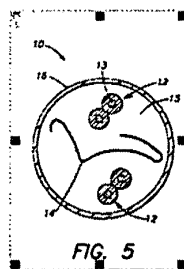
¹⁵ In 2009, market shares for copper cable suppliers as cable vendors, SuperiorEssex, Mohawk, and Belden were 10.6%, 8.4%, and 6.7%, respectively. CommScope, Berk-Tek, and General Cable held market shares of 22.8%, 17.5%, and 12.9%, respectively.

¹⁶ The '999 patent under reexamination and the Clark '503 patent share 2 (two) inventors.

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"A cable exhibiting reduced crosstalk between transmission media includes a core having a profile with a shape which defines spaces or channels to maintain a spacing between transmission media in a finished cable. **The core is formed of a conductive material to further reduce crosstalk.** A method of producing a cable introduces a core as described above into the cable assembly and imparts a cable closing twist to the assembly."

The '999 patent under reexamination describes the term "*configurable pair separator 14*" in Fig.5, while Backmann '866 discloses a twisted pair communications cable in Fig.1.



Backmann '866 Fig. 1

It then seems that the "*configurable pair separator*" was known in **1998** (per Backmann '866).

The "*unshielded communications cable*" is the only element not specifically disclosed in Backmann '866, even though the Clark '503 patent discloses as known "*A conventional four-pair cable including a non-conductive core*".

"The Patent Owner respectfully requests that the Examiner re-evaluate the objective evidence in light of the **Federal Circuit's January 2011 decision** in *In re Glatt Air Techniques, Inc.* There, the court confirmed that "nexus" requires evidence that the claim elements are present in the secondary consideration claimed, but does not require the evidence be for all possible embodiments of the claims." (emphasis added)

[Response filed July 25, 2011, page 14].

First, the Examiner does accord deference to court findings. Nonetheless, a court develops definitions, using different evidence, different standards of proof, a **presumption** that the claims are valid coupled with the understanding that the Patentee has no opportunity to amend. Thus, the court relies upon its discretion to interpret the claims to preserve validity.

It should come as no surprise then, that even when considering the same claim terms, a court's claim interpretation does not necessarily comport with a **reasonably broad claim interpretation standard** that an Examiner, by law, must apply to any reexamination proceedings before the Office.

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Second, *Glatt Air Techniques* involves the reexamination of Patent No. 5,236,503, relating to an improvement to an apparatus known as a Wurster coater used to coat particles such as pharmaceutical ingredients. The improvement comprises a shield means, such as a physical shield or air wall, positioned adjacent the spray nozzle that prevents particles from prematurely entering the stream of the coating spray before the spray pattern has fully developed, thus causing blockages in the apparatus. During reexamination, the examiner rejected the claim at issue as obvious in light of the prior art, a determination that was upheld by the Board of Patent Appeals and Interferences. In reaching its conclusion, the Board also rejected *Glatt's* commercial success evidence because it related only to a single embodiment – a physical shield – and the claim also covered the use of an air wall. Thus, the Board concluded, the evidence was not commensurate in scope with the claim.

On appeal, the CAFC first found that the Board had failed to establish a prima facie case of obviousness. It also disagreed with the Board's rejection of *Glatt's* evidence of commercial success, expanding on its past holding that "commensurate" does not mean "every" embodiment. *"The fact that Glatt's commercial products only contain one type of shielding means does not make its commercial success evidence irrelevant. Under the PTO's logic, there would never be commercial success evidence for a claim that covers more than one embodiment."* Slip Op. at 10. Citing past precedent, the CAFC went on to state that *"we have consistently held that a patent applicant 'need not sell every conceivable embodiment of the claims in order to rely upon evidence of commercial success.' Id. (quoting In re DBC, 545 F.3d 1373, 1384 (Fed.Cir.2008)).* Thus, *"commercial success evidence should be considered 'so long as what was sold was within the scope of the claims.'"* *Id.*

However, note that simply being commensurate with the scope of the claim does not necessarily satisfy the **nexus** requirement, as illustrated by the outcome of *In re DBC*. In the appeal the Federal Circuit found (1) a substantial question of patentability had been raised, and (2) that the patent claims were properly found obvious based on the prior art despite evidence of commercial success.

Patentee further argues,

*"As shown above in section III.A, the Requester's own products embody the independent claims and were found to infringe claim 2. According to its marketing brochure, there is little, if anything, in the Requester's DataGain products other than the claim elements. Because of this, the evidence of secondary considerations must be **presumed** to have the appropriate nexus to the claims."* (emphasis added)

[Response filed July 25, 2011, page 15].

However, the statutory **presumption** of validity, 35 U.S.C. 282, has no application in reexamination (*In re Etter*, 756 F.2d 852, 225 USPQ 1 (Fed. Cir. 1985)).

Moreover, in the Memorandum Opinion of August 12, 2011, in *Belden Technologies v. Superior Essex*, the District court judge stated,¹⁷

¹⁷ Defendants (Superior Essex) identified seventeen companies that compete in the U.S. market for the products at issue (Twisted-Pair Copper Cable Market) - ADC Krone, Belden, Berk-Tek, Black Box,

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*"Furthermore, **there is no indication that the Category 6 and 6A data cables are responsible for a significant portion of plaintiffs' total copper cable sales.** Even if there were such indication, plaintiffs' total copper cable sales itself represents a small portion of plaintiffs' total sales. In 2009, plaintiffs had a combined \$111 million in copper cable sales. This number is insignificant in relation to their total revenue of nearly \$1.4 billion."*

[Belden Technologies v. Superior Essex, Memorandum Opinion, August 12, 2011, p.33]
(emphasis added)

Further, Belden and Superior Essex are direct competitors, but are **not** the only competitors "in the twisted pair copper network cable market...Further, plaintiffs and defendants together **only** comprise 25% of the market and, as such, are not individually major market players."¹⁸

[Belden Technologies v. Superior Essex, Memorandum Opinion, August 12, 2011, p.35]
(emphasis added)

Patentee provides insufficient evidence to establish a "**nexus**" between the claims of the '999 patent under reexamination and the alleged commercial success. Although Patentee's cable design maybe widely used, Patentee has provided no sales data, evidence of market share, or other data which would establish commercial success of a system within the scope of the claims.

Thus, Patentee's evidence of commercial success is not sufficient to outweigh the Examiner's evidence of obviousness, as amply described *supra*.

MPEP 716.03(b)(I) states:

*In considering evidence of commercial success, care should be taken to determine that the commercial success alleged is directly derived from the invention claimed, in a marketplace where the consumer is free to choose on the basis of objective principles, and that such success is not the result of heavy promotion or advertising, shift in advertising, consumption by purchasers normally tied to applicant or assignee, or other business events extraneous to the merits of the claimed invention, etc. **In re Mageli**, 470 F.2d 1380, 176 USPQ 305 (CCPA 1973) (conclusory statements or opinions that increased sales were due to the merits of the invention are entitled to little weight); **In re Noznick**, 478 F.2d 1260, 178 USPQ 43 (CCPA 1973).*

Examiner incorporates by reference Third Party Requester's documentation showing that the design features recited in the claims of the alleged invention are not a basis for competition in the twisted pair communication cable industry [See Third Party Requester's Revised Comments of April 25, 2011 at 10-13], and e.g., the Patent Owner's Vice President of Research and

CommScope, General Cable, Hitachi, Hubbell, Mohawk, Molex, Ortronics, Panduit, Siemon, Superior Essex, Systimax, Tyco Electronics, Uniprise, and others.

¹⁸ In 2009, market shares for copper cable suppliers as cable vendors, SuperiorEssex, Mohawk, and Belden were 10.6%, 8.4%, and 6.7%, respectively. CommScope, Berk-Tek, and General Cable held market shares of 22.8%, 17.5%, and 12.9%, respectively.

