IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

BELDEN TECHNOLOGIES INC. and BELDEN CDT (CANADA) INC.,	)	
Plaintiffs,	)	
v.	)	Civ. No. 08-63-SLR
SUPERIOR ESSEX COMMUNICATIONS LP and SUPERIOR ESSEX INC.,	)	
Defendants.	)	

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MEMORANDUM OPINION

Dated: August 12, 2011
Wilmington, Delaware

CommScope v. Belden
IPR2023-01061, -01062
Belden EX-2011

ROBINSON, District Judge

I. INTRODUCTION

Plaintiffs Belden Technologies, Inc. and Belden CDT (Canada) Inc. (collectively, "Belden") own several patents directed to high performance data cables and methods of making such cables, including U.S. Patent Nos. 5,424,491 ("the '491 patent"), 6,074,503 ("the '503 patent"), 7,135,641 ("the '641 patent"), 7,339,116 ("the '116 patent"), 6,570,095 ("the '095 patent"), 6,998,537 ("the '537 patent") and 7,179,999 ("the '999 patent") (collectively, "the patents in suit"). On December 2, 2009, plaintiffs dropped their claim of infringement of the '944 patent, and on December 4, 2009, the parties stipulated that certain claims of the patents in suit were infringed and others were not. (D.I. 105, 106) The court resolved the remaining issues of infringement in its memorandum opinion on summary judgment of August 18, 2010. (D.I. 218) In said opinion, the court also found that claims 4 and 7 of the '116 patent were invalid. (*Id.*) A trial was held from September 7-15, 2010 on the outstanding invalidity issues. The jury returned a verdict finding that claim 1 of the '503 patent, claims 1 and 2 of the '491 patent and claim 31 of the '095 patent were invalid. (D.I. 247) The jury further found that claim 19 of the '537 patent, claim 2 of the '999 patent, claim 27 of the '095 patent, and claim 13 of the '641 patent were not invalid. (*Id.*) Currently before the court are plaintiffs' renewed motion for JMOL of no anticipation and no obviousness or for a new trial (D.I. 254), defendants' renewed motion for JMOL of anticipation, to amend the judgment, or for a new trial (D.I. 250), and plaintiffs' motion for a permanent injunction (D.I. 251).

II. BACKGROUND

A. Technology Overview

The court presumes familiarity with the data cable technology at issue in this case, as detailed in its prior opinion. *See Belden Techs. Inc. v. Superior Essex Commc'ns LP*, 733 F. Supp. 2d 517, 524-533 (D. Del. 2010). In summary, the high performance data cables at issue utilize twisted pair technology. Data cables designed for communication applications are generally comprised of at least two twisted pairs, with one of the pairs transmitting data and the other receiving data. ('116 patent, col. 1:16-17) An individual twisted pair typically includes two insulated conductors,[1] helically twisted together. The helical twist imparts a measure of control over certain electrical parameters upon which the viability of a high performance data cable depends. ('116 patent, col. 1:22-25) The critical parameters include, at a basic level, the concepts of attenuation and noise, both of which have deleterious effects upon the signal carried by the data cable. (*See id.*, col. 1:25-29) The impedance of a circuit can contribute to the loss of signal, otherwise known as attenuation. (*See id.*) Likewise, crosstalk[2] is one of several electronic phenomena that produces signal interference, or noise. (*See id.*)

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[1] Each twisted pair includes a forward and return conductor, the conductors together forming a single circuit. Typically, copper or copper alloys serve as the conductive material.

[2] Crosstalk refers to the transfer of signal from one conductor in the twisted pair to the other. The proximity of twisted pairs facilitates this signal transfer. Crosstalk measured at the end of the cable closest to the source is known as Near-End Crosstalk ("NEXT"), while crosstalk measured at the end furthest from the source is known as Far-End Crosstalk ("FEXT"). (D.I. 125, ex. 20, col. 3:37-44) Alien crosstalk, which concerns interference between twisted pairs in neighboring cables, can occur when multiple cables exist in close proximity. (*Id.*, ex. 28 at 9-10)

Multiple tools exist to obviate or minimize these undesirable characteristics and meet performance specifications, including cable lay techniques and various cable configurations. (*Id.*, col. 1:30-49) The longitudinal distance between twists in a twisted pair is known as the "twist lay." ('503 patent, col. 1:28-30) In an unshielded twisted pair cable ("UTP") employing a uniform twist lay, the adjacent twisted pairs are closely aligned. (*Id.*, col. 1:31-34) This proximity magnifies crosstalk. (*Id.*) Varying the twist lays among the twisted pairs of a cable increases the distance between adjacent twisted pairs and, accordingly, reduces crosstalk. (*Id.*, col. 1:35-39)

Cables designed for voice frequency or low-speed data typically employ a twist lay of between 3.7 and 5.7 inches. ('491 patent, col. 1:7-13) By contrast, high-speed data cables require a much smaller twist lay. (*Id.*, col. 1:18-23) The conventional low-speed data cables minimized crosstalk through use of the aforementioned variation in twist lay. (*Id.* at col. 1:40-43) Introducing these variations among twisted pairs characterized by smaller twist lays results in an uncontrollable nominal characteristic impedance,[3] which may cause an impermissible deviation from telecommunication industry standards. (*Id.*, col. 1:53-67)

Alternatively, each individual twisted pair in the cable may be surrounded by a

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[3] Nominal characteristic impedance is a function of, *inter alia*, capacitance and inductance. The capacitance of a conductor depends upon the length of the conductor. Inductance, on the other hand, depends upon the physical space between conductors. Variations among twisted pairs having large twist lays (e.g., 3.7 to 6 inches) produce a largely proportional change in both capacitance and inductance, resulting in a minimal variation in characteristic impedance. Because the helical length of the conductor tends to vary more widely in twisted pairs with small twist lays, the disproportional change in capacitance and inductance has a dramatic effect upon the characteristic impedance. (*See id.*, col. 1:33-67)

conductive "shield," creating a shielded twisted pair cable ("STP"). The individual shields in a STP act to prevent or reduce the occurrence of NEXT and FEXT. Surrounding the plurality of twisted pairs with an overall shield, otherwise known as a screened twisted pair cable ("ScTP"), also serves to minimize crosstalk. Both configurations suffer from the potential for geometric instability,[4] and cost appreciably more to manufacture than an UTP. ('116 patent, col. 1:39-41)

III. STANDARDS

A. Motion for Judgment as a Matter of Law

To prevail on a renewed motion for judgment as a matter of law following a jury trial under Federal Rule of Civil Procedure 50(b), the moving party "'must show that the jury's findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusions implied [by] the jury's verdict cannot in law be supported by those findings.'" *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1348 (Fed. Cir. 1998) (quoting *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893 (Fed. Cir. 1984)). "'Substantial' evidence is such relevant evidence from the record taken as a whole as might be acceptable by a reasonable mind as adequate to support the finding under review." *Perkin-Elmer Corp.*, 732 F.2d at 893. In assessing the sufficiency of the evidence, the court must give the non-moving party, "as [the] verdict winner, the benefit of all logical inferences that could be drawn from the evidence presented, resolve all conflicts in the evidence in his favor, and in general, view the record in the light most favorable to him." *Williamson v. Consol. Rail Corp.*, 926 F.2d

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[4] The deformation of a data cable during manufacture or use may disrupt electrical stability. ('116 patent, col. 1:46-48)

1344, 1348 (3d Cir. 1991); *Perkin-Elmer Corp.*, 732 F.2d at 893. The court may not determine the credibility of the witnesses nor "substitute its choice for that of the jury between conflicting elements of the evidence." *Id.* In summary, the court must determine whether the evidence reasonably supports the jury's verdict. *See Dawn Equip. Co. v. Kentucky Farms Inc.*, 140 F.3d 1009, 1014 (Fed. Cir. 1998).

