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22428 7590 09/20/2011 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER NGUYEN, MINH T	
			ART UNIT 3992	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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CENTRAL REEXAMINATION UNIT

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

REEXAMINATION CONTROL NUMBER 95/000,474.

PATENT NUMBER 6570095.

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)

ACTION CLOSING PROSECUTION (37 CFR 1.949)	Control No.	Patent Under Reexamination
	95/000,474	6570095
	Examiner	Art Unit
	MINH T. NGUYEN	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 02 August, 2011

Third Party(ies) on 5/14/10

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:

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

PART II. SUMMARY OF ACTION:

- 1a. ☒ Claims 1-40 are subject to reexamination.
- 1b. ☐ Claims _____ are not subject to reexamination.
2. ☐ Claims _____ have been canceled.
3. ☒ Claims 21-22,27-33 are confirmed. [Unamended patent claims]
4. ☒ Claims 34-40 are patentable. [Amended or new claims]
5. ☒ Claims 1-20 and 23-26 are rejected.
6. ☐ Claims _____ are objected to.
7. ☐ The drawings filed on _____ ☐ are acceptable ☐ are not acceptable.
8. ☐ The drawing correction request filed on _____ is: ☐ approved. ☐ disapproved.
9. ☐ 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 _____
10. ☐ Other _____

INTER PARTES REEXAMINATION SECOND ACTION CLOSING PROSECUTION

This second Action Closing Prosecution (ACP) is in response to the patent owner's amendments filed on 4/16/10 and 12/23/10 and requester's comment filed on 5/14/10. In view of the requester's comment, some rejections need to be restored. The following is a detailed office action.

Status of the Claims

Claims 1-40 are subject to reexamination. By the response filed on April 16, 2010, no further changes has been made. Thus, the status of the claims is now as follows: claims 1-23, 27-30 and 32-33 are original, claims 24-26 and 31 are amended and claims 34-40 are new.

Prior Art

Claims 1-40 of the United States Patent Number 6,570,095 to Clark et al. ("the '095 patent") are reexamined in view of the following patents and publications:

DE Patent No. 297 19 866 U1 ("GmbH '866")

JP 05-290645A to Ikeda et al. ("Ikeda '645")

U.S. Patent No. 3,622,683 to Roberts et al. ("Roberts '683")

U.S. Patent No. 5,670,748 to Gingue et al. ("Gingue '748")

European Patent Application EP0569217 A2 to Weinberg Martin ("Martin '217")

U.S. Patent No. 5,789,711 to Gareis et al ("Gareis '711")

U.S. Patent No. 4,644,099 to Basconi ("Basconi '099")

U.S. Patent No. 4,755,629 to Beggs et al. ("Beggs '629")

Art Unit: 3992

U.S. Patent No. 4,385,485 to Yonechi ("Yonechi '485")

U.S. Patent No. 5,574,250 to Hardie et al. ("Hardie '250")

U.S. Patent No. 4,096,346 to Stine et al. ("Stine '346")

U.S. Patent No. 3,888,710 to Burk ("Burk '710")

Information Disclosure Statement

The Information Disclosure Statement (IDS) submissions filed on 4/6/10, 6/28/11 and 8/2/11 have been considered. It is to be noted, however, that where patents, publications, and other such items of information are submitted by a party (patent owner or requester) in compliance with the requirements of the rules, the requisite degree of consideration to be given to such information will be limited by the degree to which the party filing the information citation has explained the content and relevance of the information. In instances, where no explanation of citations (items of information) is required and none is provided for an information citation, only a cursory review of that information is required. The examiner need only perform a cursory evaluation of each unexplained item of information, to the extent that he/she needs in order to determine whether he/she will evaluate the item further. If the cursory evaluation reveals the item not to be useful, the examiner may simply stop looking at it. This review may often take the form of considering the documents in the same manner as other documents in Office search files are considered by the Examiner while conducting a search of the prior art in a proper field of search. **The initials of the Examiner, in this proceeding, placed adjacent to the citations on the POL-1449 or PTO/SB/08A and 08B or its equivalent, without an indication in the record 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.** The same degree of consideration was provided for the references merely cited with the request but for which no

Art Unit: 3992

explanation regarding the content and relevance of the information was provided. See MPEP 609, seventh paragraph, Revision 5, Aug. 2006 [page 600-141].

The IDSs filed on 4/6/10, 6/28/11 and 8/2/11 are considered on the attached signed sheets. It is noted that certain items are lined through as not considered: i.e., court documents, Memorandum Opinion or submissions of the prosecution history of related patents are not appropriately cited on an IDS. Items like court documents, Memorandum Opinion or submissions of the prosecution history of related patents are evidence, but are not prior art as such, and therefore will not be placed on the face of the patent; such evidence is therefore inappropriate for an IDS and thus the items are lined through. Only patents and printed publications should be included as citations within an IDS. The examiner notes that the evidence has been read and considered.

Statutes

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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 through 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 negatived by the manner in which the invention was made.

Requester's proposed rejection: Ground 1

Requester's proposed anticipation rejection of claims 1, 9-13, 20-21 and 27-29 under 35 USC 102(b) by GmbH '866 **is not adopted**.

The proposed anticipation rejection of these claims was adopted in part in the previous ACP office action (e.g., claims 27-29 was adopted). In this office action, the examiner's decision for not adopting claims 1, 9-13 and 20-21 is maintained, the adopted anticipation rejection of claims 27-29 is withdrawn.

A. Reasons for not adopting claims 1, 9-13 and 20-21:

(The reason for not adopting the proposed rejection of these claims is the same as the one presented in the previous ACP office action and repeated below)

Regarding claim 1, the claim expressly requires "a dielectric pair separator consisting of a dielectric layer". The requester asserts that because GmbH '866 discloses the pair separator being made of metal foil laminated by plastic, GmbH '866 anticipates this limitation. The examiner disagrees. GmbH '866 does not disclose a dielectric pair separator consists of only a dielectric layer as required in claim 1.

Regarding claim 10, the proposed anticipation rejection is not adopted for the same reason discussed in claim 1.

Because claims 9, 11-13 and 20-21 depend from claim 1 or 10, which the proposed anticipation rejection is not adopted, the proposed anticipation rejection to these claims is not adopted.

B. Reasons for withdrawing the rejection of claims 27-29:

The proposed anticipation rejection of claims 27-29 was adopted in the previous ACP office action. Patent owner argues that GmbH '866 does not teach the limitation that the twisted pairs and the separator are twisted to form the finished cable. Patent owner points out that the

Art Unit: 3992

SZ stranding disclosed in GmbH '866 does not refer to cabling to close the cable but rather it refers to twisting individual conductors to form the twisted pairs. The requester refers to the comment filed on 1/11/10 which relied on the teaching in the GmbH '866 patent at page 2 that "[t]he invention-specific arrangement of the shielding further makes it possible to use stranding and/or longitude reshaping of the conductor pair to apply onto or insert the shielding into the cable" and the Declaration of Mr. Baxter at paragraph 11.

The examiner agrees with the patent owner that the teaching in GmbH '866 refers to the twisting of each individual conductor pairs, not the twisting of the dielectric pair separator, the first and second twisted pairs to form a twisted pair cable as recited in claim 27. The statement at paragraph 11 in the Declaration of Mr. Baxter is merely his interpretation when reading the GmbH '866 patent. The examiner respectfully disagrees with his opinion. The phrase "longitude reshaping of the conductor pairs" should be understood as the longitudinal twisting of each individual pair of conductors, not all of the interior components of the cable – the pair separators and the twisted pairs of insulated conductors as interpreted by Mr. Baxter. At most, the teachings in GmbH '866 at page 2, ¶ 2, page 6, ¶ 3 and page 3, claim 11 are unclear and can be interpreted either ways, i.e., as the twisting of each of conductors pairs or the twisting of the dielectric pair separator, the first and second twisted pairs to form a twisted pair cable.

Because it is unclear whether GmbH '866 teaches this limitation, GmbH '866 cannot anticipate claims 27-29.