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Development and Chief Technology Officer testified at trial that *the Patent Owner does not even market the features of the alleged inventions to customers* [see Third Party Requester's comments of August 24, 2011, pages 12-14].

V. Issues Specific To the Adopted Rejections

Rejections Over Yonechi

Patentee argues that fiber optic media cable products are not the equivalent of twisted pair cable products, and that Yonechi is not analogous art [Response filed July 25, 2011, p.17].

During reexamination, patent claims are to be given the "broadest reasonable interpretation" in light of the specification. MPEP § 2258(G); see also § 2111 (citing *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed.Cir.2005)).

Patentee describes in the specification "A number of embodiments of a data communications cable according to the invention" [the '999 patent, 4:16-17].

Patentee argues,

"The findings of the Office Action impermissibly read an admission into the statement at col. 4, 11. 16-33 of the '999 patent, and beyond that, increase the scope of the text far beyond what was actually said."

[Response filed July 25, 2011, page 17].

The statement in the '999 patent reads as follows,

"A number of embodiments of a data communications cable according to the invention will now be described in which the cable is constructed with a plurality of twisted pairs of insulated conductors and a core made from a configurable, dielectric pair separator. However, it is to be appreciated that the invention is not limited to any number of twisted pairs or any profile for the configurable, dielectric pair separator illustrated in any of these embodiments. The inventive principles can be applied to cables including greater or fewer numbers of twisted pairs and having different core profiles of the configurable dielectric pair separator. In addition, although these embodiments of the invention are described and illustrated in connection with twisted pair data communication media, it is to be appreciated that other high-speed data communication media can be used instead of twisted pairs of conductors in the constructions of the cable according to the invention, such as, for example, fiber optic media."

With regard to Patentee's argument above that Examiner "impermissibly read an admission into the statement at col. 4, 11. 16-33 of the '999 patent", clearly Patentee knows how to define and recite "a communications cable", as exemplified by the drafting of US 7179999 and US 6074503, for example.

As a reviewing court remarked in a similar circumstance, when a Patentee was confronted by a claim construction broader than the Patentee had intended, if Patentee, "who was responsible for drafting and prosecuting the patent, intended something different, it could have prevented

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this result through clearer drafting." *Hoganas AB v. Dresser Indus., Inc.*, 9 F.3d 948,951 (Fed. Cir. 1993), and "This court recognizes that such reasoning places a premium on forethought in patent drafting. Indeed this premium may lead to higher costs of patent prosecution. However, the alternative rule – allowing broad play for the doctrine of equivalents to encompass foreseeable variations, not just of a claim element, but of a patent claim – also leads to higher costs. . . . **Given a choice of imposing the higher costs of careful [patent] prosecution on patentees, or imposing the costs of foreclosed business activity on the public at large, this court believes the costs are properly imposed on the group best positioned to determine whether or not a particular invention warrants investment at a higher level, that is, the patentees.**" *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1425-26 (Fed. Cir. 1997).

Patentee misquotes *Ex parte Ravi Srinivasan*, where the Board stated,

"The Examiner then concludes that to substitute fiber optic camera equipment for the generic camera equipment disclosed within Rohling would be no more than a simple substitution of known components to achieve known and predictable results of having visual imaging equipment that does not interfere with the radiological imaging equipment. Ans.11. We concur."

[Decision in *Ex parte RAVI SRINIVASAN*, June 16, 2011, p.5].

MPEP 2144.06 titled "II. SUBSTITUTING EQUIVALENTS KNOWN FOR THE SAME PURPOSE" states in pertinent part,

*"In order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on applicant's disclosure or the mere fact that the components at issue are functional or mechanical equivalents. In re Ruff, 256 F.2d 590, 118 USPQ 340 (CCPA 1958) (The mere fact that components are claimed as members of a Markush group cannot be relied upon to establish the equivalency of these components. **However, an applicant's expressed recognition of an art-recognized or obvious equivalent may be used to refute an argument that such equivalency does not exist.**); ** *Smith v. Hayashi*, 209 USPQ 754 (Bd. of Pat. Inter. 1980)"*(emphasis added)

MPEP 2141.01(a) titled "IV. ANALOGY IN THE MECHANICAL ARTS" states in pertinent part with regard to analogous and non-analogous art,

*"See, for example, ** *Stevenson v. International Trade Comm.*, 612 F.2d 546, 550, 204 USPQ 276, 280 (CCPA 1979) ("In a simple mechanical invention a broad spectrum of prior art must be explored and it is reasonable to permit inquiry into other areas where one of ordinary skill in the art would be aware that similar problems exist."). See also *In re Bigio*, 381 F.3d 1320, 1325-26, 72 USPQ2d 1209, 1211-12 (Fed. Cir. 2004).*

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"Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor was involved." In re Bigio, 381 F.3d 1320, 1325 (Fed. Cir. 2004).

Patentee tried to establish "commercial success" by quoting Declarant Niemiera, *supra*. The relevant paragraph from in the Niemiera declaration reads as follows,

*"8. My employers - previously CDT and now Belden – have at all times been the owners of the above-identified patent and its related family of patents and patent applications. We have enjoyed tremendous, commercial success in selling cable products that embody the claimed tape separator inventions in a marketplace where customers are free to choose many competing alternatives. With respect to our so-called **Mohawk product lines** which are my primary area of responsibility, year-over-year sales for our 6LAN product including a tape separator tripled in 2006. In the three years since then, this 6 LAN product with a tape separator has gone on to become our single biggest selling product, now accounting for approximately 50% of the total sales revenues for all our unshielded Category 6 product lines. From 2006 to the present, sales of our 6 LAN and related tape separator products have produced over \$67 million in revenues. Notably, these figures are substantially understated because they do not reflect several other non-Mohawk tape separator products lines sold by Belden."* (emphasis added)

[DECLARATION OF GREGORY NIEMIERA UNDER 37 C.F.R. §1.132, November 19, 2009]

The web page for Mohawk products clearly spells out,

*"Mohawk is an ISO 9001 manufacturer of **copper, fiber**, broadcast and special applications **cable products**. We support an open architecture philosophy and offer an open solution to cabling ", and*

*"Whether it's land or sea or air, we offer a solution in...**hybrid** applications".*

Per *Bigio, supra*, Yonechi is in the same field of endeavor, cable products. The '999 patent is directed to the field of high speed communications cables [see '999 patent, "Field of the Invention"; see generally, '999 patent (describing and claiming communications cables)]. Yonechi is directed to optical fiber communications cable [see Yonechi, "Field of the Invention", see generally Yonechi (describing and claiming methods for making optical fiber communications cables)]. As the inventors of the '999 patent admit, optical fibers are high-speed data communications media [the '999 patent, 4:27-33].

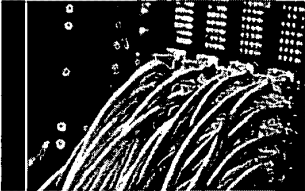
Indeed, the '999 patent expressly states that its invention covers cables with optical fiber communications media [See *id.*].



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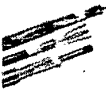
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Our Products

Mohawk is an ISO 9001 manufacturer of copper, fiber, broadcast and special applications cabling products. We support an open architecture philosophy and offer an open solution to cabling.



Copper LAN Cable
We manufacture plenum and riser listed Category 6A through Category 3 ETL verified copper products, including high pair count.



Fiber Optic Cable
Our Fiber Optic cables are available with fiber counts ranging from 1 to 216 laser-optimized multimode, single-mode or hybrid versions. They come in plenum, riser, outside plant and indoor/outdoor constructions.



Special Applications
Whether it's land or sea or air, we offer a solution to meet your special cabling needs in copper, fiber or hybrid applications.



Broadcast Cable
We offer a full end-to-end solution for all HDTV cabling needs, including a full variety of SMPTE cables and assemblies to suit any application.