B. Motion for a New Trial

The decision to grant or deny a new trial is within the sound discretion of the trial court and, unlike the standard for determining judgment as a matter of law, the court need not view the evidence in the light most favorable to the verdict winner. *See Allied Chem. Corp. v. Darflon, Inc.*, 449 U.S. 33, 36 (1980). Federal Rule of Civil Procedure 59(a) provides, in pertinent part:

> A new trial may be granted to all or any of the parties and on all or part of the issues in an action in which there has been a trial by jury, for any of the reasons for which new trials have heretofore been granted in actions at law in the courts of the United States.

New trials are commonly granted in the following situations: (1) where the jury's verdict is against the clear weight of the evidence, and a new trial must be granted to prevent a miscarriage of justice; (2) where newly-discovered evidence surfaces that would likely alter the outcome of the trial; (3) where improper conduct by an attorney or the court unfairly influenced the verdict; or (4) where the jury's verdict was facially inconsistent. *See Zarow-Smith v. N.J. Transit Rail Operations*, 953 F. Supp. 581, 584 (D.N.J. 1997) (citations omitted). The court, however, must proceed cautiously and not substitute its own judgment of the facts and assessment of the witnesses' credibility for the jury's independent evaluation. Nevertheless,

> [w]here a trial is long and complicated and deals with a subject matter not lying within the ordinary knowledge of jurors a verdict should be scrutinized more closely by the trial judge than is necessary where the litigation deals with material which is familiar and simple, the evidence relating to ordinary commercial practices. An example of subject matter unfamiliar to a layman would be a case requiring a jury to pass upon the nature of an alleged newly discovered organic compound in an infringement action.

Lind v. Schenley Indus. Inc., 278 F.2d 79, 90-91 (3d Cir. 1960).

C. Motion to Amend the Judgment

The standard for obtaining relief under Rule 59(e) is difficult to meet. The purpose of a motion for reconsideration is to "correct manifest errors of law or fact or to present newly discovered evidence." *Max's Seafood Cafe, By Lou-Ann, Inc. v. Quinteros*, 176 F.3d 669, 677 (3d Cir. 1999) (citing *Harsco Corp. v. Zlotnicki*, 779 F.2d 906, 909 (3d Cir. 1985)). Therefore, a court should exercise its discretion to alter or amend its judgment only if the movant demonstrates one of the following: (1) a change in the controlling law; (2) a need to correct a clear error of law or fact or to prevent manifest injustice; or (3) availability of new evidence not available when the judgment was granted. *See id.*

IV. DISCUSSION

A. The '491 Patent

Plaintiffs argue that the jury erred by finding claims 1 and 2 of the '491 patent invalid as obvious in light of a combination of United States Patent Nos. 2,792,442 ("the '442 patent') and 5,010,210 (the '210 patent"). (D.I. 255 at 7-11) Specifically, plaintiffs claim that the prior art fails to disclose a "telecommunications cable" as defined by the court's claim construction, and that persons of ordinary skill in the art would have no

motivation to combine the 2" twist lay of the '210 patent with the '442 patent. (*Id.*)

1. "Telecommunications cable" limitation

In its claim construction order of August 24, 2010, the court construed the "telecommunications cable" term in the preamble of the '491 patent to be a cable that is "[c]able capable of transmitting high frequency data." (D.I. 215 at 4) While the court did not specifically identify what it considered to be "high frequencies," it did note that its construction of the term comported with the patent specification's statement that one of the goals of the patent was to rectify problems with "telecommunications cable[s] . . . designed to operate at high frequencies, perhaps up to 100 megabytes." (*Id.*)

The cable claimed by the '442 patent is an analog voice cable from the 1950's that operated in the range of "large kilohertz" to "maybe little megahertz." (D.I. 303 at 668:9) At the time of its invention, the cable claimed in the '442 patent was considered "high speed," though it was not "high speed" relative to the effective date of the '491 patent. (D.I. 255 at 8) Plaintiffs reason that, because the cable found in the '442 patent was not "high speed" as defined during the time of invention of the '491 patent, it cannot render the '491 patent obvious as it does not disclose one of the '491 patent's limitations. (*Id.* at 7-11)

Plaintiffs misunderstand 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 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 Pharm., Inc.*, 642 F. Supp. 2d 329, 373 (Fed. Cir. 2009).

Substantial evidence supports the jury's verdict. The inventors of the '442 patent sought to rectify a problem with modern high speed telecommunications cables. Given the iterative nature of engineering, it only stands to reason that a person of ordinary skill in the art would look to see how other, earlier inventors solved analogous problems in the high speed cables of the time. The jury heard testimony from defendant's expert, Dr. Mark Baxter ("Baxter"), that the disclosure in the '442 patent would have been germane to the problem that the inventors of the '491 patent were trying to solve. (D.I. 302 at 428:15-429:17) (A person of ordinary skill in the art would be motivated to combine the teaching of the '442 patent with the '210 patent "because it's addressing the same problem. I mean, in fact, as the twists get tighter, you would certainly have motivation to apply these teachings to equalize the characteristics.") While the jury also heard conflicting testimony from plaintiffs' expert, it was up to the jury to determine the experts' credibility and weigh the evidence appropriately.

2. "Twist lay" limitation

It was undisputed that the '442 patent did not disclose the 2" twist lay as required by the '491 patent, and that the 2" twist lay limitation came from the '210 patent. (D.I. 255 at 5-6) Plaintiffs argue that there would have been no apparent reason "for adding the relatively short twist lays from the '210 patent to the '442 prior art cable that was

designed for use with much longer twist lays." (D.I. 255 at 6)

Once again, substantial evidence supports the jury's verdict. Baxter testified that the '210 and '442 patents both "address[] the same problem." (D.I. 302 at 419:7-13) In fact, '[t]he '210 patent is specific about telecommunications cables with short twists and the advantages you get . . . . By the mid 90's it was well known in the art to use short twists." (*Id.* 302 at 428:7-14) The '491 patent itself cites the '210 patent for the proposition that "the use of small twist lays for twisted connector pairs in a particular cable provides the surprising result that electromagnetic interference is reduced to commercially acceptable levels even though the cable is unshielded, to provide minimization in crosstalk." ('491 patent, col. 1:27-32)

Furthermore, the jury heard testimony that a person of ordinary skill in the art would have a reasonable expectation of success in combining the '210 patent and the '442 patent. When asked whether a person of ordinary skill of the art in the early 1990's would have known how to combine the teachings of the '442 patent with the shorter twist lays disclosed in the '210 patent, Baxter responded that "[i]t would have been quite obvious because . . . the twist lays are aimed at [solving] cross talk, and you put those in and then you do the different insulation thickness to get the impedances right, so it would have been a very obvious combination." (D.I. 302 at 429:22-430:1) Therefore, the jury's verdict is supported by substantial evidence.

B. The '095 Patent

1. Invalidity of claim 31

The jury verdict relating to the '095 patent presents an interesting dilemma. Both

parties argue that they should be granted a JMOL for essentially the same reason: an inconsistent jury verdict. At issue is the fact that the jury found claim 27 of the '095 patent to be valid and claim 31 to be invalid. The parties both agree that only one limitation in dispute during trial was shared by the two claims: the "twisted about a common central axis" limitation. (D.I. 262 at 14; D.I. 252 at 28; D.I. 255 at 12) In claim 27, the limitation reads, "wherein the configurable dielectric pair separator is arranged to provide a sufficient spacing between 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. . . ." ('095 patent, col. 12:18-21) (emphasis added) In claim 31, the limitation reads, "wherein the plurality of twisted pairs of insulated conductors and the configurable dielectric pair separator **are twisted about a common axis** to form a twisted pair cable." (*Id.*, col. 12:48-50) (emphasis added)

a. Standard

The Federal Circuit reviews inconsistent verdicts under regional circuit law. *Callaway Golf Co. v. Acushnet*, 576 F. 3d 1331, 1343 (Fed. Cir. 2009). The Third Circuit has identified four approaches that a district court may take when facing an inconsistent verdict:

> (1) allow an apparently inconsistent verdict to stand;
> (2) read the verdict in a manner that will resolve the inconsistencies;
> (3) resubmit the question to the jury; and finally,
> (4) if verdicts are genuinely inconsistent and if the evidence might support either of the 'inconsistent' verdicts, the appropriate remedy is ordinarily . . . not simply to accept one verdict and dismiss the other, but to order an entirely new trial.