Requester's proposed rejection: Ground 2

Requester's proposed obviousness rejection of claims 1, 9-13, 20 and 21 under 35 USC 103(a) over GmbH '866 in view of Roberts '683 **is adopted in part.**

The proposed rejection of these claims was not adopted in the previous ACP office action. In this office action, the proposed rejection of claims 1, 9-13 and 20 is adopted and the proposed rejection of claim 21 is not adopted for the reasons below:

Patent owner does not provide any further argument in the response to the previous ACP office action. Patent owner, at pages 17-20 in the response filed on 12/10/09, argued that it is not obvious to combine GmbH '866 and Roberts '683 because GmbH '866 discloses that the purpose of using metal tapes is for electromagnetic shielding. Removing the metal tapes would render the prior art invention being modified unsatisfactory for its intended purpose, Patent owner further argued that GmbH '866 teaches only twisting the conductor pairs, not the conductor pairs and the separator as required in claim 21.

Requester, in response to the previous ACP office action, asserts that patent owner improperly focuses on the purpose of the foil. The proper focus is on the purpose of the disclosed device – the communications cable. Regarding the limitation "cabling", requester in the response filed on 1/22/10 contended that because GmbH '866 discloses "longitudinal reshaping" GmbH '866 anticipates this limitation. Requester relied on the Declaration of Mr. Baxter at paragraph 11 to support his argument.

Regarding the argument that it is not obvious to combine, the examiner agrees with the requester. The focus should be on the purpose and intended use of the disclosed communications cable. As pointed out by the requester, the objective of GmbH '866 is to have a cable that will operate in the frequency range of 1 to 100MHz. The test data from Mr. Niemiera demonstrates that a separator that is made of only plastic material performs adequately for the

Art Unit: 3992

disclosed purpose of GmbH '866, a telecommunications cable. Thus, modifying the separator of GmbH '866 by removing the metal part would result in a cable that operates as intended in the telecommunications field.

Regarding claim 21, the argument that GmbH '866 teaches only twisting the conductor pairs, the examiner agrees with the patent owner for the reasons noted in ground 1 above.

For those above reason, the proposed rejection of claims 1, 9-13 and 20 is adopted and the proposed rejection of claim 21 is not adopted.

Claim 1:

A data communications cable comprising: a first twisted pair of insulated conductors; a second twisted pair of insulated conductors;

GmbH '866 discloses a data communications cable (title). Fig. 3 of GmbH '866 discloses a cable having four twisted pairs of insulated conductors 1, including a first twisted pair and a second twisted pair. "An invention-specific data transmission cable depicted in Figure 1 has four pairs 1 of insulated, stranded copper conductors 2 or cants". English trans, at page 3, para. 3.

a dielectric pair separator consisting of a dielectric layer disposed between the first twisted pair and the second twisted pair of insulated conductors, the dielectric pair separator being folded and arranged to provide a plurality of grooves extending along a longitudinal length of the dielectric pair separator, the dielectric pair separator providing a sufficient spacing between the first twisted pair of insulated conductors and the second twisted pair of insulated conductors so as to provide a desired crosstalk isolation between the first twisted pair of insulated conductors and the second twisted pair of insulated conductors;

The cable disclosed in GmbH '866 includes two dielectric pair separators 5. In the configuration shown in Fig. 3, each pair separator has two folds that form grooves for the

Art Unit: 3992

twisted pairs. As can be seen from Fig. 3, the separator is disposed between the twisted pairs. The pair separator provides shielding between individual pairs, that is, provides crosstalk isolation between the pairs. English trans, at page 2, para. 1, lines 1-3: "Accordingly the invention is based on the fundamental idea that by means of the shielding, the cable cross section is subdivided into sectors in which the conductor pairs run shielded against each other." GmbH '866 discloses that the pair separator may be made of a metal foil, such as aluminum, or a metal foil laminated by plastic.

GmbH '866 does not disclose that the separator consists of dielectric layer.

It would have been obvious to one of ordinary skill in the art to modify the separator of the cable of GmbH '866 to consist of a dielectric layer only.

First, one of ordinary skill in the art would be under market pressure to reduce costs for the cable and eliminating the metal foil would likely reduce the cost of the cable. See *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) ("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."). See also, GmbH '866 patent, Engl. trans, at 1 (discussing the expense of prior art cables).

Second, as illustrated in Roberts '683, there are only a finite number of combinations of plastic and metal components for separators. Roberts '683 shows four of the six possible combinations in figures 5-8 - the other two being a plastic material sandwiched in metal and an all plastic material separator. Figure 13 of Roberts '683 shows separator 17a being made of plastic only, i.e., "plastic tape".

It would have been obvious for one of ordinary skill in the art to try all six of these configurations, including an all plastic separator (that is, a dielectric pair separator that "consist[s] of a dielectric layer.")

Art Unit: 3992

A person with ordinary skill in the art would have been motivated to do so to reduce the cost of the cable. One of ordinary skill in the art would have a reasonable expectation of success of using a different separator configuration of the cable structure of GmbH '866 based on the teachings of Roberts '683, because of the substantial overlap of technology and the predictable result achieved by combining the relevant teachings. In fact, the modified cable would still be capable of operating in the frequency range of 1 to 100Mhz as the unmodified cable. See the test submitted in the Declaration of Mr. Niemiera at paragraph 7.

a jacket assembly enclosing the first twisted pair of insulated conductors, the second twisted pair of insulated conductors and the dielectric pair separator; and

GmbH '866 discloses a cable with the twisted pairs and separator within a protective sheath (Fig. 3, item 4). English trans, at page 3, para. 3, lines 17-19: "As an outer mechanical protection, an invention-specific transmission cable has a cable cover 4, which consists of customary thermoplastic cover materials."

wherein the plurality of grooves do not form completely enclosed channels.

As shown in Fig. 3 of GmbH '866, the grooves do not form completely enclosed channels.

Claim 9:

The data communications cable according to claim 1, further comprising a conductive shield surrounding the combination of the first twisted pair of insulated conductors, the second twisted pair of insulated conductors, and the dielectric pair separator.

GmbH '866 discloses a conductive shield below the cable cover. English transl, at page 3, para. 3, lines 17-21: "As an outer mechanical protection, an invention-specific transmission cable has a cable cover 4, which consists of customary thermoplastic cover materials."

Art Unit: 3992

Especially EMC protective measures can additionally be taken by the application of metal foils and/or shielding plaits below the cable cover." Emphasis added.

Claim 10:

A data communications cable comprising: a plurality of twisted pairs of insulated conductors,

GmbH '866 discloses a data communications cable (title). Fig. 3 of GmbH '866 shows a cable having four twisted pairs of insulated conductors 1,

a dielectric pair separator consisting of a dielectric layer formed with a plurality of folds to provide a plurality of grooves extending along a longitudinal length of the dielectric pair separator;

Figure 3 of GmbH '866 discloses separator 5 consisting of metal foil or metal foil laminated by plastic and having the recited shape. GmbH '866 does not disclose that the separator consists of dielectric layer. However, using only dielectric layer for the separator 5 in the cable of GmbH '866 would have been obvious for the reason and motivation discussed in claim 1 which are incorporated herein by reference.

each twisted pair of insulated conductors of the plurality of twisted pairs of insulated conductors, being disposed within a corresponding groove of the dielectric pair separator;

Figure 3 of GmbH '866 clearly shows the recited arrangement.

a jacket assembly enclosing the plurality of the twisted pairs of insulated conductors and the dielectric pair separator; and wherein the plurality of grooves do not form completely enclosed channels.

Figure 3 of GmbH '866 clearly shows the recited arrangement.

Claim 11:

Art Unit: 3992

The data communications cable according to claim 10, wherein the dielectric pair separator is folded so as to separate each twisted pair of insulated conductors from every other twisted pair of insulated conductors, with a sufficient spacing to provide a desired crosstalk isolation between each of the plurality of twisted pairs of insulated conductors.

Fig. 3 of GmbH '866 discloses an embodiment where all twisted pairs of insulated conductors are separated from each other based on a folding of a dielectric pair separator. The purpose of the separation is crosstalk isolation, as GmbH '866 recognizes that these types of data cables require low cross talk. English transl, at page 1, para. 2, lines 2-5: "These cables serve in particular for use in communication networks that require optimized transmission characteristics, especially a defined wave resistance and low coupling resistance, low damping and low crosstalk." In the embodiment depicted in Fig. 3 of GmbH '866, the separator is folded around each of the four twisted pairs of insulated conductors.