Yonechi also is "reasonably pertinent to the particular problem with which the inventor was involved." "A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). The particular problem being solved by the '999 patent is using a non-conductive, configurable separator to separate data communications

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media. That is the exact purpose of the tape separators in Yonechi -- they provide separation for the individual fiber optic media. Both, the '999 patent and Yonechi solve the same problem. See *id.* ("Thus, the purposes of both the invention and the prior art are important in determining whether the reference is reasonably pertinent to the problem the invention attempts to solve. If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection. An inventor may well have been motivated to consider the reference when making his invention. If it is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it.").

The '999 patent under reexamination describes "a number of embodiments" with a string of **design choices**, but does not describe the **criticality** of using one over the other.

The specification of the '999 patent provides no disclosure as to any barriers of moving from a cable with tape separators and twisted pairs of copper conductors and tape separators and optical fibers. However, the '999 patent states that such a variation in cables can be made, and is within the scope of the alleged invention. Only one conclusion can be drawn from these facts. One of ordinary skill would be able to make that substitution of twisted pairs for optical fibers with an expectation of success. Again, the '999 patent itself informs the public and one of ordinary skill in the art that the "invention" relates to both copper and fiber optic cables. The specification discloses separating the transmission media with a configurable separator. For copper cables, such separation provides reduced crosstalk. For optical fibers, such separation has other benefits. The focus must be on what the '999 patent itself contends is the "invention," not the Patent Owner's characterization.

The Patent Owner further argues that a person of ordinary skill would not have had a reasonable expectation of success in substituting twisted pairs into the cable design of Yonechi because twisted pair cable design requires careful management of EMI. The Patent Owner admits that EMI performance is not claimed, and cites "*the rule in Preemption Devices*" [Response filed July 25, 2011, page 18] for the proposition that claiming advantages is not required; however, as discussed above, the Patent Owner misreads the law of *Preemption Devices*. The Examiner properly determined that the EMI performance, an unclaimed feature, was not material to the obviousness analysis. Further, even if it was proper to consider EMI management, one of ordinary skill in the art would understand such considerations. As discussed previously, the specification of the '999 patent provides no disclosure on managing EMI when modifying a cable from one embodiment to another. Accordingly, the inventors recognized that this understanding was within the level of skill in the art of the '999 patent.

The '999 patent under reexamination describes in the specification at 4:16-33,

*"A number of embodiments of a **data communications cable** according to the invention will now be described in which the cable is constructed with a plurality of twisted pairs of insulated conductors and a core made from a configurable, dielectric pair separator. However, it is to be appreciated that the invention is not limited to any number of twisted pairs or any profile for the configurable, dielectric pair separator*

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*illustrated in any of these embodiments. The inventive principles can be applied to cables including greater or fewer numbers of twisted pairs and having different core profiles of the configurable dielectric pair separator. In addition, although these embodiments of the invention are described and illustrated in connection with twisted pair data communication media, it is to be appreciated that **other high-speed data communication media** can be used instead of twisted pairs of conductors in the constructions of the cable according to the invention, such as, for example, fiber optic media.*" (emphasis added)

With respect to the rejection under 35 U.S.C. 103, Patentee's arguments, regarding the deficiencies of each reference, are an attack on the references individually, and are unpersuasive where, as here, the references are applied in combination. The test for obviousness is what the combined teachings of the references would have suggested to those of ordinary skill in the art. *Leinoff v. Louis Milona & Sons, Inc.* 220 USPQ 845 (CAFC 1984); *In re Keller* 208 USPQ 871 (CCPA 1981).

Further, Patentee's argument fails to take into account that the rejection is based on the **combined** teachings of the applied references and not merely the teachings of Yonechi **alone**, as Yonechi **alone** is directed at a data communications cable with optical fiber transmission media. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.1986).

Additionally, it would have been obvious to modify Yonechi '485 to substitute copper pairs for the optical fibers, as recognized by the '999 patent itself, as one of ordinary skill in the art would understand that the cable, as recited in claim 1, could be used in the fiber optic arts (see the disclosure of the '999 patent, *supra*), indicating that 1) one of ordinary skill in the art would have known to substitute copper pairs for the optical fibers of Yonechi '485 and 2) one of ordinary skill in the art would expect predictable results in transferring teachings from the fiber optic arts, at least as it relates to tape separators, into the twisted copper pair art. "*The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.*" *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007).

Further, the Refi reference discloses that copper pairs substitute for optical fibers in a communications cable. The Refi reference discloses that "[h]ybrid cables are constructed by substituting copper pairs for the fibers in a slot (the Refi reference at paragraph bridging pages 79-80).

Moreover, the '999 patent is virtually silent on the matter of any purported advantage to *the use of **only** twisted pairs of conductors*, as well as suggesting quite the opposite, that the twisted pairs of conductors and the fiber optic media are **interchangeable**:

"it is to be appreciated that other high-speed data communication media can be used instead of twisted pairs of conductors in the constructions of the cable according to the invention, such as, for example, fiber optic media"[the '999 patent, 4:29-33].

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Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to replace the *twisted pairs of conductors* used by the '999 patent with the *fiber optic media* disclosed by Yonechi '485 patent in the constructions of the cable because:

a) both are very well known, alternate types of cables which will perform the same function, if one is replaced with the other, of transmitting signals, as already suggested by the '499 patent and the Refi reference, and

b) the use of this particular type of cables is considered to be nothing more than the use of one of numerous and well known alternate types of cables that a person having ordinary skill in the art would have been able to provide using routine experimentation in order to transmit signals, as already suggested by the '499 patent and the Refi reference.

Patentee failed to set forth any reasons why the differences between the claimed invention and the prior art would result in a different function or give unexpected results. *In re Rice*, 341 F.2d 309, 144 USPQ 476 (CCPA 1965) ("Appellants have failed to show that the change [in the claimed invention] as compared to [the reference], result in a difference in function or give unexpected results."); *In re Kuhle*, 526 F.2d 553, 555, 188 USPQ 7, 9 (CCPA 1975) ("Use of such means of electrical connection in lieu of those used in the references solves no stated problem and would be an obvious matter of design choice within the skill in the art." (emphasis added) (citations omitted)).

Rejections Over Backmann '866

A foreign publication is a valid reference for what is clearly disclosed. *In re Cross*, 62 F.2d 182, 182 (CCPA 1932).

We do know that some opinions have looked askance at foreign patents but that is for the reason that the patents of some countries have been notorious for containing inadequate and incomplete disclosures. A consideration of cases will show that this type of argument has not borne fruit in this court for the past 30 years. *In re Moreton*, 288 F.2d 708, 710 (CCPA 1961).

"Section 103 forbids issuance of a patent when 'the differences ... are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 407 (2007).

KSR disapproved a rigid approach to obviousness (i.e., an analysis *limited* to lack of teaching, suggestion, or motivation). *KSR*, 550 U.S. at 420 ("*The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.*").

Patentee misunderstands the obviousness requirements of § 103. Not every limitation of a claimed invention need be found in the prior art in order for said invention to be obvious. The *Graham* factors direct the fact finder to look to the scope and content of the prior art, the

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differences between the invention and the prior art, and the level of skill of one of skill in the art. *KSR Intern. Co. v. Teleflex, Inc.*, 550 U.S. 398, 406 (2007). While it may be easier to prove obviousness if each limitation of the claimed invention is found in the prior art, the level of skill of one of ordinary skill in the art can, at times, fill in the gap when limitations of the claimed invention are not specifically found in the prior art. *Purdue Pharma Prods. L.P. v. Par Ph arm. , Inc.*, 642 F. Supp. 2d 329, 373 (Fed. Cir. 2009).

Patentee's arguments have been fully considered but they are not deemed to be persuasive.