Acumed LLC v. Advanced Surgical Servs. Inc., 561 F.3d 199, 217-18 (3d Cir. 2009)

(citations omitted). An inconsistent verdict can be allowed to stand in "circumstances [] where the verdict appears to be the result of compromise as opposed to jury confusion." *Montgomery County v. Microvote Corp.*, 320 F.3d 440, 451 n.5 (3d Cir. 2003).

b. Discussion

The jury found claim 27 to be not anticipated by German Patent No DE 297 19 866 A1 ("the '866 patent"). The jury found claim 31 to be obvious in view of the '866 patent and United States Patent No. 5,670,748 ("the '748 patent"). The '866 patent formed the primary reference, and contained all of the required limitations of claim 31 except for the "foamed polymer." (D.I. 302 at 476:7-481:7) These seemingly inconsistent verdicts can be reconciled when viewed in light of the evidence presented.

At trial, Baxter testified that page six of the '866 patent reveals the "twisted about a common axis" limitation of claims 27 and 31. 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.

(D.I. 262 at 15) (emphasis added)

Concentrating on the "longitudinal reshaping of conductor pairs" language, 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. (D.I. 302 at 450:14-451:10) 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,[5] 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.

(D.I. 303 at 543:4-12, 541:21–542:8)

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. Therein lies the difference between claims 27 and 31. Claim 31 was found obvious, not anticipated, and the final jury instructions directed the jury to consider the knowledge of one of ordinary skill in the art when determining if a patent claim is obvious. (D.I. 241 at 24-27) The most reasonable explanation for the inconsistent verdicts is that 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.

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[5] The '999 patent contains a similar limitation to the '095 patent's "twisted about a common axis limitation." Baxter used the same arguments in his testimony about both the '095 and '999 patents as discussed *infra*.

Although this explanation solves the inconsistent verdict dilemma, it raises another. Despite their contentions to the contrary, defendants presented an obviousness defense at trial based on the knowledge of one of skill in the art,[6] which evidence was not vetted during discovery and to which plaintiffs objected.[7] Consistent with its trial guidelines, the court allows parties, like defendants, to assume the risk of admitting such evidence, rather than the court's using trial hours to review the expansive discovery record for a decision on the merits. In relying on this evidence, defendants violated the cardinal rule of this court's trial practice, that is, evidence not vetted during discovery cannot be used at trial. Therefore, having concluded that the

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[6] Defendants assured the court during trial that "[they did] not intend to argue as one of [their] invalidity defenses that it would have been obvious to modify the '866 patent, to twist it" because "the '866 patent discloses the twisting." Nevertheless, defendants' expert still made numerous references to twisting about the central axis being known in the prior art. (D.I. 302 at 316:22-25; 356:16-20) Even when asked if page six was the only part of the '866 patent that he relied on in forming his opinion that the patent disclosed the "twisted about a common central axis" limitation, Baxter still referenced the knowledge of one of skill in the art: "Yes. And my belief is that any cable of that type would be stranded [twisted] as **known in the prior art**." (D.I. 303 at 644:13-17) Nor was said obviousness theory advanced in Baxter's expert report and, therefore, his testimony was beyond the scope of his expert report. Defendants also emphasized twisting was known in the art at various other times, including at closing when defendants argued to the jury that "we know that twisting has been known, and that's the only issue." (D.I. 307 at 1331:21-22)

[7] Plaintiffs objected to introductory slides that implied it would be obvious to modify or supplement the '866 patent with the concept of "twisted about a common central axis" (D.I. 301 at 81:4-84:9) and objected to slides that Baxter was going to use that had a similar implication. (D.I. 302 at 314:3-316:13) Both of these objections were not just to the use of the slides in particular, but to defendants' ability to make an obviousness argument in general. In response to plaintiffs' objections, defendants assured the court that they did not intend to argue that the '866 patent was obvious to modify or supplement. (*Id.* at 315:22-316:5) Despite these assurances, defendants made numerous arguments to that effect anyway. (D.I. 301 at 124:17-19; D.I. 302 at 337:6-339:23, 343:10-13, 356:16-20)

most plausible explanation for the jury's inconsistent verdicts was their use of prior art knowledge in finding claim 31 invalid as obvious, and consistent with the court's trial guidelines,[8] the court will retry the invalidity of claim 31, at defendants' expense and precluding their use of the knowledge of one of ordinary skill in the art to support their invalidity defense.

2. Validity of claim 27

The jury found that claim 27 of the '095 patent is not anticipated by Japanese Patent Hei5(1993)-20645 ("the '645 patent"). Once again, the only limitation in dispute is the "twisted about a common central axis" limitation. (D.I. 255 at 32) Defendants argue that the '645 patent discloses said limitation, and that the reason the jury did not find that the '095 patent was anticipated was because plaintiffs improperly argued that the '095 patent required a "helical twist," a limitation not found within the claim. (D.I. 252 at 34)

Regardless of whether the jury believed that claim 27 of the '095 patent required a helical twist, their verdict is supported by substantial evidence. Plaintiffs' expert, Dr. Mark Horenstein ("Horenstein"), testified that the '645 patent instructs users to start with a sheet of plastic or polymer, to take the twisted pairs of conductors and fuse them to said polymer, then roll the sheet up like a "jelly roll." (D.I. 305 at 1133:24-1134:7) He disagreed that this operation of rolling was the same as twisting, as he felt that twisting

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[8] As noted in the court's trial guidelines, expert testimony that is beyond the scope of the expert's report and related discovery is impermissible and "the party proffering such testimony may be sanctioned, e.g., by having to assume the costs for a new trial." Guidelines for Civil Trials (July 12, 2011), at 3, *available at* http://www.ded.uscourts.gov/SLR/Misc/Guidelines-Civil_Trial_07-12-11.pdf.

would create a structure more akin to a licorice stick, i.e., a helical structure. (*Id.* at 1135:10-14) Using a physical model, Horenstein demonstrated how twisting the '645 patent would destroy the conductor arrangement since, as they are twisted, they would pull off the polymer. (*Id.* at 1136:13-18) Furthermore, after twisting, "the wires are no longer straight and parallel with the access of the structure." (*Id.* at 1136:19-21) Even Baxter admitted that the conductors in the '645 patent were parallel to the center axis of the cable and "not twisted themselves about the axis." (D.I. 303 at 663:12-17)

C. The '503 Patent

1. Invalidity of claim 1

The jury found claim 1 of the '503 patent invalid as anticipated by U.S. Patent No. 4,385,485 ("the '485 patent"). The only limitation that plaintiffs argue is not disclosed by clear and convincing evidence is the "prevents twisting motion of the core" limitation. (D.I. 262 at 19) The parties did not ask for this limitation to be construed by the court and, as such, the jury was instructed to use the ordinary meaning of the words. (D.I. 241 at 17-18)

Substantial evidence support's the jury's verdict that claim 1 of the '503 patent is invalid as anticipated by the '485 patent. At trial, Baxter first opined that in the '503 patent, the reason that the first die prevented twisting of the core was that it aligned the transmission media with the surface features of the core. (D.I. 302 at 354:5-355:7) Baxter then used an animated demonstrative to show that the '485 patent also prevented twisting of the core relative to the transmission media via its first die. (*Id.* at 376:3-15) Further supporting the jury's verdict and Baxter's explanation, plaintiffs'

expert, Mr. Thomas Blackburn ("Blackburn"), admitted on cross examination that the main reason to prevent back twisting in the '503 patent was to preserve the profile of the transmission media and the core. (D.I. 305 at 1062:12-18, 1064:14-1065:8, 1065:18-24)

Plaintiffs argue that the two cabling methods work differently and, therefore, the '485 patent cannot anticipate the '503 patent. (D.I. 255 at 23) In the '485 patent, the whole machine is rotated to impart a twist while the cable itself is held stationary. (*Id.*) In the '503 patent, the machine is held stationary, and the cable is rotated to impart a twist. (*Id.*) However, the jury could have reasonably found that this is a distinction without a difference, as both systems contain a die that prevents the twist of the core from propagating back along its length to the point where the core is being aligned with the constituent components of the cable, regardless of how the twist is imparted.