Claim 12:

The data communications cable according to claim 10, wherein the dielectric pair separator is wrapped around a first twisted pair of insulated conductors of the plurality of twisted pairs of insulated conductors, so as to separate the first twisted pair of insulated conductors from a remainder of the plurality of twisted pairs of insulated conductors, with a sufficient spacing to provide a desired crosstalk isolation between the first twisted pair of insulated conductors and the remainder of the twisted pair of insulated conductors.

As shown in Figs. 4 and 5 of GmbH '866, GmbH '866 discloses multiple embodiments where the dielectric pair separator is wrapped around one of the twisted pairs of insulated conductors and separates that pair from the remainder of the other twisted pairs. The

Art Unit: 3992

configuration provides sufficient spacing to achieve the desired crosstalk isolation English transl, at page 1, para. 2, lines 2-5: "These cables serve in particular for use in communication networks that require optimized transmission characteristics, especially a defined wave resistance and low coupling resistance, low damping and low crosstalk."

Claim 13:

The data communications cable according to claim 10, wherein the plurality of folds of the dielectric pair separator extend from a center of the data communications cable to at least a pitch radius of the data communications cable.

As shown in Fig. 3 of GmbH '866, GmbH '866 discloses an embodiment where the folds extend from the center of the cable to the radius of the cable. For this embodiment, GmbH '866 teaches a joiner of the center of the two separators, such that the separator extends from the cable center. English translation at page 6, para. 2, lines 6-8: "[T]he two partial shieldings 11, 12 in the transition area between the two round section 15 of each partial shielding are glued to one another."

Claim 20:

The data communications cable according to claim 10, further comprising a conductive shield surrounding the plurality of twisted pairs of insulated conductors and the dielectric pair separator.

This claim is rejected for the same reason noted in claim 9 which is incorporated herein by reference.

Requester's proposed rejections: Ground 3

Requester's proposed obviousness rejection of claims 2, 4-5, 14 and 16 under 35 USC 103(a) over GmbH '866 in view of Roberts '683 and further in view of Gingue '748 **is adopted**.

The proposed rejection was not adopted in the previous ACP office action. However, in view of the current reconsideration, the proposed rejection is adopted in this office action.

Patent owner does not provide any further argument in response to the previous ACP office action. In the response filed on 12/10/09, patent owner argued that Gingue '748 does not cure the lack of dielectric separator, does not teach materials for separator.

Regarding the argument that Gingue '748 does not cure the lack of dielectric separator, the examiner notes that the combination of GmbH '866 and Roberts '683 teaches a separator "consisting of a dielectric layer" as discussed in ground 2.

Regarding the argument that Gingue '748 does not teach the materials for separator, requester points out that Gingue '748 discloses the benefits of specific materials used in data cables and makes clear that electrical performance considerations are not limited to conductor insulation and extend to other cable applications. The examiner agrees with the requester. A person of ordinary skill in the art would consider the teaching of Gingue '748 when choosing a material for a separator used in the cable field.

The following is the rejection of claims 2, 4-5, 14 and 16 under 35 USC 103(a) over GmbH '866 in view of Roberts '683 and further in view of Gingue '748.

Claim 2:

The data communications cable according to claim 1, wherein the dielectric pair separator is made of a foamed polymer.

The combination of GmbH '866 and Roberts '683 does not disclose the separator being made of a foamed polymer.

Art Unit: 3992

Gingue '748 discloses fluorinated ethylene propylene (FEP) polymer (among other materials) for use in data cables to achieve flame retardancy and minimize smoke. These materials are dielectrics and are non-conductive, as they are used as insulators for copper conductors. Gingue '748 is directly related to materials used for flame retardancy and smoke suppression in data communications cables. *See generally*, Gingue '748. Gingue '748 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 foamed material is preferably employed to achieve a favorable balance of electrical properties and flame retardancy." See Gingue '748 patent, Table 1 and col. 3, 11. 11-25. Although Gingue '748 claims are directed to a composition of materials for use to insulate a conductor, the "Background of the Invention" section discusses electrical and fire retardancy properties of materials used in cables generally. One of ordinary skill in the art would have known to combine the teaching of foamed polymer disclosed in Gingue '748 to modify the pair separator of GmbH '866, to achieve a pair separator with non-conductive, dielectric materials only, where the materials include a foamed polymer.

Claim 4:

The data communications cable according to claim 1, wherein the dielectric pair separator is a flame-retardant, low-dielectric constant, foamed polymer tape.

GmbH '866 does not disclose the dielectric pair separator being made of a flame-retardant, low-dielectric constant, foamed polymer tape as called for in the claim. Gingue '748 discloses fluorinated ethylene propylene (FEP) polymer (among other materials) for use in data cables to achieve flame retardancy and minimize smoke. Gingue '748 is directly related to materials used for flame retardancy and smoke suppression in data communications cables.

Art Unit: 3992

Thus, it would have been obvious to combine for the reason and motivation discussed in claim

2.

Claim 5:

The data communications cable according to claim 1, wherein the dielectric pair separator is a foamed fluorinated ethylene propylene material.

GmbH '866 does not disclose the dielectric pair separator is a foamed fluorinated ethylene propylene material as called for in the claim. However, using such material for the dielectric pair separator of GmbH '866 is obvious in view of Gingue '748 for the same reason and motivation discussed in claim 4.

Claim 14:

The data communications cable according to claim 10, wherein the dielectric pair separator is a flame-retardant, foamed polymer tape.

This claim is rejected for the same reason discussed in claim 4 which is incorporated herein by reference.

Claim 16:

The data communications cable according to claim 10, wherein the dielectric pair separator is a foamed fluorinated ethylene propylene material disposed in a core of the data communications cable between the first and second twisted pairs of insulated conductors.

The combination of GmbH '866 and Roberts '683 does not disclose the dielectric pair separator is a foamed fluorinated ethylene propylene material as called for in claim 16. However, using such material for the dielectric pair separator of GmbH '866 is obvious in view of Gingue '748 for the same reason and motivation discussed in claim 5. Regarding the limitation that the separator is disposed in a core of the data communications cable between the first and

Art Unit: 3992

second twisted pairs of insulated conductors, this limitation is clearly shown in Fig. 3 of GmbH 866.

Requester's proposed rejection: Ground 4

Requester's proposed obviousness rejection of claims 3 and 15 under 35 USC 103(a) over GmbH '866 in view of Roberts '683 and further in view of Martin '217 is adopted.

The rejection was withdrawn in the previous ACP office action; however, in view of the current reconsideration, it is restored in this office action.

Patent owner does not provide any further argument in response to the previous ACP office action. In the response filed on 12/10/09, patent owner argued that (1) Martin '217 does not disclose a separator or woven fiberglass tape would be suitable for use as a separator, (2) Martin '217 discloses insulation tape; however, insulation tape and separator are very different structures serving different purposes, (3) Martin '217 does not teach or suggest woven fiberglass tape being suitable for use in a twisted pair communications cable. Thus one of ordinary skill in the art would have no reasonable expectation of success.

Requester contends that patent owner narrowly applies the teaching of Martin '217. Requester further points out that Martin '217 teaches that the disclosed material can be used for a variety of applications. See Martin '217, col. 7, lines 45-50.

The examiner agrees with the requester. A person skilled in the art would recognize that the purpose of the separator in the cable of GmbH '866 is to separate twisted pairs. As discussed above regarding ground 2, the material can be dielectric tape, metal foil or metal foil laminated by plastic. Because woven fiberglass tape is merely one kind of dielectric tape for insulating and separating purpose, a person with ordinary skill in the art would recognize that woven fiberglass tape is another option. Learning from the teaching of Martin '217 that woven fiberglass tape possesses excellent dielectric properties, can be wrapped on easily ... motivate an artisan to use the tape as a separator in the cable of GmbH '866.

Art Unit: 3992

Claims 3 and 15:

3. **The data communications cable according to claim 1, wherein the dielectric pair separator is a woven fiberglass tape.**

15. **The data communications cable according to claim 12, wherein the dielectric pair separator is a woven fiberglass tape.**

The combination of GmbH '866 and Roberts '683 does not disclose the dielectric pair separator is a woven fiberglass tape as called for in each of claims 3 and 15. Martin '217 discloses the use of woven fiberglass as insulating material. The woven fiberglass is cut into tape and used as an insulating material. See abstract: "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. The tape possesses excellent dielectric properties ...". One of ordinary skill in the art would have known to combine the woven fiberglass material disclosed in Martin '217 with the pair separator of GmbH '866, to arrive at the recitation of claim 3 or 15.