With regard to Patentee's comments regarding Backmann '866 not teaching an "unshielded cable", as recited in claims 1-42, Examiner maintains that an omission of an element and its function **is obvious** if the function of the element is not desired. See *Ex parte Wu*, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989), see also *In re Larson*, 340 F.2d 965, 144 USPQ 347 (CCPA 1965) (Omission of additional framework and axle which served to increase the cargo carrying capacity of prior art mobile fluid carrying unit would have been obvious **if this feature was not desired**); and *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (deleting a prior art switch member and thereby eliminating its function was an obvious expedient).

Indeed, Declarant Baxter's own arguments at page 26, indicate that when the economy is not "that great", a company is not using the best performing cable, but rather the combination of price and performance.

*"The "highest performance cables available" were **not** tape separator cables, whose EMI performance was at least inferior to cross-web cables. Because of this, one would have expected the cross-web cables to crowd out lower-performing tape separator cables. Yet the opposite has been the case: lower-priced and slightly lower performing tape separator cables have stolen share from out cross-web cables."*

With regard to the fact that Backmann '866 does not specifically disclose "the unshielded twisted pair communications cable" configuration, i.e., having a *non-conductive core*, claimed in the '999 patent under reexamination, Patentee's claim of novelty seems to contradict the Clark '503 patent ¹⁹ [abstract], filed in **1997**, acknowledging a "**non-conductive core**,...cable" is "conventional", i.e., **known**, and also known is that cross talk is increased by making the pair separator non-conductive,

*"A cable exhibiting reduced crosstalk between transmission media includes a core having a profile with a shape which defines spaces or channels to maintain a spacing between transmission media in a finished cable. **The core is formed of a conductive material to further reduce crosstalk.** A method of producing a cable introduces a core as described above into the cable assembly and imparts a cable closing twist to the assembly."*

From the prior art, it becomes, therefore, evident that using a non-conductive separator would be going back in the art, and worsening the cross-talk characteristics of a cable. This disadvantage is known by a person of ordinary skill in the art and should be considered as

¹⁹ The '999 patent under reexamination and the Clark '503 patent share 2 (two) inventors.

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common knowledge, especially as the Clark '503 patent and the '999 patent under reexamination share 2 (two) inventors.

Further, a "**conventional four-pair cable including a non-conductive core**" [the Clark '503 patent, abstract, 4:14-21] was known in **April 1997** (the filing date of the '503 patent), which antedates the earliest priority date the '999 patent under reexamination may claim, **February 1999**, based on its continuation status.²⁰

With regard to the patent using a **non-conductive separator** for the communications cable, by eliminating the conductive core, cited e.g., in the '866 patent, Patentee does not make it easier to "reduce(d) alien cross talk", as cited in the disclosure [the '999 patent, 6:21], and as previously recited in newly added independent claim 23. Therefore it would be obvious to one skilled in the art at the time the invention was made that the elimination of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before in order to achieve a more marketable price point. See *Ex parte Wu*, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989), *In re Larson*, 340 F.2d 965, 144 USPQ 347 (CCPA 1965) and *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975).

Examiner also noted, *supra*, that the '850 application, that became the '999 patent, had a Notice of Allowance issued based on a **terminal disclaimer** with claims 1-22 of the previously issued US patent 6998537. However, the limitation "an **unshielded** communications cable" was only recited in dependent claim 11, and in the preamble of independent claim 19 of the '537 patent.

Mr. Baxter, a Declarant, based on his 20 years of experience, further explained that **shields** are popular in Germany and other areas of the world, but they're not at all popular here, because they're expensive.

*"In parts of Europe, including Germany, the cable industry developed a preference for shielded cables. In contrast, other markets such as the United States favors unshielded cables. These preferences represent a **design choice** for the industry. Both shielded and unshielded cables can be designed to perform comparably, including satisfying Category 6 requirements based on TIA/EIA -568-B.2.*

²⁰ Mr. Gareis, a Belden engineer who works with Mr. Clark (one of the inventors for the '999 patent under reexamination), on cross-examination admitted that even in his own work, he actually worked on a project where he started with a shielded cable. It was referred to as the 1711a cable. It was a **shielded** cable with a plus-shaped separator. That was the product already in existence. Mr. Gareis testified -- he called them Project A and Project B in his testimony -- that the concept here is the separator, and even though he had to do some engineering work to sort of make it commercially manufacturable, the concept was evident as a component in the project, the concept being, "*could do some work and put that separator in an **unshielded** cable.*" [Belden Technologies vs. Superior Essex proceedings, September 15, 2010, pages 1341-1343]. It might be the reason why Mr. Clark misquotes the 1711a cable as a cable with a **conductive** core [the '503 patent, 4:15].

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*Given the preference for unshielded cables in the United States and the fact that unshielded cables can be made to perform comparably to shielded cables, one of ordinary skill in the art of the '999 Patent would have been motivated to try to modify the **separator** disclosed in DE 29719866 to Backmann by removing the foil from the foil/plastic laminate separator to arrive at an unshielded cable. One specific reason to try is to make a cable more attractive to the U.S. market."*

[DECLARATION OF MR. LES BAXTER, P.E., November 18, 2009, pages 2-3]

Mr. Gareis, a Belden engineer who works with Mr. Clark (one of the inventors for the '999 patent under reexamination), on cross-examination admitted that even in his own work, he actually worked on a project where he started with a shielded cable. It was referred to as the 1711a cable. It was a **shielded** cable with a plus-shaped separator. That was the product already in existence. Mr. Gareis testified -- he called them Project A and Project B in his testimony -- that the concept here is the separator, and even though he had to do some engineering work to sort of make it commercially manufacturable, the concept was evident as a component in the project, the concept being, "could do some work and put that separator in an **unshielded** cable."²¹

[Belden Technologies vs. Superior Essex proceedings, September 15, 2010, pages 1341-1343]

Moreover, Mr. Gareis stated,

*"7. **Design choices** available to the developer of data cables having twisted pairs include physical attributes, such as: conductor size; insulation material on the conductor; insulation thickness; twist lays; a jacket; particulars of any jacket that may be provided, such as its material, thickness, configuration and electricals; a filler; particulars of any fillers that may be provided, such as its material, geometry and shape; a **shield** particulars of any shielding that may be provided, such as its material composition, thickness, coating, shape and configuration; a drain wire and particulars of any drain wires that may be provided, such as its material, gauge and outer pitch.*

*8. During the development or modification of data cables having twisted pairs, one or more physical attributes are chosen or otherwise modified to achieve a desired result, such as meeting various data cable performance parameters. **There is more than one way to meet electricals through physical relationships of all cable components. The optimal physical relationship strives to meet the smallest size, and / or least expensive relationship of all cable components."***

[DECLARATION OF GALEN GAREIS UNDER 37 C.F.R. §1.132, October 19, 2009]

It seems, therefore, that "**meet(ing) the smallest size, and / or least expensive relationship of all cable components**", would be a substitute for an inventive limitation in Patentee's view.

Patentee further argues,

²¹ It might be the reason why the inventor, Mr. Clark misquotes the 1711a cable as having a conductive core [the '503 patent, 4:15].

"Finally, in an attempt to satisfy the "unshielded" claim limitations of the '999 Patent, the Office Action apparently relies on the Belden 1711A cable, which was disclosed in the Clark '503 Patent specification. This reasoning, however, is similarly incorrect. The Belden 1711A cable was a shielded cable and is identified as such on the cover of Clark '503 under "OTHER PUBLICATIONS."

[Response filed July 25, 2011, page 21]

The Clark '503 patent teaches *"Making enhanced data cable with cross-twist cabled core profile"* [title], via *"A cable exhibiting reduced crosstalk between transmission media includes a core having a profile with a shape which defines spaces or channels to maintain a spacing between transmission media in a finished cable. **The core is formed of a conductive material to further reduce crosstalk.** A method of producing a cable introduces a core as described above into the cable assembly and imparts a cable closing twist to the assembly"* (emphasis added) [the Clark '503 patent, abstract].