The jury also found claim 1 of the '503 patent invalid as obvious in view of Japanese Patent No. Sho56(198)-7307 ("the '307 patent"), combined with the knowledge of one of ordinary skill in the art. The only limitation that is not disclosed by the '307 patent is the "prevents twisting motion of the core" limitation, and the jury found that this limitation would have been obvious to one of ordinary skill in the art. (D.I. 262 at 19) Plaintiffs argue that the jury's finding is erroneous. (*Id.*)

Once again, substantial evidence supports the jury's verdict. Baxter testified that the '307 patent contained a plus shaped core, and that the cable is twisted to close it. (D.I. 302 at 395:24-396:9, 398:6-24) He then opined that a person of ordinary skill in the art would understand that it was necessary to prevent the twisting of the core at some point, else the transmission media would not stay aligned with the core. (*Id.* at

400:1-22, 401:8-402:3) Furthermore, die 9 of the '307 patent would be the most effective place to attempt to eliminate back twisting as it is the place where the components of the cable are being assembled. (*Id.* at 402:14-25) Blackburn reiterated Baxter's opinion that the need to prevent twisting of the core would be known to one of skill in the art, and that die 9 of the '307 patent would be a possible place to prevent said twist. (D.I. 305 at 1075:9-20, 1076:10-24)

The jury heard expert testimony that the '307 patent disclosed every limitation of claim 1 except the limitation pertaining to preventing twisting of the core.[9] Furthermore, the jury heard this was a known problem in the art and that there were a finite number of possible solutions. Therefore, under *KSR*, the jury's finding that claim 1 was obvious in view of the '307 patent combined with the knowledge of one of skill in the art is supported by substantial evidence. *KSR,* 550 U.S. at 420.

2. Reexamination

Plaintiffs argue that the court erred in refusing to allow evidence of the U.S. Patent and Trademark Office's ("PTO") reexamination of the '503 patent and, therefore, should grant its motion for a new trial on the validity of the '503 patent. (D.I. 255 at 44) In said reexamination, the PTO reviewed both the '485 and '307 prior art patents, and found the '503 patent to be valid over them. (*Id.* at 26-27)

a. Standard

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[9] Blackburn explained that the reason the '307 patent does not disclose preventing back twist of the core is because it describes an S-Z stranding system and a person of ordinary skill in the art would not find it necessary to prevent back twist of the core in such a system. (D.I. 305 at 1033:5-17) However, the jury also heard from Baxter that it would be a problem with this patent, and they were free to give whatever weight they felt appropriate to the experts' testimony.

"All relevant evidence is admissible, except as otherwise provided. . ." Fed. R. Evid. 402. "Relevant evidence means evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." Fed. R. Evid. 401. Rule 401's basic standard of relevance is a liberal one. *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 587 (1993). The trial judge is obligated to act as a "gatekeeper" and has broad discretion to balance the probative value of the evidence against its potential prejudicial harm. *See Magnivision, Inc. v. Bonneau Co.,* 115 F.3d 956, 961 (Fed. Cir. 1997)

b. Discussion

During a teleconference with the parties, the court issued an oral ruling, excluding evidence of the reexamination of the '503 patent on the basis that it was not relevant and would likely cause confusion among the jury. (D.I. 262 at 25) Plaintiffs argue that the court should have admitted evidence of this reexamination because, unlike other reexaminations that the court has refused to allow into trial, the reexamination here was "final" despite the fact that the PTO had only issued a Notice of Intent to Issue Reexamination Certificate ("NIRC"). (D.I. 255 at 45)

Even if a NIRC is considered "final" by the PTO, and no further action can be taken by the examiner (a contention that defendants dispute), the court did not err by excluding evidence of the reexamination. While the reexamination involved the two invalidating patents at issue, they were presented to the examiner in a very different context than during trial; to wit, the reexamination was *ex parte* instead of *inter partes*,

and defendants were unable to advance to the examiner the arguments that they made in court, including testimony as to the knowledge and level of skill of one of ordinary skill in the art. Admitting evidence about the '503 patent's reexamination, the outcome of which is not binding on the court, would have only served to confuse the jury and was ultimately far more prejudicial than probative.

D. The '537 Patent

Defendants argue that the jury erred by failing to find that claim 19 of the '537 patent is rendered obvious by the combination of the '866 patent and the '748 patent. (D.I. 252 at 7) The only claim limitations in dispute are the "unshielded cable" and a "separator [that] includes a foamed polymer" limitations. (*Id.* at 7-8)

The jury's verdict is supported by substantial evidence. Defendants' only argument that the combination of the '866 and '748 patent discloses an unshielded cable is Baxter's testimony that the '866 patent does not require an overall shield and that the only shielding in the '866 patent is on the pair separators. (D.I. 302 at 498:4-15) Replacing the separators with a foamed polymer would necessarily remove the shielding, making an unshielded cable. (*Id.*)

In contrast, Horenstein opined that there would have been no motivation to replace the '866 patent's metal foil shield with the foamed polymer material from the '748 patent. (D.I. 305 at 1123:2-10) The claimed invention of the '866 patent is that of a shielded cable and does not make any reference to non-shielded cables. (*Id.* at 1123:2-8) Galen Gareis, one of plaintiffs' cable designers, testified that a person of ordinary skill in the art would not look to shielded cable designs for guidance when building an

unshielded high speed data cable because of the way the foil shielding alters the cable's ground plane. (*Id.* at 941:12-943:5) Furthermore, Horenstein testified that the '748 patent's foam polymer is a flame retardant insulation and jacketing material made via an extrusion process wherein the foam is melted into the cable and does not form a separator. (*Id.* at 1122:6-22) Even Baxter agreed on cross-examination that neither the '866 patent nor the '748 patent "actually show [a separator] formed of a foamed polymer." (D.I. 303 at 665:25-666:5)

The jurors heard from both parties' experts and, ultimately, it was their job to decide which one was more credible. Here, the jury found that claim 19 of the '537 patent was not obvious in view of the '866 and '748 patents, a finding that is supported by substantial evidence.

E. The '999 Patent

Defendants argue that the jury erred by failing to find that claim 2 of the '999 patent is rendered obvious by the combination of the '866 patent and the U.S. Patent No. 3,622,683 ("the '683 patent"). (D.I. 252 at 12) The only claim limitations in dispute in this regard are the "unshielded," "cabled about a common axis," and "separator is substantially non-conductive" limitations. (*Id.* at 12)

Once again, the jury's verdict is supported by substantial evidence. Defendants contend that the "cabled about a common axis" limitation of the '999 patent is, for the purposes of validity, the same as the "twisted about a common axis" limitation from the '095 patent. (D.I. 252 at 12-14) Defendants then reiterate their argument that, because the jury found claim 31 of the '095 patent obvious, the '866 patent discloses this claim

limitation and the jury should have found this patent obvious as well. (*Id.*) However, as discussed *supra*, substantial evidence supports the jury's finding that the '866 patent does not disclose the "twisted about a common axis limitation" and, therefore, by implication, it does not disclose the "cabled about a common axis" limitation. By finding claim 2 of the '999 patent to be valid, just like claim 27 of the '095 patent, the jury's verdict is more consistent, rather than less.