Martin '217 discloses materials useful to insulate conductors. Martin '217 demonstrates that one of ordinary skill in the art knew that woven fiberglass tapes could be used as insulating materials. It would have been obvious to one of ordinary skill in the art to use a woven fiberglass tape for the dielectric pair separator disclosed in GmbH '866 to achieve the subject matter of claim 3 or 15. Further, one of ordinary skill in the art would have a reasonable expectation of success of using a woven fiberglass tape in the cable structure of GmbH '866 because of the predictable result of combining such basic features.

Requester's proposed rejections: Grounds 5-6

Ground 5: Requester's proposed obviousness rejection of claims 6-7 and 17-18 under 35 USC 103(a) over GmbH '866 in view of Roberts '683 and further in view of Gareis '711 is adopted.

Ground 6: Requester's proposed obviousness rejection of claims 6 and 17 under 35 USC 103(a) over GmbH '866 in view of Roberts '683 and further in view of Burk '710 is adopted.

Patent owner and requester do not provide any further argument in response to the previous ACP office action. In the response filed on 12/10/09, patent owner argued that the rejections should be withdrawn for the reasons presented in claims 1 and 10 because these claims depend from claims 1 and 10. Because patent owner does not provide any separate argument, the rejection of these claims stands or falls together with their independent claims. As discussed above, claims 1 and 10 are rejected over GmbH '866 in view of Roberts '683, these claims are also stand rejected.

Claims 6, 7, 17 and 18:

6. **The data communications cable according to claim 1, further comprising a central core filling material disposed in a core of the data communications cable between the first and second twisted pairs of insulated conductors.**

7. **The data communications cable according to claim 6, wherein the central core filling is made of a same material as the dielectric pair separator.**

17. **The data communications cable according to claim 10, the cable further comprising a central core filling material disposed in a core of the data communications cable between the first and second twisted pairs of insulated conductors.**

Art Unit: 3992

18. **The data communications cable according to claim 17, wherein the central core filling is made of a same material as the dielectric pair separator.**

The combination of GmbH '866 and Roberts '683 does not disclose central core with filling material being made of the same material as the separator. Gareis '711 and Burk '710 disclose central core with filling materials to keep the twisted pairs at fixed positions. It would have been obvious to one of ordinary skill in the art to add central core with filling materials to the cable of GmbH '866 as taught in Gareis '711 or Burk '710 to keep twisted pairs at fixed positions.

Regarding the limitation that the filling material is the same as the material used in the separator. This limitation would have been obvious also since it would be convenient to do so.

Requester's proposed rejection: Ground 7

Requester's proposed obviousness rejection of claims 8 and 19 under 35 USC 103(a) over GmbH '866 in view of Roberts '683 and further in view of Basconi '099 **is adopted**.

The proposed obviousness rejection was not adopted in the ACP office action. In view of the current reconsideration, it is adopted in this office action.

Patent owner does not provide any further argument in response to the previous ACP office action. In the response filed on 12/10/09, patent owner argued that it is not obvious to combine because Basconi '099 teaches coaxial cable, not twisted pair cable and Basconi '099 provides no suggestion to modify the cable of GmbH '866.

Requester contends that patent owner narrowly applies the teaching of the prior art and ignores the teaching of arrangement cable components in a flat configuration in Basconi '099. Instead patent owner focuses on a secondary aspect of the disclosed embodiment. One of ordinary skill in the art would look to a variety of flat telecommunications cables, including coaxial cables, in designing a flat twisted pair cable to overcome mechanical challenges of making such cable.

The examiner agrees with the requester. Depending on how the cable is to be installed and used, a person of ordinary skill in the art would look at related available prior art. When a cable is to be installed under a carpet, for example, flat cable is preferred to round cable.

Claims 8 and 19:

8. **The data communications cable according to claim 1, wherein the cable is substantially flat.**

19. **The data communications cable according to claim 10, wherein the data cable is substantially flat.**

Art Unit: 3992

The combination of GmbH '866 and Roberts '683 does not disclose the cable being flat as called for in the claims. However, flat cables are well known in the art as taught in Basconi '099. As that patent states, "[I]t is often convenient when installing cable for data transmission to pass the cable under carpeting, rather than through walls, ducts, etc. However, to be suitable for under carpet installation, the cable should be fiat and have tapered edges." As demonstrated by Basconi '099, the choice of whether to use a fiat cable as compared to a round cable is based on, in some respects, how the cable is to be installed and used.

It would have been obvious to one of ordinary skill in the art to combine the teaching of fiat cable of Basconi '099 with the cable structure of GmbH '866 for certain applications where it has more advantages. Further, one of ordinary skill in the art would have a reasonable expectation of success in applying the teaching of fiat cable of Basconi '099 to the cable structure of GmbH '866 because of the substantial overlap of technology and the predictable result of combining them.

Requester's proposed rejections: Grounds 8-10

Ground 8: Requester's proposed obviousness rejection of claim 21 under 35 USC 103(a) over GmbH '866 in view of Roberts '683 and further in view of patent owner's admitted prior art (APA) **is not adopted**.

Ground 9: Requester's proposed obviousness rejection of claim 21 under 35 USC 103(a) over GmbH '866 in view of Roberts '683 and further in view of Gareis '711 **is not adopted**.

Ground 10: Requester's proposed obviousness rejection of claim 22 under 35 USC 103(a) over GmbH '866 in view of Roberts '683 and further in view of Beggs '629 **is not adopted**.

These proposed rejections were not adopted in the previous ACP office action.

Patent owner and requester do not provide any further argument in response to the decision for not adopting the rejections.

The examiner agrees with the patent owner's argument that none of the prior art teaches or makes obvious the limitation that the twisted pairs and the separator are twisted to form a finished cable or a drain wire disposed within a center of the separator. Thus, the proposed rejections on these grounds are not adopted.

Requester's proposed rejections: Grounds 11-12

Ground 11: Requester's proposed obviousness rejection of claim 23 under 35 USC 103(a) over GmbH '866 in view of Roberts '683 and further in view of Hardie '250 is adopted.

Ground 12: Requester's proposed obviousness rejection of claim 23 under 35 USC 103(a) over GmbH '866 in view of Roberts '683 and further in view of Yonechi '485 is adopted.

The proposed rejections of claim 23 were not adopted in the previous ACP office action because the proposed rejection of claim 10 which claim 23 depends from was not adopted; however, they are adopted in this office action. Patent owner and requester do not provide any further argument in response to the previous ACP office action.

Claim 23:

The data communications cable according to claim 10, wherein a plurality of the data communications cables are disposed within an outer casing to form an overall data cable.

The combination of GmbH '866 and Roberts '683 does not disclose a plurality of the data communications cables being disposed within an outer casing to form an overall data cable as called for in the claim. However, the concept of multiple cables in a single outer jacket to form an overall cable is well known in the art. For example, figure 9 of Hardie '250 and figure 5 of Yonechi '485 disclose such cable.

It would have been obvious to a person of ordinary skill in the art to combine several cables disclosed in GmbH '866 to an outer casing to form an overall data cable as taught in Hardie '250 or Yonechi '485 for applications which require a transmitting of high numbers of data signals as expressly disclosed in Hardie '250. See Hardie '250, col. 9:32-41.

Requester's proposed rejection: Ground 13

Requester's proposed obviousness rejection of claim 24-26 under 35 USC 103(a) over GmbH '866 in view of Stine '346 is adopted with modification.

The proposed obviousness rejection was not adopted in the ACP office action; however, it is adopted in this office action.

Patent owner does not provide any further argument regarding the reason for not adopting.

Requester's comment at page 18 in the response to the previous ACP office action contends that Stine '346 teaches the separator has only a first aluminum layer 12 and a second layer polyester layer 13 in figures 4 and 5. Thus, the teaching meets the claim language that the separator consists of a dielectric layer and a conductive layer.