Apparently, the Clark '503 patent misquotes the Belden 1711A cable as having a "non-conductive core" [the Clark '503 patent, 4:11-21],²²

*"A conventional four-pair cable including a non-conductive core, **such as the Belden 1711 A cable**, reduces nominal crosstalk by up to 5dB over similar, four-pair cable without the core. **By making the core conductive, crosstalk is reduced a further 5dB.** Since both loading and jacket construction can affect crosstalk, these figures compare cables with similar loading and jacket construction."*

However, clearly, the Clark '503 patent meant to teach that a *conductive core reduces crosstalk*, as described in the abstract;

*"A cable exhibiting reduced crosstalk between transmission media includes a core having a profile with a shape which defines spaces or channels to maintain a spacing between transmission media in a finished cable. **The core is formed of a conductive material to further reduce crosstalk.** A method of producing a cable introduces a core as described above into the cable assembly and imparts a cable closing twist to the assembly."*

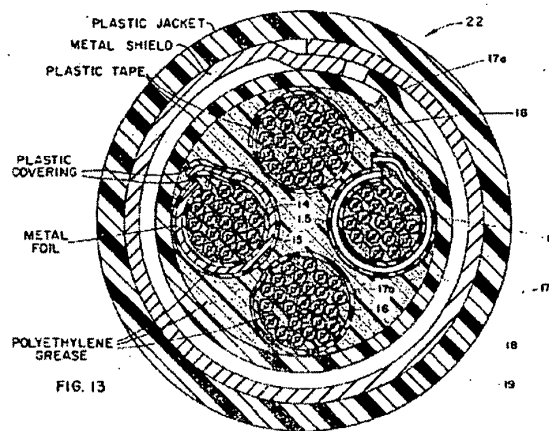
²² Mr. Gareis, a Belden engineer who works with Mr. Clark (one of the inventors for the '999 patent under reexamination), on cross-examination admitted that even in his own work, he actually worked on a project where he started with a shielded cable. It was referred to as the 1711a cable. It was a **shielded** cable with a plus-shaped separator. That was the product already in existence. Mr. Gareis testified -- he called them Project A and Project B in his testimony -- that the concept here is the separator, and even though he had to do some engineering work to sort of make it commercially manufacturable, the concept was evident as a component in the project, the concept being, *"could do some work and put that separator in an **unshielded** cable."* [Belden Technologies vs. Superior Essex proceedings, September 15, 2010, pages 1341-1343]. It might be the reason why Mr. Clark misquotes the 1711a cable as a cable with a **conductive** core [the '503 patent, 4:15].

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The '683 patent discloses an embodiment with a substantially non-conductive separator.

Contrary to what the Patent Owner argues, the '683 patent discloses an embodiment with a substantially non-conductive separator.

Figure 13 of the '683 patent, reproduced below, discloses a cable with two plastic- only separators (elements 17a - "plastic tape"):



Similarly, claim 1 of U.S. Patent 3,622,683 recites:

"1. A cable comprising:

- a. a cable core having first and second groups of insulated electrical conductors;
- b. a metal foil shield covered on both surfaces with a plastic, said metal foil shield peripherally surrounding said first group of electrical conductors but not said second group of electrical conductors;
- c. a plastic tape peripherally surrounding said second group of electrical conductors, but not said first group of electrical conductors, and**
- d. a plastic sheath circumferentially surrounding said first and second groups of electrical conductors. "(emphasis added)

The '683 patent teaches three options for separators -- foil, a composite of foil and plastic, or plastic-only (plastic tape). The '866 patent discloses two options for the separator -- foil or a composite of foil and plastic. Given these teachings, it would have been obvious to one of ordinary skill in the art to modify the teaching of the '866 patent to include the third option -- a plastic-only separator. This plastic-only separator is a non-conductive separator.

Even if the combination of the '866 patent and the '683 patent resulted in a foil separator totally enclosed in plastic, that separator would be "substantially non-conductive." Or, if each end of the foil/plastic laminate separator was exposed as the Patent Owner argues, the separator is conductive between two points only - the ends. At every other location along the separator, the separator would be non-conductive, as any foil would be completely surrounded by plastic. In that way, the separator would be substantially non-conductive, as recited in the claims. The

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Patent Owner's argument attempts to improperly narrow the claims. *See In re Icon Health & Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007) ("*During reexamination, as with original examination, the PTO must give claims their broadest reasonable construction consistent with the specification.*").

Furthermore, the principle of operation of the '866 patent is a cable that employs a plurality of twisted pairs of insulated conductors to carry telecommunications data. The modified cable of the '866 patent operates in the same way -- to carry telecommunications data.

It would have been obvious to one of ordinary skill in the art to try a plastic-only (that is, "non-conductive") separator in the cable disclosed in the '866 patent. *"A patent may not be obtained...if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."* 35 U.S.C. § 103(a). In *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), the Supreme Court stated that an invention may be found obvious if it would have been obvious to a person having ordinary skill in the art to try a course of conduct:

"When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103." *Bayer Schering Pharma AG v. Barr Laboratories, Inc.*, 575 F.3d 1341 (Fed. Cir. 2009) (quoting *KSR Int'l* at 421).

The Federal Circuit has provided guidelines to determine when a particular innovation would not be obvious to try. *Bayer Schering Pharma AG v. Barr Laboratories, Inc.*, 575 F.3d 1341 (Fed. Cir. 2009).

First, an invention would not be obvious to try when *"the inventor would have had to try all possibilities in a field unreduced by direction of the prior art."* *Id.* at 1347. In interpreting the *KSR Int'l* requirement that the field of search be among a *"finite number of identified solutions,"* the Federal Circuit requires that the number of options be *"small or easily traversed"* *Id.* (quoting *Ortho-McNeil Pharm., Inc. v. Mylan Labs, Inc.*, 520 F.3d 1358, 1364 (Fed. Cir. 2008)).

In the instant case, *"market pressure"*, per Patentee's and Declarant Baxter's own arguments at page 26, when the economy is not *"that great"*, forces a company to reduce pricing on cables, e.g., by reducing the price of materials used, as the ever increasing price of raw materials dictates using not the best performing cable, but rather the combination of price and performance.

*"The "highest performance cables available" were **not** tape separator cables, whose EMI performance was at least inferior to cross-web cables. Because of this, one would have expected the cross-web cables to crowd out lower-performing tape separator cables. Yet the opposite has been the case: **lower-priced and slightly lower performing** tape separator cables have stolen share from out cross-web cables."*

Second, an invention is not obvious to try when "*vague prior art does not guide an inventor toward a particular solution.*" *Bayer Schering Pharma*, 575 F.3d at 1347. If what is obvious to try is "*to explore a new technology or general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it*" a finding of obviousness is not appropriate. *Id.* (quoting *In re O'Farrell*, 853 F.2d 894 (Fed. Cir. 1988)). This prong "*expresses the same idea as the KSR requirement that the identified solutions be 'predictable.'*" *Bayer Schering Pharma*, 575 F.3d at 1347.

Although the Patent Owner in *Bayer Schering Pharma* argued that the prior art taught away from the invention, the Federal Circuit found that the invention was obvious to try because the prior art led to two known options. *Id.* at 1350. The Federal Circuit found that "two" was a finite number of identified, predictable solutions. *Id.* The Federal Circuit also found that the prior art was not vague but guided the person of ordinary skill in the art precisely. *Id.* Because one of the two options led to the result claimed in the invention, the Federal Circuit affirmed the District Court's finding that the invention was obvious. *Id.*

The '866 patent in combination with other prior art, when viewed in the context of the tests established in *Bayer Schering Pharma*, render the limitation "non-conductive" recited in all claims obvious to try, and the claim limitation reciting a "non-conductive" separator obvious to try in the communication cable arts.