Furthermore, the jury had substantial evidence from which to find that the combination of the '866 patent and the '683 patent did not disclose an "unshielded" cable. As discussed *supra*, it is uncontested that the '866 patent only discloses shielded cables. Defendants cite figure 15 of the '683 patent in support of their contention that the '683 patent discloses an unshielded cable as it "discloses an all plastic tape material as a separator." (D.I. 252 at 15-16; D.I. 303 at 545:21-23) Plaintiffs counter with testimony from Horenstein that figure 15 is, in fact, a shielded cable. In his opinion,

> it is still a shielded design, even though this upper bunch is wound in some plastic tape. The fact that there are still shields left on the conductors on the right and left, and if you read the text of the patent, the specification, [the] motivation for doing that is still [to] provide a shielded cable without having to shield every conductor.

(D.I. 306 at 1182:19-25) Ultimately, Baxter admitted that the purpose of the '683 patent was to disclose and claim shielded cables even though the shielded cables might contain unshielded components. (D.I. 303 at 606:17-607:2) This was especially evident given that every one of the embodiments of the '683 patent is an "overall shielded" cable. (*Id.* at 607:3-5)

F. The '641 Patent

Defendants argue that the jury erred by failing to find that claim 13 of the '641 patent is rendered obvious by the combination of U.S. Patent No. 5,796,046 (the '046 patent) and the U.S. Patent No. 6,150,612 ("the '612 patent"). (D.I. 252 at 17) The only claim limitation in dispute in this regard is the "wherein the jacket comprises a plurality of protrusions extending away from an inner circumferential surface of the jacket, and wherein the plurality of protrusions provide an air gap between the plurality of twisted pairs of insulated conductors and the inner circumferential surface of the jacket." (*Id.*) Neither the "protrusions extending away" nor the "inner circumferential surface of the jacket" limitations were construed by the court,[10] thus allowing the jury to use their ordinary meanings. (D.I. 215) It is undisputed that the '612 patent disclosed all of the limitations of claim 13 of the '641 save the "plurality of protrusions" limitation currently in dispute. Defendants contend that: (1) this limitation is disclosed by the '046 patent; (2) they met their prima facie case of obviousness by clear and convincing evidence; (3) plaintiffs failed to rebut said showing; and (4) the jury did not have substantial evidence on which to find claim 13 valid. For the reasons stated below, the court agrees.

1. Disclosure of the '046 patent

During trial, defendants made out a prima facie case of obviousness that plaintiffs failed to rebut. Baxter explained that the '046 patent discloses a cable jacket with a plurality of sharply angled protrusions projecting inward from the inner circumferential surface of the cable jacket. (D.I. 303 at 565:21-568:8) These triangular protrusions, like

[10] The parties did not identify these limitations as requiring construction. (D.I. 102)

the rectangular ones in the '641 patent, serve to keep the pairs away from the jacket. (*Id.* 568:9-23) According to Baxter, there is no substantive difference between the two types of protrusions. (*Id.*)

Plaintiffs failed to rebut defendants' showing that the '046 patent discloses a plurality of protrusions extending away from an inner circumferential surface of the jacket that creates an air gap between the conductors and the jacket. In attempting to do so, Horenstein opined that there is no "inner surface" disclosed in the '046 patent because the striations are uninterrupted as they encircle the inner elements of the cable.[11] (D.I. 306 at 1214:13-1215:5) However, this opinion contradicts the plain language of the '046 patent and is, itself, nonsensical. For example, the '046 patent describes a "means 20 for spacing the **inner surface** away from the twisted pairs [that] includes a plurality of sharply angled striations 21 disposed about **the inner surface of the cable jacket** such that adjacent striations define sharply angled inwardly directed projections 23." ('046 patent, col. 3:32-36) Furthermore, the jury heard testimony from Baxter that the '046 patent's specification clearly states that protrusions other than striations (triangles) can be used on the inner surface of the jacket so long as they keep the twisted pairs away from the jacket. (D.I. 303 at 568:24-569:18; '046 patent, col. 5:5-22) Therefore, rectangular protrusions, like the ones illustrated in figure 13 of the '641 patent, are contemplated by the '046 patent.[12]

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[11] The "inner surface" limitation of the '614 patent was allegedly to differentiate its rectangular protrusions from triangular ones. (D.I. 306 at 1214:13-1215:5)

[12] Plaintiffs further argued that, unlike the '641 patent, the protrusions in the '046 patent are a part of the jacket itself. (D.I. 261 at 18-19) The **only** line from the '046 specification that plaintiffs cite in support of their argument is "[a]ccording to the present

2. Motivation to combine

It is undisputed that the ridged jacket is designed to address some form of crosstalk, be it internal (between the twisted pairs), or external (between sets of cables). Plaintiffs argue that the '046 patent and the '612 patent both address internal crosstalk and, therefore, a person of ordinary skill in the art would have no reason to combine them because they would be cumulative. Defendants disagree, reasoning that the '046 patent addresses external crosstalk, and the '612 patent internal crosstalk, thereby providing a motivation to combine.

a. Internal crosstalk

At trial, defendants demonstrated a motivation to combine the '046 and the '612 patents regardless of whether they address the same problem or different problems. Baxter opined that, if the references were considered to address the same problem, i.e, internal crosstalk, a person of ordinary skill in the art would be motivated to combine them because "it is standard practice in cable design to use multiple techniques to improve a single parameter." (D.I. 303 at 574:1-14)

Plaintiffs failed to rebut defendants' showing of a motivation to combine. William Clark, one of the inventors of the patents-in-suit, testified that jacket protrusions like those of the '046 patent serve to decrease internal crosstalk by lowering the overall dialectic constant of the cable via reduction of capacitive coupling. (D.I. 304 at 832:2-

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invention, a communication cable includes a cable jacket wherein the inner surface of the cable jacket **includes** a plurality of sharply angled striations." ('046 patent, col. 2:18-22) However, the '641 patent contains similar language describing a "jacket **including** a plurality of protrusions. . . ." ('641 patent, abstract) Most importantly, nothing in the claim language indicates that the protrusions are in any way separate from the jacket itself. They merely extend inwardly from its inner circumference.

10) The presence of a cross-web separator, found in the '612 patent, also helps to reduce the cross talk. (D.I. 304 at 832:14-16) These separators are so effective that Horenstein claimed that the cross web separator of the '612 patent surpassed all known standards for internal crosstalk at the time of its invention. (D.I. 306 at 1212:25-1213:6) Because of the interrelatedness of the two technologies, Horenstein believed that there was no motivation to combine them. (*Id.*)

This testimony, however, fails to overcome defendants' showing of obviousness. If anything, plaintiffs' expert's opinion that the technologies are interrelated **provides** a motivation to combine them to solve a known problem in the art. *In re Johnson*, 435 F.3d 1381, 1385 (Fed. Cir. 2006) (finding that many factors are relevant to the motivation to combine aspect of the obviousness inquiry, including the extent to which the references are in the same or related fields of technology). "It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition which is used for the very same purpose." *In re Kerkhoven*, 626 F.2d 846, 850 (C.C.P.A. 1980) Moreover, even though the cross web separator of the '612 patent may have surpassed all known standards for internal crosstalk at the time of **its** invention, changing market forces may have demanded an even higher level of crosstalk prevention at the time of invention of the '641 patent. *KSR*, 550 U.S. 398 at 401 ("When a work is available in one field, design incentives and other market forces can prompt variations of it . . . . If a person of ordinary skill in the art can implement a predicable variation, and would see the benefit of doing so, § 103 likely bars patentablity.").

b. External crosstalk

The jury heard testimony from Baxter that, if the references were directed to two different types of crosstalk, they would have been even more obvious to combine as the '612 patent deals with internal cross talk, and the '046 patent deals with external crosstalk. (*Id.* at 574:15-24) "[I]n a high performance cable, you would be extremely motivated - it would, in fact, be common sense for a designer to apply both of these to design a high performance cable." (*Id.* at 574:25-575:3) "It's extremely simple to combine them. And when you do, you get a very predictable result. Each one of them does exactly what it did on its own, and you put them together and you get the benefits of both of them in one cable." (*Id.* at 575:16-23)

Under *KSR*, this testimony demonstrates a motivation to combine and a prima facie case of obviousness:

> 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.