The examiner disagrees. Layers 12 and 13 shown in figures 4 and 5 of Stine '346 are not equivalent to the separator recited in claim 24 because they neither provide a plurality of grooves nor functioned as a separator for separating conductors. However, claims 24-26 are obvious for the reasons set forth below.

Claims 24-26 are rejected under USC 103(a) over GmbH '866 in view of Roberts '683 and further in view of Stine '346.

Claim 24:

A data communications cable comprising: a plurality of twisted pairs of insulated conductors;

These limitations are discussed in claim 1, ground 2 which are incorporated herein by reference.

a dielectric pair separator consisting of a dielectric layer and a conductive layer formed with a plurality of folds to provide a plurality of grooves extending along a

Art Unit: 3992

longitudinal length of the dielectric pair separator, wherein the plurality of grooves do not form completely enclosed channels;

GmbH '866 includes two dielectric pair separators 5 as shown in figure 1 that do not form completely enclosed channels. GmbH '866 further discloses that the separator can be metal foil or metal foil laminated by plastic but does not disclose that the separator consists of a dielectric layer and a conductive layer. However, this missing limitation would have been obvious to a person of ordinary skill in the art. As illustrated in Roberts '683, there are only a finite number of combinations of plastic and metal components for separators. Roberts '683 shows four of the six possible combinations in figures 5-8 - the other two being a plastic material sandwiched in metal and an all plastic material separator. Figure 7 shows a separator consisting of a metal layer and a plastic layer which is the same as the separator recited in the claim.

It would have been obvious for one of ordinary skill in the art to try all six of these configurations, including a configuration consists of a metal layer and a plastic layer (that is, a dielectric pair separator that consists of a dielectric layer and a conductive layer). One of ordinary skill in the art would have a reasonable expectation of success of using a different separator configuration of the cable structure of GmbH '866 based on the teachings of Roberts '683, because of the substantial overlap of technology and the predictable result achieved by combining the relevant teachings. Further, the configuration would isolate the conductors from electromagnetic interference.

a jacket assembly enclosing the plurality of twisted pairs of insulated conductors and the dielectric pair separator;

each twisted pair of insulated conductors of the plurality of twisted pairs of insulated conductors being disposed within a corresponding groove of the dielectric pair separator; and

Art Unit: 3992

These limitations are clearly shown in figure 1 of GmbH '866.

a binder enclosing the plurality of twisted pairs of insulated conductors and the dielectric pair separator, the binder having a conductive layer that faces each of the plurality of twisted pairs of insulated conductors so that the binder in combination with the dielectric pair separator provides a plurality of enclosed channels extending along a longitudinal length of the data communications cable, each enclosed channel providing crosstalk isolation between a corresponding twisted pair of insulated conductors enclosed within the channel and a remainder of the plurality of twisted pairs of insulated conductors, and providing reduced susceptibility of the twisted pair of insulated conductors to electromagnetic interference.

GmbH '688 does not expressly disclose a binder having a conductive layer that faces each of the plurality of twisted pairs as called for in the claim. Stine '346 discloses using the aluminum/ MYLAR tape as a binder. Stine, col. 3:20-48. One of ordinary skill in the art would have known to combine the binder disclosed in Stine '346 with the pair separator of GmbH '866, to arrive at the recitation of claim 24. As Stine states, "[i]t is an objective of this invention to provide electrical conductors having improved isolation cross-linked by irradiation with electrons." Stine, col. 1:59-61. That is, the enclosed channels formed by the tape isolate the conductors from electromagnetic interference.

Claim 25:

The data communications cable according to claim 24, wherein the dielectric pair separator is folded and arranged so that the conductive layer faces each of the plurality of twisted pairs of insulated conductors.

The modified cable discussed in claim 24 does not disclose that the conductor layer of the separator faces each of the plurality of twisted pairs as called for in the claim. However, it

Art Unit: 3992

would have been obvious to a person of ordinary skill in the art to do so because such arrangement keeps electromagnetic radiation from conductors to the neighboring conductors.

Claim 26:

The data communications cable according to claim 25 wherein the binder and the dielectric pair separator are made of an aluminum/mylar tape, an aluminum layer of the tape being the conductive layer facing the plurality of twisted pairs of insulated conductors.

Stine '346 discloses using an aluminum/mylar tape as a binder. Specifically, Stine '346 discloses a layer of aluminum and a layer of poly(ethylene terephthalate) polyester (known by the trade name MYLAR). The modified cable does not disclose that the separator is made of the same material as the binder which is aluminum/mylar as called for in the claim. However, this limitation would have been obvious to a person of ordinary skill in the art because it is more convenient to use the same material in a product.

Requester's proposed rejection: Ground 14

Requester's proposed obviousness rejection of claims 27-29 under 35 USC 103(a) over GmbH '866 in view of patent owner's admitted prior art (APA) **is not adopted**.

The proposed obviousness rejection was adopted in the ACP office action; however, in view of the patent owner's argument, the rejection is withdrawn in this office action.

Patent owner in the response to the previous ACP office action at pages 22-23 argues that the combination does not teach the limitation that "the configurable dielectric pair separator, the first twisted pair of insulated conductors and the second twisted pair of insulated conductors are twisted about a common central axis to form a twisted pair cable." Patent owner further argues that the combination also does not teach "substantially flat separator" and "dielectric separator" as recited in claim 27.

Requester's comment at page 22 in the response filed on 1/11/10 contended that APA discloses this limitation at col. 9, lines 10-12 ("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"). Requester does not submit any further argument in the response the ACP office action.

The examiner agrees with the patent owner that the APA merely discloses that cabling techniques generally are known, but does not disclose or suggest that cabling of a cable such as the disclosed in GmbH '866 are known. In other words, column 9, lines 10-12 in the '095 patent merely discloses that the twisting techniques are known but does not disclose the use of any of the known twisting techniques for twisting the dielectric pair separator, the first and second twisted pairs as understood by the requester. Because neither APA nor GmbH '866 disclose this limitation, the proposed obviousness rejection of claims 27-29 over GmbH '866 in view of APA is withdrawn in this office action. Other arguments by the patent owner regarding

Art Unit: 3992

the terms "dielectric pair separator" and "flat separator" are moot because the rejection is withdrawn.

Requester's proposed rejection: Ground 15

Requester's proposed obviousness rejection of claims 27-29 under 35 USC 103(a) over GmbH '866 in view of Gareis '711 **is not adopted**.

This proposed rejection was adopted in the ACP office action and the examiner's decision for not adopting is withdrawn in this office action.

Patent owner, at pages 23-26 in the response to the ACP office action, argues that the proposed combination is improper because the interior support of the cable disclosed in Gareis '711 is completely different from the interior of the cable disclosed in GmbH '866. Patent owner further argues that the combination does not teach limitation "substantially flat separator" and no prima facie rejection has been made in the ACP office action.

Requester does not submit any further argument in the response the ACP office action. Requester's comment at page 23 in the response filed on 1/11/10 contended that patent owner ignores that Gareis '711 teaches that cables can be twisted with a helical or S-Z twist and the twisting of the entire cable "improves flexibility while preserving geometry." Gareis '711 at col. 5:7-8 and col. 5:43-45. Requester also contended that patent owner fails to properly consider the overall teaching of Gareis '711 by improperly focuses on the characteristics of the separator.

The examiner agrees with the patent owner's argument that the interior star-separator structure of the cable in Gareis '711 is completely different from the interior structure of the cable in GmbH '866. Gareis '711 discloses that when the star separator is in helical shape, the twisted splines of the star-shape separator define helically twisted conductor receiving grooves which accommodate the twisted pairs. Id. at col. 5:5-11. Gareis '711 further discloses that due to the crush resistant of the star separator, the spacings for the twisted pairs are preserved and by adding a helical or S-Z twist, the flexibility is improved while preserving geometry. Id. at col.

Art Unit: 3992

5:41-45. These advantages are only achieved when the separator has a star-shape structure. In other words, these advantages cannot be obtained when applying the teachings of Gareis '711 to the cable in GmbH '866 because the cable in GmbH '866 does not have a star-shape separator. For this reason, the examiner agrees with the patent owner that it is not obvious to combine Gareis '711 with GmbH '866 to cure the missing twisting limitation required in claim 27. Other arguments by the patent owner are moot because the rejection is withdrawn.