Considering the first prong of *Bayer Schering Pharma*, there are a finite number of solutions, specifically "three" solutions, disclosed in the combination of the '866 patent and '683 patent. As discussed above, the Patentee's argument that that the combination of Backmann' 866 patent separator and the US Patent 3,622,683 separator would still have a foil component ignores what is taught in this combination. The '683 patent does in fact teach, and claim, a plastic-only separator. The '683 patent teaches three, and only three, options for separators - foil, a composite of foil and plastic, or plastic-only. Three known solutions satisfies the Bayer Schering Pharma requirement that the number of options be small.

Considering the second prong of *Bayer Schering Pharma*, the prior art guides the person of ordinary skill in the art and does not require him to explore a new technology or give only general guidance. As shown above, the '683 patent teaches and claims a combination of foil or foil/plastic with plastic-only separators. Each and every embodiment of claim 1 of the '683 patent contains at least one group of electrical conductors separated from other conductors by a **plastic-only tape**.

The '683 patent is not the only prior art that guides the person of ordinary skill in the art to try a dielectric separator consisting of a dielectric layer. The "**related art**" section of the '999 patent identifies that it was known in the art to provide physical separation between twisted pairs to achieve improved transmission performance, and further identifies two prior art examples of cables that use dielectric separators consisting of a dielectric layer. First, Fig.1 of the '999 patent, reproduced below, is an Admitted Prior Art cable identified in the '999 patent as disclosed in U.S. Patent No. 4,777,325, in which the twisted pairs are separated by a

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dielectric separator consisting of a dielectric layer. The '999 patent describes this cable as follows,

"In particular, a plurality of twisted pairs 104a-104b, 106a-106b, 108a-108b, and 110a-110b are positioned side-by-side, each in separate compartments 112, 114, 116, and 118 formed within a fiat hollow envelope of an extruded outer sheath 120. The cable is provided with separator ribs 122 between a top and a bottom of the sheath to divide the outer sheath into the separate compartments and to prevent lateral movement of the twisted pairs out of their respective compartments." ('999 patent at 2:10-25)

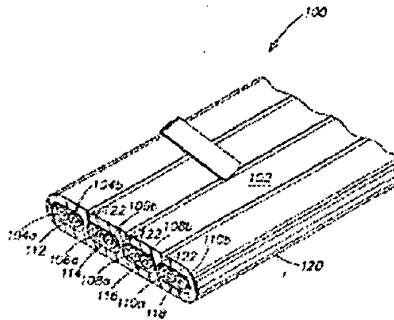


FIG. 1

(RELATED ART)

U.S. Patent No. 4,777,325 issued **October 11, 1988**, well before the February 1999 effective filing date of the '999 patent.

Fig.3 of the '999 patent, reproduced below, discloses another prior art cable in which the twisted pairs are separated by a dielectric separator consisting of a dielectric layer. The '999 patent describes this cable as follows,

"Still another known industry cable implementation 132 is illustrated in FIG. 3. The cable utilizes a jacket 134 with inward protrusions 136 that form channels 138 within the cable. A twisted pair 140 of conductors 142, 144 is disposed within each channel. The protrusions are used to provide adequate pair separation." ('999 patent, 2:46-62)

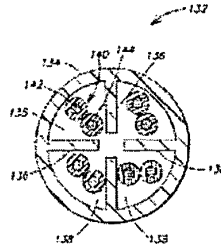


FIG. 3
(RELATED ART)

Furthermore, as the Supreme Court identified in *KSR Int'l*, if trying the known options leads to the anticipated success, *the success is likely the product not of innovation, but of ordinary skill and common sense*. The example prior art cables given above in U.S. Patent 3,622,683 and in the Admitted Prior Art in the "related art" section of the '999 patent would lead one of ordinary skill in the art to anticipate success in trying a plastic-only separator.

*"[T]he problem that is the basis for the present invention., is to configure it so that the **manufacturing costs can be lowered**, without the transmission properties., being impaired as compared to those cables with individually shielded conductor pairs."*

One of ordinary skill in the art would have been motivated to try a plastic-only separator for a number of reasons. Removing the metal foil, as disclosed in the '683 patent, would reduce manufacturing costs. Consumers in the U.S. market prefer cables without metal foils. (See Declaration of Baxter at paragraphs 12-13) The '683 patent discloses disadvantages of a metal foil that could be eliminated or mitigated by use of a plastic-only separator.

"Because a metal foil screen or shield is used, provisions should be made for preventing unwanted electrical energy, escaping from imperfections in the insulations around electrical conductors, from reaching the metal shield." ('683 Patent at 13:37-40.)

"By using the concept of a firmly adhering plastic coating on a metal foil [rather than a metal only separator], the mechanical properties, i.e., resistance to flexing, bending or mechanical manipulations, can be improved." ('683 Patent at 13:50-53).

The resistance to flexing, bending or mechanical manipulations of a plastic-only separator would be even better than that of a plastic-coated foil.

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The Patent Owner quotes Declarant Gareis's testimony for the proposition that one of ordinary skill in the art would not use a shielded cable to make an unshielded cable with the same performance standard in arguing that the prior art teaches away from modifying the '866 Patent [See Patent Owner's Revised Response at 43-44].

The Patent Owner's fundamental assumption is in error; the '999 Patent does not claim performance standards, but only cable structure. Accordingly, the consideration is not whether one of ordinary skill in the art would use the teachings of the '866 Patent to make an unshielded cable that performs identically to the cable of the embodiment of the '866 Patent. Instead, the consideration is whether one of ordinary skill in the art would use the teaching of the combination of patents to modify the cable disclosed in the '866 Patent to arrive at the subject matter of the claims. Clearly, one of ordinary skill in the art would do so. The '866 Patent does not teach away from the modification.

With regard to Patentee's comments that it would not have been obvious to cable Backmann '866 – Examiner bring up the fact that at trial, Declarant Baxter testified that page six of the '866 patent reveals the "twisted (cabled) about a common axis" limitation. Specifically, this page reads in relevant part:

*"An invention-specific data transmission cable, as described above, can be manufactured so that the partial shielding 11, 12, or 17, 18 can be applied together with the stranding of conductor pairs 1 and/or **longitudinal reshaping of the conductor pairs 1**. Especially with stranding of the conductor pairs in the SZ stranding procedure, the existing laying tools for the partial shielding 11, 12 can support changing the stranding direction."*

[<http://www.ded.uscourts.gov/SLR/Opinions/Aug2011/08-63.pdf>] (emphasis added)

Concentrating on the "longitudinal reshaping of conductor pairs" language, Declarant Baxter demonstrated with a rope model that this longitudinal reshaping involved twisting sets of twisted pairs over each other and around a central axis in such a way that, if one were to slice the cable at various points, the twisted pairs would be in different positions in relationship to each other along the length of the cable.

Hence, the cable was "longitudinally reshaped" instead of longitudinally homogeneous. (*Id.*) Baxter further clarified what the '866 patent meant by "longitudinal reshaping" when he discussed "cable common axis" in the '999 patent, which limitation is similar to "twisted about a common axis" from the '095 patent:

"When you are talking about the longitudinal reshaping of the pairs, that is what happens when you twist the whole cable, and particularly when you talk about doing it in conjunction with putting in these separators. You don't have the separators when you are only working with one pair because they go around multiple parts of the cable. So that to me indicates clearly that he is talking about an operation on the entire cable, not just the twisting of one pair."

[<http://www.ded.uscourts.gov/SLR/Opinions/Aug2011/08-63.pdf>] (emphasis added)

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In addition to Baxter's testimony about the disclosure of the '866 patent, **substantial testimony was admitted, over plaintiffs' objections**, as to the knowledge of one of ordinary skill in the art regarding twisting wires about a common central axis. Even the jury found that the '866 patent failed to disclose the "twisted about a common central axis" limitation, **yet found that modifying the '866 patent to include such a twist would have been obvious to one of ordinary skill in the art given his relevant knowledge.**

Third Party Requester's comments filed with regard to the Backmann '866 reference, as a primary reference, are incorporated herein by reference.