KSR, 550 U.S. 398 at 421.

Horenstein's testimony regarding the lack of motivation to combine the '046 and '612 patents if they were directed to two different types of crosstalk was conclusory and provides no support for the jury's verdict. To begin, he states that neither the '046 nor '612 patent even mentions "alien" cross talk.[13] (D.I. 306 at 1212:17-18) Then, when

[13] The parties refer to this external crosstalk as "alien crosstalk." (D.I. 252 at 21)

asked if there are any teachings in the '046 or '612 patents that would have motivated someone to look outside of the patents for help with cross talk, his answer was "I don't believe so," and "I don't think so." (*Id.* at 1213:13-23) There were no reasons stated for his opinions.

Horenstein's testimony fails to rebut defendants' prima facie showing of obviousness. He appears to rely on a strict pre-*KSR* teaching, suggestion, or motivation test when rendering his opinion and, even then, he only opines as to one of the many ways a person of skill in the art could divine a reason to combine prior art references: a teaching within the references themselves. This, however, is contrary to established law. When reviewing obviousness, the fact finder "need not seek out precise teachings directed to the challenged claim's specific subject matter, for [the fact finder] can consider the inferences and creative steps a person of ordinary skill in the art would employ." *KSR*, 550 U.S. at 401. "The diversity of inventive pursuits and of modern technology counsels against confining the obviousness analysis by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasizing the importance of . . . the explicit content of issued patents."[14] *Id.* at 402.

3. Secondary indicia of non-obviousness

Plaintiffs argue that, even if the '046 and '612 patents disclose all of the limitations of claim 13, and a person of ordinary skill in the art would have a motivation to

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[14] It is irrelevant that neither the '046 or '612 patents mention "alien crosstalk" so long as a person of ordinary skill in the art would recognize that they would in fact be useful in said application. "It is common sense that familiar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle." *KSR*, 550 U.S. at 402.

combine the references, secondary indicia of non-obviousness preclude a finding of obviousness. (D.I. 261 at 22) During trial, plaintiffs' corporate representative, Douglas Brenneke ("Brenneke"), testified that through 2008, plaintiffs sold about $3 million worth of products embodying claim 13 of the '641 patent. (D.I. 305 at 982:13-983:1) He further testified that the invention embodied within the '641 patent allowed plaintiffs to make a competitive product in the high performance data cable market, and that plaintiffs consider it to be "commercially sucessful." (*Id.* at 983:2-9)

Brenneke's testimony does not establish the commercial success necessary to overcome defendants' prima facie case of obviousness. First, plaintiffs cite no testimony as to whether $3 million, a small fraction of the $140 million in sales of cables with separators, is significant enough to constitute a "commercial success" in the patent validity context. Second, plaintiffs fail to show a nexus between the commercial success and claim 13 of the '641 patent. *Tokai Corp. v. Easton Enters., Inc.* 632 F.3d 1358, 1369-70 (Fed. Cir. 2011). Given plaintiffs' admitted status as a "market leader" for high speed communication cables (D.I. 305 at 969:22-25), sales are easily attributed to their leadership position and successful marketing campaigns. *Ritchie v. Vast Resources, Inc.*, 563 F.3d 1334, 1336 (Fed. Cir. 2009).

4. Conclusion

Defendants established, by clear and convincing evidence, that the combination of the '046 and '612 patents disclose all of the limitations of claim 13, and that a person of ordinary skill in the art would be motivated to combine said patents regardless of whether they address the same type of crosstalk. Plaintiffs failed to rebut this showing,

as the testimony of plaintiffs' experts was either conclusory or unsupported by the evidence of record. Finally, plaintiffs were unable to show that secondary indicia of non-obviousness overcame defendants' showing of invalidity because plaintiffs were unable to establish a nexus between the sales and the patented invention, or that $3 million in sales was a "commercial success."

G. Plaintiffs' Motion for Permanent Injunction

Plaintiffs renewed their motion for a permanent injunction (D.I. 251) under Fed. R. Civ. P. 65, requesting that "the court enjoin defendants from making, using, selling, offering for sale, or importing the infringing products, and any other products not more than colorably different therefrom." (D.I. 289 at 1) Plaintiffs further requested that the scope of the injunction encompass defendants' design-around products containing a "T-filler" separator because "they are not more than colorably different from the infringing Category 6 Tape Separator Cables." (*Id.* at 2) Defendants, in their opposition to plaintiffs' motion for a permanent injunction, request that: (1) if the court were to grant a permanent injunction, the injunction should not encompass the T-Filler redesign because plaintiffs have not satisfied their burden of proving the T-Filler products infringe any valid patent claim; and (2) pursuant to Fed. R. Civ. P. 62(c), the court temporarily stay an injunction to allow defendants time to move the Federal Circuit for a stay pending appeal. (D.I. 294 at 1)

1. Standard of review

In *eBay Inc. v. MercExchange, L.L.C.*, 126 S.Ct. 1837 (2006) (vacating and remanding *MercExchange, L.L.C. v. eBay Inc.*, 401 F.3d 1323, 1339 (2005)) (hereinafter

"*eBay*"), the Supreme Court overruled the Federal Circuit's longstanding "general rule that courts will issue permanent injunctions against patent infringement absent exceptional circumstances." Permanent injunctions in patent cases must be based on a case-by-case assessment of the traditional equitable factors governing injunctions. *Id.* at 1839. That is, to be awarded a permanent injunction, a plaintiff must demonstrate: "(1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction." *Id.* "[T]he decision whether to grant or deny injunctive relief rests within the equitable discretion of the district courts, and that discretion must be exercised consistent with traditional principles of equity, in patent disputes no less than in other cases governed by such standards." *Id.* at 1841.

The *eBay* Court specifically cautioned against the application of categorical rules, classifications and assumptions in these analyses. *Id.* at 1840. Nevertheless, courts, presumably struggling to balance the absence of a presumption of irreparable harm with a patentee's right to exclude, have frequently focused upon the nature of the competition between plaintiff and defendant in the relevant market in the context of evaluating irreparable harm and the adequacy of money damages. *See TruePosition Inc. v. Andrew Corp.*, 568 F. Supp. 2d 500, 531 (D. Del. 2008).

Courts awarding permanent injunctions typically do so under circumstances in

which the plaintiff practices its invention and is a direct market competitor.[15] Plaintiffs also frequently succeed when their patented technology is at the core of their business, and/or where the market for the patented technology is volatile or still developing.[16]

2. Discussion

a. Irreparable harm

Plaintiffs assert that defendants' infringement is causing irreparable harm because the parties are direct market competitors across all relevant market segments

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[15] *See, e.g., Muniauction, Inc. v. Thomson Corp.*, 502 F. Supp. 2d 477, 482 (W.D. Pa. 2007) ("Plaintiff and defendants are direct competitors in a two-supplier market. If plaintiff cannot prevent its only competitor's continued infringement of its patent, the patent is of little value.") (granting permanent injunction); *Johns Hopkins Univ. v. Datascope Corp.*, 513 F. Supp. 2d 578, 586 (D. Md. 2007) (granting permanent injunction where infringing product was plaintiffs' "only competition" and "thus, its sale reduce[d] the [p]laintiffs' market share"); *Transocean Offshore Deepwater Drilling, Inc. v. GlobalSantaFe Corp.*, Civ. No. 03-2910, 2006 WL 3813778, *4 (S.D. Tex. Dec. 27, 2006) (granting permanent injunction requiring structural modifications to infringing deepwater drilling rigs where "the customer base for deep water drill rigs is small, and [defendant] has not only used [its] rigs equipped with the infringing structure to compete for the same customers and contracts as [plaintiff], but also to win contracts over competing bids from [plaintiff]").