Requester's proposed rejections: Grounds 16-17

Ground 16: Requester's proposed obviousness rejection of claim 30 under 35 USC 103(a) over GmbH '866 in view of APA, and further in view of Gingue '748 is not adopted.

Ground 17: Requester's proposed obviousness rejection of claim 30 under 35 USC 103(a) over GmbH '866 in view of Gareis '711, and further in view of Gingue '748 is not adopted.

Those proposed obviousness rejections were adopted in the previous ACP office action; however, in view of the patent owner's argument regarding claim 27 noted in ground 14 (or ground 15) above, the rejections are withdrawn in this office action.

Because claim 30 depends from independent claim 27 which is not adopted for the reason discussed in ground 14 (or ground 15), the proposed rejection of claim 30 over GmbH '866 in view of APA (or Gareis '711), and further in view of Gingue '748 is withdrawn in this office action.

Requester's proposed rejection: Ground 18

Requester's proposed obviousness rejection of claims 31-33 under 35 USC 103(a) over GmbH '866 in view of Gareis '711, and further in view of Gingue '748 is not adopted.

This proposed rejection was adopted in the previous ACP office action; however, they are withdrawn in this office action for the same reasons discussed in ground 15 which are incorporated herein by reference.

Requester's proposed rejection: Ground 19

Requester's proposed anticipation rejection of claims 1, 9-12, 20-21, and 27-29 under 35 USC 102(b) by Ikeda '645 **is adopted in part.**

This proposed rejection was adopted in the previous ACP office action. In view of the current reconsideration, the rejection of claims 1 and 9 is maintained in this office action and the rejection of claims 10-12, 20-21 and 27-29 is withdrawn.

Patent owner, at pages 45-47 in the response to the previous ACP office action, argues that claim 1 requires the dielectric pair separator being "folded and arranged to provide a plurality of grooves". Ikeda '645 merely discloses a separator that is "rolled up", not "folded". The plain and ordinary meaning of the term "folded" does not encompass the "rolled up" feature illustrated in Ikeda '645. Further, the separator in Ikeda '645 does not provide a plurality of grooves. There is no physical separation between adjacent supposed "grooves" in the cable of Ikeda '645.

Regarding claim 10, patent owner argues that Ikeda '645 does not teach the limitation that the separator is folded so as to separate each twisted pair from every other twisted pair.

Regarding claims 27-29, patent owner argues that Ikeda '645 does not teach limitations: "cabling", "plurality of grooves" and "flat separator."

Requester does not provide any further argument in the response to the previous ACP office action. Requester's comment, at pages 26-29 in the response filed on 1/11/10, argued that "folds" of the Ikeda '645 separator are represented by the curves formed during coiling and figure 6 of Ikeda '645 shows at least two grooves.

Art Unit: 3992

Regarding claim 10, requester argues that coiling provides bend that provides separation between adjacent pairs. Pairs on one layer of the coil are separated from pairs on an outer layer of the coil by the separator material itself.

Regarding claim 1, the examiner agrees with the requester that it is reasonable to consider that the insulator sheet in the cable of Ikeda '645 is "folded" into the shape shown in figure 6. In other words, looking at figure 6 of Ikeda '645, in a plain and ordinary expression, a person of ordinary skill in the art would consider that the insulator sheet 3 (functioned as a separator) **is folded** into a spiral shape. The examiner also agrees with the requester that figure 6 of Ikeda '645 shows at least two grooves. The first groove is defined starting at the most inner edge of the sheet and end where the sheet complete a circle, the second is outside that circle. This interpretation is reasonable as compared to figure 8 of the '095 patent. In figure 8 of the '095 patent, the portion of the sheet which encloses twisted pair TP4 is the groove which is equivalent to the first groove in Ikeda '645.

Regarding claim 10, although not argued by the patent owner, Ikeda '645 does not teach the limitation that "each twisted pair of insulated conductors ... being disposed within a corresponding groove." Thus, the rejection of claim 10 in the previous ACP office action is withdrawn.

Regarding claims 11, 12 and 21, the arguments are moot because the rejection is withdrawn.

Regarding claims 27-29, the examiner agrees with the patent owner that Ikeda '645 does not disclose the limitation that the dielectric pair separator, and the twisted pairs are twisted about a common central axis to form a twisted cable.

The rejection of claims 1 and 9 is repeated below:

Art Unit: 3992

Claims 1 and 9 are rejected as being anticipated under 35 USC 102(b) by Ikeda '645.

Claim 1:

A data communications cable comprising: a first twisted pair of insulated conductors; a second twisted pair of insulated conductors;

Ikeda '645 discloses a cable with a pair separator that separates twisted pairs of conductors. See Fig. 6 of Ikeda. Items 7 and 8 denote wires in a twisted pair. Multiple twisted pairs are shown in Figs. 1 and 6 for the cable of Ikeda '645.

a dielectric pair separator consisting of a dielectric layer disposed between the first twisted pair and the second twisted pair of insulated conductors, the dielectric pair separator being folded and arranged to provide a plurality of grooves extending along a longitudinal length of the dielectric pair separator, the dielectric pair separator providing a sufficient spacing between the first twisted pair of insulated conductors and the second twisted pair of insulated conductors so as to provide a desired crosstalk isolation between the first twisted pair of insulated conductors and the second twisted pair of insulated conductors;

As shown in Fig. 6, Ikeda '645 discloses a separator that is coiled, or folded, which provides a plurality of grooves for the twisted pairs. The separator provides desired crosstalk isolation. Fig. 1 of Ikeda '645, also shows the coiled separator and a spacing between twisted pairs. English transl., abstract: "The objective of the present invention is to provide an aligned/paired-type cable 1 or quad-type (four cable stranded) cable, of which the manufacturing is made easier, the production efficiency is made more favorable, *the cross talk properties are made superior*, and the connection operations are made easier, by sharing insulation cores and simplifying identification means." Emphasis added. The separator is dielectric. Eng. transl., para. [0004], lines 12-13: "Generally speaking, as the base, plastic

Art Unit: 3992

materials which are superior in low-temperature-resistance and mechanical strength, such as nylon, polyester, etc., may be utilized."

a jacket assembly enclosing the first twisted pair of insulated conductors, the second twisted pair of insulated conductors and the dielectric pair separator; and

Fig. 1 of Ikeda '645 shows the cable with a jacket 4. English trans., para. [0003], lines 4-8: "The invention is summarized as follows: first, aligned/paired-type cable, wherein two insulation cores 7 and 8 respectively formed by cladding conductor 5 with insulator 6 are given an identification means and stranded together to form paired/stranded cable 2, and the above-stated paired/stranded cable 2 is fused together with sheet 3 or several of the above-stated paired/stranded cable 2 are fused/adhered to sheet 3 through the utilization of fusing agent or adhesive 11, arranged/fixated and assembled, wound into a coil-like shape, and *clad with casing 4;*" Emphasis added. The jacket encloses the twisted pairs and dielectric separator.

wherein the plurality of grooves do not form completely enclosed channels.

As can be seen in Fig. 6 of Ikeda, the channels formed by the separator sheet are not completely enclosed.

Claim 9:

The data communications cable according to claim 1, further comprising a conductive shield surrounding the combination of the first twisted pair of insulated conductors, the second twisted pair of insulated conductors, and the dielectric pair separator.

Ikeda '645 discloses a conductive shield surrounding the pairs and separator. English transl., para. [0005], lines 12-16: "Figure 6 shows a second working example of aligned/paired-type cable 1 of the present invention. This possesses a three-layer constitution, in which shield

Art Unit: 3992

13 such as braided wires, aluminum metal tapes, etc. is attached to the external surface of sheet 3, which is desirable to be utilized for cables for shielding electromagnetic waves."

Requester's proposed rejection: Ground 20

Requester's proposed obviousness rejection of claims 2, 4-5, 14, 16 and 30-33 under 35 USC 103(a) over Ikeda '645 in view of Gingue '748 **is adopted in part.**

This proposed rejection was adopted in the previous ACP office action. In view of the current reconsideration, the rejection of claims 2, 4 and 5 is maintained in this office action and the rejection of claims 14, 16 and 30-33 is withdrawn.