Rejections over Yanagida

The '470 patent to Yanagida discloses a separator that is flat prior to cable twisting, and is configured during the twisting process. See '470 Patent Translation, Detailed Explanation of the Invention.

*"Core material 2 is most effectively shown in Figure 2; as shown therein, **the material is formed** into a reciprocatingly twisted state by slowly changing the facing of both surfaces as the material moves in the longitudinal direction. This can be achieved by twisting the facing direction of the plate body to the opposing direction at fixed intervals while maintaining the rigid plastic or other material of the horizontal plate at a prescribed temperature the core material is caused to be inserted into a guide hole provided in the center of a revolving butt strap, and each group of insulated element wire is caused to be inserted into a guide hole provided on the fringe [of the revolving butt strap]; subsequently, while the tips of these are indexed through dies, reciprocating rotation should be conducted by combining the revolving butt strap with the twisting of the core material."* (emphasis added)

Patentee had previously quoted the definition construed for the term "configurable" during litigation,

"1. '[C]onfigurable: Flexible enough to be formed or arranged."

This construction is consistent with the claims as well as the specification. ('095 patent at col. 7: 19-20; col. 3:6-9). The parties agree in principal with this construction, diverging only with defendants' proposed additional limitation of "providing structural stability during manufacture." While the specification describes one embodiment directed to a configurable separator that provides structural stability, the court declines to import the limitations of a single preferred embodiment into this limitation. See Comark Commc'ns. v. Harris Corp., 156 F.3d 1182 (Fed. Cir. 1998)."

[Patent Owner's Revised Response, March 25, 2011, p.44]

As discussed *supra*, the Examiner does accord deference to court findings. Nonetheless, a court develops definitions, using different evidence, different standards of proof, a **presumption** that the claims are valid coupled with the understanding that the Patentee has no opportunity to amend. Thus, the court relies upon its discretion to interpret the claims to preserve validity.

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It should come as no surprise then, that even when considering the same claim terms, a court's claim interpretation does not necessarily comport with a **reasonably broad claim interpretation standard** that an Examiner, by law, must apply to any reexamination proceedings before the Office.

In the instant case, in Yanagida "***the material is formed*** into a reciprocatingly twisted state", and therefore is "configurable".

Regarding Patentee's remarks on page 44 of the Revised Response that the term "*Configurable tape means a tape that is flexible enough to be formed or arranged*" construed during litigation should be adopted during reexamination, while Examiner acknowledges Patent Owner's reading of the claim language, this is not the only manner in which the claim limitation can be read. There is no requirement that the claim language be interpreted only in the singular manner urged by Patent Owner because the language Patent Owner relies upon (e.g. that the "*tape that is flexible enough to be formed or arranged*") is not found in the claims. Accordingly, the argument is not persuasive.

Patentee also makes reference to, for example, the following paragraph for support [the '999 patent, 8:30-43],

*"Referring now to FIG. 12, there is illustrated a perspective view of a system for practicing a **method of making a cable** in accordance with an embodiment of the invention. The pair separator 26 is drawn from a reel or pad (not shown), and is formed around a round cob 28 into a shaped pair separator such as, for example, in the shape of a cylinder. The shaped pair separator is aligned with four twisted pairs 12 by passing the four twisted pairs through openings 30 in first die 32, and the shaped pair separator through central opening 34. The shaped pair separator is then further configured into a desired shape (formed pair separator) as illustrated in FIG. 12. It is to be appreciated, as discussed above, that this shape can be varied."*

It is noted that MPEP 2111 points out,

"During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." >The Federal Circuit's en banc decision in Phillips v. AWH Corp., 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005) expressly recognized that the USPTO employs the "broadest reasonable interpretation" standard:

The Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." In re Am. Acad. of Sci. Tech. Ctr., 367 F.3d 1359, 1364, 70 USPQ2d 1827] (Fed. Cir. 2004). Indeed, the rules of the PTO require that application claims must "conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may

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be ascertainable by reference to the description." 37 CFR 1.75(d)(1) 415 F.3d at 1316, 75 USPQ2d at 1329. See also In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified."

Moreover, MPEP 2181 states in pertinent part,

"The Federal Circuit has held that applicants (and reexamination patentees) before the USPTO have the opportunity and the obligation to define their inventions precisely during proceedings before the PTO. See In re Morris, 127 F.3d 1048, 1056-57, 44 USPQ2d 1023, 1029-30 (Fed. Cir. 1997) (35 U.S.C. 112, second paragraph places the burden of precise claim drafting on the applicant); In re Zletz, 893 F.2d 319, 322, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (manner of claim interpretation that is used by courts in litigation is not the manner of claim interpretation that is applicable during prosecution of a pending application before the PTO); Sage Prods., Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1425, 44 USPQ2d 1103, 1107 (Fed. Cir. 1997)" (emphasis added)

Configuring a separator is a **method**, not a product. Patentee drafted structure claims that are primarily directed to physical limitations, such as components of the structure; it cannot now incorporate method claims that are primarily directed to steps in a process by asking for *"broadest reasonable interpretation consistent with the specification"*. See *In re Icon Health & Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007) (*"During reexamination, as with original examination, the PTO must give claims their broadest reasonable construction consistent with the specification."*). In making this argument, the Patent Owner improperly construes the claim term "configurable" to require that the separator can be configured once *inside the cable*. Nothing in the claims of the '999 patent requires such a narrow claim construction.

In Yanagida, during the manufacturing process, the separator is heated to allow it to be formed into a helical core profile. The separator is "configurable."

Since the separator of the Yanagida '470 Patent is "configurable," even under the litigation construction, the Patent Owner improperly attempts to narrow the court's claim construction to mean "flexible enough to be formed or arranged while the separator is in the cable." Indeed, the Patent Owner's position is contrary to its first argument: that the "'configurability' of the tape separator is present to allow the tape to be made into core profiles shown in the figures, without losing the overall flexibility in the cable."

"The Office is, of course, not legally bound by the court's construction. However, there are some good reasons why the Office should consider adopting it. First, it is correct. The "configurability" of the tape separator is present to allow the tape to be made into core profiles shown in the figures, without losing the overall flexibility in the cable."

[Patent Owner's Revised Response, March 25, 2011, p.45.]

The '999 Patent expressly discloses that the separator is formed into core profiles during the construction of the cable and prior to the core being inside the cable [See '999 Patent, Fig.12

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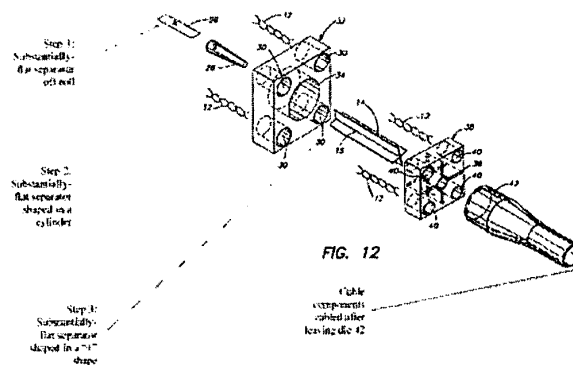
and accompanying text]. The Patent Owner also attempts to improperly narrow the construction to require the configurability to be "at normal manufacturing temperatures."

"In order for the word "configurable" to have any content at all, it must mean configurable at normal manufacturing temperatures."

[Patent Owner's Revised Response, March 25, 2011, p.46]

Even if this added limitation was in the claim, this requirement is met by the separator of the Yanagida '470 Patent. It is precisely during "*normal manufacturing*" that the separator of the Yanagida '470 Patent is configured.