[16] *See Martek Biosciences Corp. v. Nutrinova Inc.*, 520 F. Supp. 2d 537, 558-59 (D. Del. 2007) (granting permanent injunction where plaintiff was a direct competitor "likely to lose market share that it may not be able to recapture," as plaintiff's patented technology was its primary revenue source, and defendant was plaintiff's only competitor and was "targeting [plaintiff's] customers in that industry"); *Tivo, Inc. v. EchoStar*, 446 F. Supp. 2d 664 (E.D. Tex. 2006) (granting permanent injunction where: (1) parties were direct competitors; (2) "plaintiff [was] losing market share at a critical time in the market's development"; (3) the parties agreed that customers in the relevant market tend to remain customers of the company they first purchased from; and (4) as a "relatively new company with only one primary product," plaintiff's "primary focus is on growing a customer base specifically around the product" competing with the infringing product).

for infringing products.[17] (D.I. 289 at 15) These include: (1) sales through independent distributors; (2) sales directly to contractors or end-use customers; and (3) sales for "end-to-end systems," where cables and "connectivity" are sold together as a package.[18] (D.I. 289 at 3-5) The parties also compete for the services of external sales representatives who are independent contractors hired to promote a single manufacturer's line of data cables. (*Id.* at 5) Plaintiffs further allege collateral harm resulting from defendants' infringing product sales in the form of loss of customers, loss of business opportunities, harm to reputation as innovators, and price erosion. (*Id.* at 6-9)

(1) Parties are not the only direct competitors in the market.

Plaintiffs and defendants are direct competitors, but are not the only competitors

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[17] Plaintiffs, as Belden and Belden's Mohawk brand, compete directly with defendants in the market for high performance Category 6 and 6A data cables. (D.I. 289 at 2-6) Belden's Mohawk brand orginated at Cable Design Technologies, Inc. ("CDT"), which merged with Belden in 2004. (*Id.* at 2) Defendant's Senior Vice President of Marketing and Product Development admitted that "[defendants] compete directly with Belden and Mohawk branded products 'every day on most projects.'" (D.I. 290 at 108-109)

[18] Plaintiffs allege that defendants used the infringing Category 6 Tape Separator Cables to complete their data cable portfolio, and effectively took away the connectivity partner Leviton from Belden's Mohawk brand. (D.I. 289 at 8) Defendants have admittedly taken Leviton. (D.I. 290 at 63-64) Plaintiffs further contend that they and defendants "are the only two cable supply partners" in the end-to-end system market using Leviton connectivity. (D.I. 289 at 16) The court finds this argument unpersuasive as: (1) plaintiff Belden manufactures its own end-to-end systems that include both cable and connectivity (*Id.*, ex. 2 at ¶ 9); thus, it seems that since CDT merged with Belden, Mohawk has a market advantage over defendants in partnering with Belden for connectivity; and (2) market share data for copper cable suppliers as connectivity vendors indicates CommScope, Leviton, Panduit, and Belden as holding 18.0%, 14.9%, 14.2% and 2.1% market share, respectively. (D.I. 295, ex. A at 44745) As such, there are many other companies that Mohawk can partner with.

in the twisted pair copper network cable market.[19] (D.I. 289 at 2-6; D.I. 294 at 2-3) Therefore, a sale to defendants is not necessarily the loss of a sale to plaintiffs. *See Bosch, Ltd. Liab. Co. v. Pylon Mfg. Corp.*, 748 F. Supp. 2d 383, 408 (D. Del. 2010). Defendants point out that plaintiffs are aware of the many competitors in the market, and that any one of these may be responsible for the losses for which plaintiffs seek relief.[20] (D.I. 294 at 3)

Plaintiffs, citing to *Acumed Limited Liability Company v. Stryker Corporation*, 551 F.3d 1323, 1327-28 (Fed. Cir. 2008), contend that irreparable injury may be found where there are more than two competitors in the market. (D.I. 297 at 3) *Acumed* differs from the case at bar in that the plaintiff in *Acumed* previously chose to license its technology only to two specific major competitors, the jury had already found lost profits and sales, and the balance of hardships favored plaintiff, a much smaller company whose infringed product was one of its "flagship" products. Here, plaintiffs blame the structure of the market for their inability to show lost sales. (D.I. 289 at 5; D.I. 290, ex. 1 at 85-96) Furthermore, there is no indication that the Category 6 and 6A data cables are

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[19] Defendants 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. (D.I. 295, ex. A at 44726, 44738, 44740-42; ex. B at 49:20-56:10, 60:12-15; ex. F at 46097; ex. G at 46145, 46160; ex. H at 46171)

[20] In a Belden internal company Competition/SWOT Analysis, plaintiffs identified as a threat the fact that the "market is saturated with vendors and over-capacity leading to commoditization" and indicated specific companies, such as Berk-Tek, General Cable, and Systimax, as being closer competition than defendants. (D.I. 294, ex. F at 46097) Further, in plaintiffs' annual report, they acknowledge that "[t]he global cable, connectivity, and networking industries are highly competitive." (D.I. 295, ex. Q at 36679)

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.[21] (D.I. 295, ex. A at 44742) This number is insignificant in relation to their total revenue of nearly $1.4 billion. (*Id.* at ex. Q at 36689) Based on this information, plaintiffs cannot be considered smaller companies that, because they depend on the infringed technology to make ends meet, would bear the brunt of the hardship should a permanent injunction not issue. Therefore, the fact that a permanent injunction was granted in *Acumed* where multiple competitors existed is not persuasive authority in the present analysis.

(2) Plaintiffs cannot prove that defendants' infringement caused market share decrease

In further support of their direct competitor argument, plaintiffs use a market share data graph published by the independent research firm BSRIA, in its annual U.S. Structured Cabling Reports, to show that "[defendants'] market share has increased at a rate almost mirroring [plaintiffs'] decline" since the introduction of defendants' infringing Category 6 Tape Separator Cable in September 2002. (D.I. 289 at 9; D.I. 290, ex. 1 at 26, 186, ex. 8-9) However, Belden and Mohawk's combined share only dropped approximately 9% from approximately 24% to 15% from 2000 to 2009 and defendants' increased approximately 6% from approximately 4% to 11%. This is an insubstantial change compared to cases where irreparable harm was found using this kind of data.

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[21] Mohawk and Belden's copper cable sales in 2009 amounted to $61.8 million and $49.2 million, respectively. (D.I. 295, ex. A at 44742)

(D.I. 290, ex. 8; D.I. 295, ex. A at 44742); *Becton Dickinson & Co. v. Tyco Healthcare Grp. LP*, Civ. No. 02-1694, 2008 WL 4745882, *4 (D. Del. Oct. 29, 2008) (finding irreparable harm where plaintiff's market share dropped by approximately 40% and customers were lost since the launch of defendant's infringing product). Further, plaintiffs and defendants together only comprise 25% of the market and, as such, are not individually major market players.[22] Plaintiffs' argument of price erosion due to the presence of defendants' infringing product is also unpersuasive as the industry experienced an overall decrease in market price due to economic conditions and the high amount of competition.[23] (D.I. 294 at 8)

As plaintiffs and defendants are not the only competitors in this multi-supplier market, defendants' infringement has not necessarily affected plaintiffs' market position. *See Bosch, Ltd. Liab. Co.*, 748 F. Supp. 2d at 408 (parties were not only market participants and, therefore, "[it was] not a clear case of a two-supplier market wherein a sale to [defendant] necessarily represent[ed] the loss of a sale to [plaintiff]."). Plaintiffs offered only thirty-nine of the approximately five to ten thousand quotes they submit

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[22] 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. (D.I. 295, ex. A at BEL44742)

[23] According to BSRIA's Structured Cabling 2009 study, "[m]any of the suppliers reduced their prices on cables . . . due to increased competition caused by lack of demand and a reduction in products stocked by distributors and some suppliers. [It was] difficult to increase prices later in the year . . . , because of the continuing fierce competition." (D.I. 294, ex. A at 44712)

yearly to indicate losses to defendants[24] (D.I. 290, ex. 5; D.I. 294 at 6; D.I. 295, ex. B at 80-82), claiming that "it is difficult to identify specific instances of lost sales" due to the structure of the data cable market. (D.I. 289 at 5; D.I. 290, ex. 1 at 85-96) Absent specific information and, combined with the fact that the parties are not the only competitors in the market, these alleged losses do not persuade the court.[25] On the present record, irreparable harm has not been established.

b. Remedies at law

Legal remedies are adequate to compensate plaintiffs for the infringement of their patent. Plaintiffs contend that defendants have taken from them both the recognition of being a technology innovator/first supplier of the patented technology, and an unquantifiable amount of business opportunities flowing therefrom.