Patent owner, at page 52 in the response to the previous ACP office action, argues that Ikeda '645 discloses that the materials that may be used for the base 10 of sheet 3 are plastic materials which are superior in low-temperature-resistance and mechanical strength, such as nylon and polyester. There is no indication in either Ikeda '645 or Gingue '748 that a foamed polymer or other foamed material recited in claim 2 would have the characteristics, such as superior in low-temperature-resistance and mechanical strength, necessary to be suitable to be used to form the sheet 3 in the cable of Ikeda '645.

Requester does not submit any further argument in the response the precious ACP office action. Requester's comment at page 29 in the response filed on 1/11/10 is incorporated herein by reference.

The examiner notes that Gingue '748 expressly discloses that "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 foamed material is preferably employed to achieve a favorable balance of electrical properties and flame retardancy." See Table 1 and col. 3:11-25. A person of ordinary skill in the art would know how to choose a particular material suitable for a certain application. In this instant case, for the need of balancing the electrical properties and

Art Unit: 3992

flame retardancy as required in a certain application, a person with ordinary skill in the art would consider using foamed polymer for the separator in Ikeda '645.

The rejection of claims 14 and 16 is withdrawn because these claims depend from claim 10 which is withdrawn as discussed in ground 19. The rejection of claim 30 is withdrawn because it depends from claim 27 which is withdrawn as discussed in ground 19. The rejection of claims 31-33 is withdrawn because the combination of Ikeda '645 and Gingue '748 does not teach or make obvious the limitation that the twisted pairs and separator are twisted to form a finished twisted cable as recited in claim 31.

The rejection of claims 2, 4 and 5 is repeated below:

Claim 2:

The data communications cable according to claim 1, wherein the dielectric pair separator is made of a foamed polymer.

Ikeda '645 does not disclose the dielectric pair separator being made of a foamed polymer as called for in the claim. Gingue '748 discloses fluorinated ethylene propylene (FEP) polymer (among other materials) for use in data cables to achieve flame retardancy and minimize smoke. It would have been obvious to a person of ordinary skill in the art to use foamed polymer as taught in Gingue '748 for the separator disclosed in Ikeda '645 for the motivation and suggestion discussed in ground 3 above which are incorporated herein by reference.

Claim 4:

The data communications cable according to claim 1, wherein the dielectric pair separator is a flame-retardant, low-dielectric constant, foamed polymer tape.

Art Unit: 3992

Ikeda '645 does not disclose that the dielectric pair separator is a flame-retardant, low-dielectric constant, foamed polymer tape as called for in each of the claims. However, using such material for the dielectric pair separator of Ikeda '645 is obvious in view of Gingue '748 for the same reason and motivation discussed in claim 2.

Claim 5:

The data communications cable according to claim 1, wherein the dielectric pair separator is a foamed fluorinated ethylene propylene material.

Ikeda '645 does not disclose the dielectric pair separator is a foamed fluorinated ethylene propylene material as called for in each of claims 5. However, using such material for the dielectric pair separator of Ikeda '645 is obvious in view of Gingue '748 for the same reason and motivation discussed in claim 2.

Requester's proposed rejection: Ground 21

Requester's proposed obviousness rejection of claims 6-7 and 17-18 under 35 USC 103(a) over Ikeda '645 in view of Gareis '711 is adopted in part.

The proposed rejection was not adopted in the previous ACP office action. The examiner's decision for not adopting the proposed rejection of claims 17 and 18 is maintained; however, the proposed rejection of claims 6-7 is adopted.

Patent owner and requester do not provide any further argument in response to the previous ACP office action. In the response filed on 12/10/09, patent owner argued that the rejections should be withdrawn for the reasons presented in claims 1 and 10 because these claims depend from claims 1 and 10. Because patent owner does not provide any separate argument, the rejection of these claims stands or falls together with their independent claims. As discussed above, claim 1 is rejected over Ikeda '645, thus, claims 6-7 are also rejected; however, because the proposed rejection of claim 10 is not adopted, the proposed rejection of claims 17-18 is not adopted.

The reason and motivation for rejection of claims 6 and 7 are the same as the one discussed in ground 5 above which are incorporated herein by reference.

Requester's proposed rejection: Ground 22

Requester's proposed obviousness rejection of claims 3 and 15 under 35 USC 103(a) over Ikeda '645 in view of Martin '217 is adopted in part.

This proposed rejection was adopted in the previous ACP office action. The examiner's decision to reject claim 3 is maintained in this office action. The rejection of claim 15 is withdrawn because the rejection of claim 10 which claim 15 depends from is withdrawn.

Patent owner in the response to the previous ACP office action at page 53 argues that Martin '217 does not disclose a separator. Patent owner further argues that Martin '217 does not disclose that the tape is suitable for use as a separator in communications cables. Patent owner's argument at page 46 in the response filed on 12/10/09 is incorporated herein by reference.

Requester does not provide any further argument in response to the previous ACP office action. Requester's comment at page 30 in the response filed on 1/11/10 is incorporated herein by reference.

The examiner notes that for an obviousness rejection, there is no requirement that both references must teach separator. A person skill in the art would know to choose the material for use as a separator in the cable of Ikeda '645 based on the characteristics of the material taught in Martin '217.

The obviousness rejection of claim 3 presented in the previous Office action is maintained and repeated as set forth below.

Claim 3:

The data communications cable according to claim 1, wherein the dielectric pair separator is a woven fiberglass tape.

Art Unit: 3992

Ikeda '645 does not disclose that the dielectric pair separator is a woven fiberglass tape as called for in the claim. Martin '217 discloses the use of woven fiberglass as an insulating material. It would have been obvious to one of ordinary skill in the art to use a woven fiberglass tape for the dielectric pair separator disclosed in Ikeda '645 for the reason and motivation discussed in ground 4 above which are incorporated herein by reference.

Requester's proposed rejection: Ground 23

Requester's proposed obviousness rejection of claims 8 and 19 under 35 USC 103(a) over Ikeda '645 in view of Basconi '099 is adopted in part.

This proposed rejection was adopted in the previous ACP office action. The examiner's decision for rejecting of claim 8 is maintained in this office action. The rejection of claim 19 is withdrawn because the rejection of claim 10 which claim 19 depends from is withdrawn.

Patent owner, in the response to the previous ACP office action at page 53, argues that Ikeda '645 teaches away from modifying the cable to make it flat since Ikeda '645 specifically discloses that the aligned cable 1 is superior to commercial flat cables. Patent owner further argues that Basconi '099 discloses a coaxial cable, not a twisted pair cable. Thus, the structure of the cables disclosed in Ikeda '645 and Basconi '099 are very different. Patent owner's argument at pages 46-47 in the response filed on 12/10/09 is incorporated herein by reference.

Requester does not provide any further argument in response to the previous ACP office action. Requester's comment at page 31 in the response filed on 1/11/10 is incorporated herein by reference.

The examiner notes that the market need for a certain kind of cable is one of the reason to motivate an artisan to modify a known cable. In this instant case, flat cable for under-carpet installation is clearly the motivation for modifying the shape of the cable in Ikeda '645 even though there is some trade-off which cannot avoid, if any. A person skilled in the art would know that whether the cable is a coaxial cable or twisted pair cable, the shape of the cable can be modified.

Art Unit: 3992

Claim 8:

The data communications cable according to claim 1, wherein the cable is substantially flat.

Ikeda '645 does not disclose that the cable is flat as called for in the claim. However, in view of Basconi '099, it would have been obvious to one of ordinary skill in the art to apply the teaching of fiat cable of Basconi '099 to the cable structure of Ikeda '645 for the reason and motivation discussed in ground 7 above which are incorporated herein by reference.

Requester's proposed rejection: Ground 24

Requester's proposed obviousness rejection of claim 22 under 35 USC 103(a) over Ikeda '645 in view of Beggs '629 is not adopted.

This proposed rejection was adopted in the previous ACP office action. The proposed rejection is withdrawn in this office action because the rejection of claim 10 which claim 22 depends from is not adopted.

Requester's proposed rejections: Grounds 25-26

Ground 25: Requester's proposed obviousness rejections of claim 23 under 35 USC 103(a) over Ikeda '645 in view of Hardie '250 is not adopted.

Ground 26: Requester's proposed obviousness rejections of claim 23 under 35 USC 103(a) over Ikeda '645 in view of Yonechi '485 is not adopted.