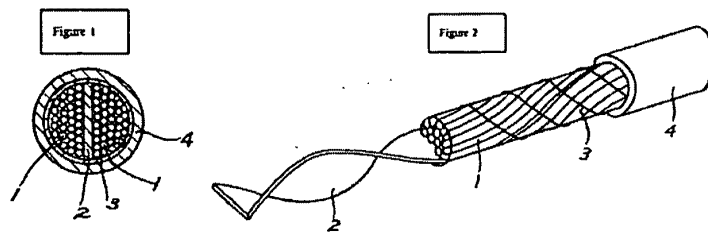
Further, as illustrated in the '999 patent's description of the manufacturing process, the separator is substantially flat prior to cabling. That description is illustrated in Fig.12 of the '999 patent:



Moreover, claim 3 recites "*wherein, prior to cabling, the configurable tape separator comprises a substantially flat tape.*" Independent claim 14 uses similar language ("*a configurable pair separator that, prior to cabling, comprises a substantially flat, non-conductive tape.*")

Figure 1 of Yanagida '470 reproduced below and the specification disclose a cable with a plurality of twisted pairs:

*"As communications cable, there is a tendency to use a plurality of either insulated element wires or else **stranded pairs** or stranded quad of such, or otherwise to use so-called [**alternately**] **stranded cable** with which units of the wires are stranded in a manner so that the stranding direction is reversed at points in time within a fixed cycle."* (emphasis added).



[Yanagida '470 Translation, Detailed Explanation of the Invention]

Yanagida '470 discloses twisted pairs, the first twisted pair is on one side of the separator 2 and the second twisted pair is on the other side of the separator. The pair separator is configurable, at least during the cable manufacturing process. The plastic is kept at a certain temperature such that the separator can be bent into the alternatively twisting shape as the cable is twisted [Yanagida '470 Translation, Detailed Explanation of the Invention].

"Core material 2 is most effectively shown in Figure 2; as shown therein, the material is formed into a reciprocatingly twisted state by slowly changing the facing of both surfaces as the material moves in the longitudinal direction. This can be achieved by twisting the facing direction of the plate body to the opposing direction at fixed intervals while maintaining the rigid plastic or other material of the horizontal plate at a prescribed temperature."

Regarding Patentee's arguments that "Yanagida '470 does not disclose the subject matter of claims 6-7, 16" at page 47 of his Revised Response, there is no disclosure in the '999 Patent as to why the specific ranges claimed in claims 6, 7, 16 are important [See generally the '999 Patent].

Third Party Requester's comments filed are incorporated herein by reference.

Rejections Under 35 U.S.C. § 112

The rejection of claims 37-42 under 35 U.S.C. 112, first or second paragraph is withdrawn, as the claims were canceled in the Response.

Patentee argues,

"Claim 23 does not prohibit a separator between the first and third pairs and between the second and fourth pairs, it simply does not require one."

[Response, July 25, 2011, p.30]

The Patent Owner's argument fails for at least two reasons.

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First, the test as to whether a claim satisfies the requirements of 35 U.S.C. § 112 is not whether a claim could cover disclosed embodiments. The test is whether one of ordinary skill in the art would understand that the inventors were in possession of the invention as claimed, that is, the broadest invention covered by the claims. See *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*) ("*[T]he description must 'clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed. In other words, the test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.'*") (internal citations omitted).

Second, Patentee is citing,

"[S]pecific twisted pair combinations can receive a dedicated amount of isolation tape folds, thereby enhancing separation of selected twisted pairs and enhancing crosstalk isolation between the selected twisted pairs where an end user, for example, needs more crosstalk isolation. The data communications cable can also be made with a desired crosstalk isolation between the opposing twisted pairs of insulated conductors."

[Response, July 25, 2011, p.30; the '999 patent, 8:63-9:3]

The citation from the '999 patent in the Patent Owner's Response does not disclose the specific configuration of cable claimed in claim 23. This citation supports just the opposite point -- that the separator can be configured such that certain pairs receive additional separation, such as TP4 in Fig.8 of the '999 patent.

INFORMATION DISCLOSURE STATEMENT

Where patents, publications, and other such items of information are submitted by a party (Patent Owner or Third Party Requester) in compliance with the requirements of the rules, the requisite degree of consideration to be given to such information will be normally limited by the degree to which the party filing the information citation has explained the content and relevance of the information. The initials of the examiner placed adjacent to the citations on the form PTO/SB /08A and 08B or its equivalent, without an indication to the contrary in the record, do not signify that the information has been considered by the examiner any further than to the extent noted above. See **MPEP 2256**.

In concert with **MPEP 2256**, the US references submitted in the IDS filed July 25, 2011 have been considered only to the extent that Patentee "*has explained the content and relevance of the information*".

CONCLUSION

(A) This is an ACTION CLOSING PROSECUTION (ACP); see **MPEP § 2671.02**.

(1) Pursuant to **37 CFR 1.951 (a)**, the Patent Owner may once file written comments limited to the issues raised in the reexamination proceedings and/or present a proposed amendment to the claims which amendment will be subject to the criteria of **37 CFR 1.116** as to whether it

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shall be entered and considered. Such comments and/or proposed amendments must be filed within a time period of 30 days or one month (whichever is longer) from the mailing date of this action. Where the patent owner files such comments and/or a proposed amendment, the Third Party Requester may once file comments under *37 CFR 1.951 (b)* responding to the Patent Owner's submission within 30 days from the date of service of the Patent Owner's submission on the Third Party Requester.

(2) If the Patent Owner does not timely file comments and/or a proposed amendment pursuant to *37 CFR 1.951 (a)*, then the Third Party Requester is precluded from filing comments under *37 CFR 1.951 (b)*.

(3) Appeal cannot be taken from this action, since it is not a final Office action.

(B) Extensions of time under *37 CFR 1.136(a)* will not be permitted in inter partes reexamination proceedings because the provisions of *37 CFR 1.136* apply only to "an applicant" and not to the Patent Owner in a reexamination proceeding. Additionally, *35 U.S.C. 314(c)* requires that inter partes reexamination proceedings "*will be conducted with special dispatch*" (*37 CFR 1.937*). Patent Owner's extensions of time in inter partes reexamination proceedings are provided for in *37 CFR 1.956*. Extensions of time are not available for third party requester's comments, because a comment period of 30 days from service of patent owner's response is set by statute. *35 U.S.C. 314(b)(3)*.

Extensions of time in reexamination proceedings are provided for in *37 CFR 1.956*. A request for extension of time must be filed *on or before the day on which a response to this action is due*, and it must be accompanied by the petition fee set forth in *37 CFR 1.17(g)*. The mere filing of a request will not affect any extension of time. An extension of time will be granted *only for sufficient cause*, and for a reasonable time specified.

The '999 patent is being litigated, and therefore subject to the standards of review described under *MPEP § 2686.04 II (A)*.

The Patent Owner is reminded of the continuing responsibility under *37 CFR 1.985(a)*, to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 7179999 throughout the course of this reexamination proceeding. The Third Party Requester is also reminded of the ability to similarly appraise the Office of any such activity or proceeding throughout the course of this reexamination proceeding.

All correspondence relating to this ex parte reexamination proceeding should be directed:

By Mail to: Mail Stop Inter Partes Reexam
Central Reexamination Unit
Office of Patent Legal Administration
United States Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
Central Reexamination Unit

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By hand to: Customer Service Window
Attn.: Central Reexamination Unit
Randolph Building, Lobby Level
401 Dulany Street
Alexandria, VA 22314

Registered users of EFS-Web may alternatively submit such correspondence via the electronic filing system EFS-Web, at <https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html>. EFS-Web offers the benefit of quick submission to the particular area of the Office that needs to act on the correspondence. Also, EFS- Web submissions are "soft scanned" (i.e., electronically uploaded) directly into the official file for the reexamination proceeding, which offers parties the opportunity to review the content of their submissions after the "soft scanning" process is complete.

Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or the Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

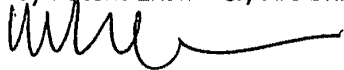
October 10, 2011

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