"[A]n unavoidable distinction [exists] between utilizing third-party licensing to bring a concept to market and strategically utilizing a patent to excise a tax from companies already participating in the market." *MercExchange, Ltd. Liab. Co. v. eBay, Inc.*, 500 F. Supp. 2d 556, 583 n.24 (E.D. Va. 2007) ("Court ordered monetary damages are more likely to adequately compensate a patent holder in the latter scenario . . . ."). In the present case, plaintiffs offered to license the '537 patent, the '095 patent, and the '999

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[24] In the plaintiffs' Rule 30(b)(6) deposition of Alexander C. Hansen, Hansen estimated that in 2010, Mohawk submitted "somewhere between 5 to 10,000" quotes and likely "generally the same" amount in 2008 and 2009. Further, he estimated that "on cable sales, [quote amount] would be similar" for Belden. (D.I. 295, ex. B at 80-82)

[25] The court has "declin[ed] to grant a permanent injunction where plaintiff and defendant were only two market competitors, where evidence indicated that sales of the patented technology accounted for low percentages of each party's business and plaintiff did not identify precisely what customers it lost to defendant." *Praxair, Inc. v. ATMI, Inc.*, 479 F. Supp. 2d 440, 443 (D. Del. 2007).

patent to defendants as part of their "new licensing program." (D.I. 294 at 15; D.I. 295, ex. C ¶ 23; ex. R) Furthermore, plaintiffs are established companies in the industry that did not need to license their patents to identified competitors to bring the concept to market. The language of a "new licensing program" suggests that plaintiffs intended to license the patents to other companies as well. (D.I. 294 at 15; D.I. 295, ex. C ¶ 23; ex. R)

Plaintiffs allege that "[defendants] damage [plaintiffs] by appearing to be an innovator" because defendants were the first to market a mid-level enhanced performance Category 6 cable by using the infringing product "forcing [plaintiffs] to be reactionary and develop a new product . . . ." (D.I. 289 at 9; D.I. 290, ex. 2, ¶ 14) While plaintiffs' reputation as technology innovators and first suppliers of the patented technology was likely affected in this one aspect of their business, *TruePosition*, 568 F. Supp. 2d at 532, plaintiffs' willingness to license the patents as part of a "licensing program" supports the court's conclusion that plaintiffs will not suffer irreparable harm absent an injunction. *Advanced Cardiovascular Sys. v. Medtronic Vascular, Inc.*, 579 F. Supp. 2d 554, 559 (D. Del. 2008) (money damages are rarely inadequate where plaintiff is willing to forgo its exclusive right for some manner of compensation). Further, plaintiffs had a burden to provide specific reasons why defendants' infringement cannot be compensated for with a money award, which they failed to do. *Praxair,* 479 F. Supp. 2d at 444. Similar to *Praxair*, plaintiffs' contention that "infringing products sales inflict compounding unquantifiable harm on plaintiffs due to the structure of the data cable market," does not explain why it may have "difficulties calculating damages going forward," or "how money damages could not adequately compensate for 'lost market

share' . . . ." *Id.*

c. Balance of hardships

The parties have informed the court that all of the asserted claims, but for those disclosed in the '503 patent, have been declared invalid by the PTO. In terms of balance of hardships, the court in *MercExchange, Ltd. Liab. Co. v. eBay, Inc.*, 500 F. Supp. 2d at 585, acknowledged that a "PTO reexamination impacts the equitable calculus of the four-factor test," such that the court was unable to determine which party the balance of harms favored should it issue a permanent injunction "only to later discover that the [infringed] patent was never valid and that [defendant] always had the right to utilize such functionality." Given the status of the reexamination proceedings vis a vis the patents in suit, the court concludes that the harm to defendants if the injunction were to issue on invalid patents is much greater than the harm to plaintiffs should the injunction not issue at all, especially in light of the court's finding that adequate legal remedies exist.

d. Public interest

"The public-interest factor often favors the patentee, given the public's interest in maintaining the integrity of the patent system." *MercExchange, Ltd. Liab. Co.*, 500 F. Supp. 2d at 586 (quoting *Odetics, Inc. v. Storage Tech. Corp.*, 14 F. Supp. 2d 785, 795 (E.D. Va. 1998)). The court in *MercExchange* cautioned that, "while preserving the integrity of the patent system will always be a consideration in the public-interest analysis, it cannot be allowed to dominate such analysis lest a presumption results." *Id.* In finding against the entry of an injunction, the court considered "the type of patent, the impact on the market, the impact on the patent system, and any other factor that may

impact the public at large" should an injunction be granted. *Id.*

The claims at issue pertain to twisted pair copper network cable technology and have almost all been invalidated by the PTO on reexamination. (D.I. 294 at 9-10, 15); *See MercExchange*, 500 F. Supp. 2d at 586 (in considering whether to protect the patent holder through injunctive relief, the court found it proper to consider "repeated indications from the PTO that such patent is invalid."). When considering the prior conduct of the parties, as did the court in *MercExchange* within the third prong of the analysis, this court notes that plaintiffs had previously attempted to license the patents to defendants as part of their "new licensing program" indicating a willingness to forego their right to exclude. (D.I. 294 at 15; D.I. 295, ex. C ¶ 23, ex. R) However, the public would not be harmed by the issuance of a permanent injunction as this is not a matter of public health or safety, nor will an injunction have the effect of limiting the public's access to a category of products. *See Mass Engineered Design, Inc.*, 633 F. Supp. 2d at 394. Here, the economic impact would be minimal because, unlike in *MercExchange* where defendant eBay was a multibillion dollar corporation whose online marketplace has a substantial impact on the United States' economy, there are many additional competitors in the twisted pair copper network cable market from which the public can purchase the network cables and stimulate the economy. (D.I. 289 at 2-6; D.I. 294 at 2-3); *MercExchange, Ltd. Liab. Co.*, 500 F. Supp. 2d at 587. Taking all factors into account, the public interest would not be harmed should a permanent injunction be granted.

3. Conclusion

For the aforementioned reasons, plaintiffs have failed to demonstrate irreparable

injury, as well as the inadequacy of money damages. Further, should an injunction issue, any hardship to plaintiffs would be outweighed by that to defendants. Plaintiffs' motion for a permanent injunction is denied.

V. CONCLUSION

For the foregoing reasons, the court grants in part and denies in part plaintiffs' renewed motion for JMOL (D.I. 250), denies plaintiffs' motion for a permanent injunction (D.I. 251), and grants in part and denies in part defendants' renewed motion for JMOL (D.I. 254).[26] An appropriate order shall issue.

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[26] Defendants' Rule 50(a) motion for JMOL of invalidity of the patents in suit (D.I. 239), and plaintiffs' Rule 50(a) motions for JMOL of no anticipation and nonobviousness of the patents in suit (D.I. 237, 238) are denied as moot.