These proposed rejections were adopted in the previous ACP office action and are withdrawn in this office action because the rejection of claim 10 which claim 23 depends from has been withdrawn.

Requester's proposed rejection: Ground 27

Requester's proposed obviousness rejection of claim 24-26 under 35 USC 103(a) over Ikeda '645 in view of Stine '346 **is adopted**.

This proposed rejection was not adopted in the previous ACP office action; however, it is adopted in this office action.

Patent owner's argument, requester's comment and the examiner's response are the same as noted in ground 13 which are incorporated herein by reference.

These claims are rejected for the same reason and motivation discussed in ground 13 which are incorporated herein by reference.

Requester's proposed rejection: Ground 28

Requester's proposed anticipation rejection of claims 1, 6, 9-11, 13, 17 and 20-22 under 35 USC 102(a) by Gareis '711 **is not adopted**.

The proposed rejection was not adopted in the previous ACP office action and the examiner's decision for not adopting is maintained in this office action.

Patent owner does not provide any further argument in response to the previous ACP office action. Patent owner's argument, at pages 51-52 in the response filed on 12/10/09, is incorporated herein by reference.

Requester does not provide any further argument in response to the previous ACP office action. Requester's comment, at page 33 in the response filed on 1/11/10, is incorporated herein by reference.

The examiner agrees with the patent owner's argument. Claim 1 and 10 call for the "separator being folded" and "separator ... formed with a plurality of folds", respectively whereas Gareis '711 discloses star separator that is a single, unitary, pre-formed structure. Requester argues that patent owner has broadly construed the claimed separator of claims 1 and 10 to cover a cross-web separator in a litigation involving the '095 patent. The examiner notes that the office is not bound to claimed constructions involved in litigation. In this instant case, the star separator in Gareis '711 cannot be reasonably considered as a dielectric pair separator that is "folded" or "formed with a plurality of folds," as recited in claims 1 and 10, respectively.

Requester's proposed rejections: Grounds 29-31

Ground 29: Requester's proposed obviousness rejection of claims 2, 5 and 16 under 35 USC 103(a) over Gareis '711 in view of Gingue '748 is not adopted.

Ground 30: Requester's proposed obviousness rejection of claim 23 under 35 USC 103(a) over Gareis '711 in view of Hardie '250 is not adopted.

Ground 31: Requester's proposed obviousness rejection of claim 23 under 35 USC 103(a) over Gareis '711 in view of Yonechi '485 is not adopted.

These proposed rejections were not adopted in the previous ACP office action and the examiner's decision for not adopting is maintained in this office action because the proposed rejection of claims 1 and 10 which these claims depend from are not adopted.

Requester's proposed rejection: Ground 32

Requester's proposed indefiniteness rejection of claims 34-40 as these new claims introduce new matter is not adopted.

The proposed rejection was not adopted in the previous ACP office action and the examiner's decision for not adopting is maintained in this office action. Patent owner and requester have not provided any further argument in the responses to the ACP office action.

At pages 39-40 of the response filed on 1/11/10, Requester alleges that the embodiments of Figs. 4-5 show only two twisted pairs and nowhere does the '095 patent suggest that the embodiments of Figs. 4-5 can have more than 2 twisted pairs whereas claims 34 and 40, each requires four and only four twisted pairs.

Examiner believes that patent owner makes typo-mistake when indicating that Fig. 4 of the '095 patent supports the subject matter recited in claims 34 and 40 (Patent owner's response, Appendix A, pages 4 and 7). While it is true that Figs. 4-5 show only two twisted pairs

Art Unit: 3992

as pointed out by the Requester, Figs. 6-8 of the '095 patent, each discloses the embodiment recited in claims 34 and 40. Thus, new claims 34-40 do not introduce new matter.

Requester's proposed rejection: Claims 34-40

Requester's proposed anticipation and obviousness rejections of these claims based on various grounds at pages 41-42 of the response filed on 1/11/10.

Those proposed rejections **are not adopted** in this office action because the prior art of record alone or in combination does not disclose or make obvious the limitation that the separator and the twisted pairs are twisted about a common central axis as recited in independent claims 34 and 40.

Secondary Considerations

Patent owner's arguments regarding "secondary considerations" at pages 13-14 in the response filed on 12/10/09 is incorporated herein by reference. Patent owner's submission at pages 3-12 filed on 12/23/11 is also incorporated herein by reference.

Requester's response at pages 35-39 in the response filed on 1/11/10 is incorporated herein by reference.

For the same reasons provided by the Requester, the arguments regarding "long-felt need", "commercial success" and "copying by other" are not found persuasive because they do not satisfy the Office's standard as evidence of secondary considerations.

Examiner's Statement of Reasons for Patentability/Confirmation

The following is an examiner's statement of reasons for patentability and/or confirmation of the claims found patentable in this reexamination proceeding:

Claims 21-22 and 27-40 are patentable/confirmed.

Claim 21 is confirmed/patentable because the prior art of record fails to disclose or make obvious the inclusion of the limitation that the dielectric pair layer and the twisted pairs are twisted about a common central axis to form a twisted pair cable. The inclusion of this limitation defines patentability over the prior art of record because it defines a distinguished structure of the cable which is not taught by the prior art of record, alone or in combination.

Claim 22 is confirmed/patentable because the prior art of record fails to disclose or make obvious the inclusion of the limitation that a drain wire disposed within a center of the separator. The inclusion of this limitation defines patentability over the prior art of record because it defines a distinguished structure of the cable which is not taught by the prior art of record, alone or in combination.

Claims 27, 31, 34 and 40 and their dependent claims are confirmed/patentable for the same reason noted in claim 21.

Any comments considered necessary by PATENT OWNER regarding the above statement must be submitted promptly to avoid processing delays. Such submission by the patent owner should be labeled: "Comments on Statement of Reasons for Patentability and/or Confirmation" and will be placed in the reexamination file.

Conclusion

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 proceeding 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 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.

Service of Papers

After the filing of a request for reexamination by a third party requester, any document filed by either the patent owner or the third party requester must be served on the other party (or parties where two or more third party requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. See 37 CFR 1.550(f).

Extensions of Time

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 parties 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 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 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). Time periods may be extended only upon a strong showing of sufficient cause.

Notification of Concurrent Proceedings

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 the '095 patent throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP 2686 and 2686.04.

Art Unit: 3992

Correspondence

All correspondence relating to this *inter partes* reexamination proceeding should be directed as follows:

By U.S. Postal Service Mail to:

Mail Stop *Inter Partes* Reexam
ATTN: Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By FAX to:

571-273-9900
Central Reexamination Unit

By Hand to:

Customer Service Window
Randolph Building
401 Dulany St.
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.

NOTICE RE PATENT OWNER'S CORRESPONDENCE ADDRESS

Effective May 16, 2007, 37 CFR 1.33(c) has been revised to provide that:

The patent owner's correspondence address for all communications in an *ex parte* reexamination or an *inter partes* reexamination is designated as the correspondence address of the patent.

Revisions and Technical Corrections Affecting Requirements for Ex Parte and Inter Partes Reexamination, 72 FR 18892 (April 16, 2007)(Final Rule)

The correspondence address for any pending reexamination proceeding not having the same correspondence address as that of the patent is, by way of this revision to 37 CFR 1.33(c), automatically changed to that of the patent file as of the effective date.

This change is effective for any reexamination proceeding which is pending before the Office as of May 16, 2007, including the present reexamination proceeding, and to any reexamination proceeding which is filed after that date.

Parties are to take this change into account when filing papers, and direct communications accordingly.

In the event the patent owner's correspondence address listed in the papers (record) for the present proceeding is different from the correspondence address of the patent, it is strongly encouraged that the patent owner affirmatively file a Notification of Change of Correspondence Address in the reexamination proceeding and/or the patent (depending on which address patent owner desires), to conform the address of the proceeding with that of the patent and to clarify the record as to which address should be used for correspondence.

Telephone Numbers for reexamination inquiries:

Reexamination Practice	(571) 272-7703
Central Reexam Unit (CRU)	(571) 272-7705
Reexamination Facsimile Transmission No.	(571) 273-9900

Art Unit: 3992

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

Conferee # 1

HNT

Conferee # 2

*SUE LAO
OPQA*



Minh Nguyen
Primary Examiner
571-272-1748
Art Unit 3992