Nos. 2017-2597, -2598, -2600, -2602, -2605, -2606, -2609, -2611, -2612, -2627, -2628, -2629, -2630, -2631, -2632, -2633, -2634, 2018-1006

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PRINCETON DIGITAL IMAGE CORPORATION,
Plaintiff/Cross-Appellant,

v.

OFFICE DEPOT INC., J.C. PENNEY COMPANY, INC., QVC INC., SEARS HOLDINGS CORPORATION, LIMITED BRANDS INC., GAP, INC., WILLIAMS-SONOMA, INC., COSTCO WHOLESALE CORPORATION, NORDSTROM.COM LLC, NORDSTROM.COM INC., NORDSTROM INC.,
Defendants,

ADOBE SYSTEMS INCORPORATED,
Defendant-Appellant.

On Appeal from the United States District Court for the District of Delaware, Nos. 1:13-cv-00239-LPS, 1:13-cv-00287-LPS, 1:13-cv-00288-LPS, 1:13-cv-00289-LPS, 1:13-cv-00326-LPS, 1:13-cv-00330-LPS, 1:13-cv-00331-LPS, 1:13-cv-00404-LPS, 1:13-cv-00408-LPS, Chief Judge Leonard P. Stark

CORRECTED NON-CONFIDENTIAL BRIEF FOR APPELLANT ADOBE SYSTEMS INCORPORATED

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January 29, 2018

CERTIFICATE OF INTEREST

Counsel for Appellant Adobe Systems Incorporated certifies the following:

1. The full name of every party or *amicus* represented by me is:

Adobe Systems Incorporated.

2. The names of the real party in interest represented by me is:

Not applicable.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

None.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court (and who have not or will not enter an appearance in this case) are:

WILMER CUTLER PICKERING HALE AND DORR LLP: Brittany Blueitt Amadi, Tasha J. Bahal, Rachel Weiner Cohen, Robert D. Cultice, Tara D. Elliott

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MORRIS JAMES LLP: Kenneth L. Dorsney

5. The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal:

Princeton Digital Imaging Corporation v. Amazon.com, Inc., No. 1:13-cv-00237-LPS (D. Del.).

Princeton Digital Imaging Corporation v. Netflix, Inc., No. 1:13-cv-00328-LPS (D. Del.).

Dated: January 29, 2018

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STATEMENT OF RELATED CASES

Intervenor-Appellant Adobe Systems Incorporated is not aware of any related cases currently pending before this Court. *See* Fed. Cir. R. 47.5.

The following cases pending in the District of Delaware will be directly affected by this Court's decision in the pending appeal:

> *Princeton Digital Imaging Corporation v. Amazon.com, Inc.*, No. 1:13-cv-00237-LPS (D. Del.).
>
> *Princeton Digital Imaging Corporation v. Netflix, Inc.*, No. 1:13-cv-00328-LPS (D. Del.).

Counsel for Adobe is not aware of any other cases pending in this or any other court that could directly affect or be directly affected by the ruling in this case.

JURISDICTIONAL STATEMENT

The district court had jurisdiction pursuant to 28 U.S.C. §§ 1331, 1338, and 1367. Appx1001. The court issued a final judgment on August 25, 2017. Adobe timely appealed on September 22, 2017, Appx5232-5235, and Princeton Digital Image Corporation cross appealed on September 27, 2017, Appx5236-5238. This Court has jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

INTRODUCTION

Princeton Digital Image Corporation ("PDIC"), a single-employee non-practicing entity, accused Adobe Systems Incorporated ("Adobe") of infringing U.S. Patent No. 4,813,056 (the "'056 Patent") in 2011. PDIC, however, agreed to

resolve the threatened litigation for valuable consideration. As part of the settlement, and to eliminate the risk of future litigation, Adobe insisted on and received from PDIC a license to the ’056 Patent, a general release of all claims, and a covenant not to sue Adobe’s customers for infringement of the ’056 Patent. But PDIC reneged on its covenant not to sue. In 2013, it filed over fifty nearly identical infringement complaints against Adobe’s customers and demanded nuisance settlements under the threat of continuing litigation.

Notwithstanding the unequivocal terms of the settlement agreement, PDIC refused to dismiss its complaints against Adobe’s customers, and Adobe was obligated to intervene to defend its customers. It was only after Adobe sought dismissal of PDIC’s complaints, intervened, and filed motions for sanctions, that PDIC finally dismissed most of its complaints.

Discovery confirmed that PDIC had no legal or factual basis for its lawsuits. PDIC had ignored the covenant not to sue and conducted no pre-suit investigation to determine whether the accused infringers were Adobe’s customers or whether PDIC’s targets had any unlicensed activity. In fact, PDIC waited until the very end of the damages period for the long-expired ’056 Patent to sue Adobe’s customers and extract nuisance value settlements. Adobe was ultimately forced to spend the better part of three years—and incur substantial litigation fees and expenses—to compel dismissals of lawsuits that never should have been filed.

The district court found PDIC's litigation conduct "exceptional" under 35 U.S.C. § 285. It denied, however, Adobe's requests for attorneys' fees because, in its view, "Adobe [chose] to litigate these cases aggressively." This decision was not only contrary to the district court's own findings that Adobe had reacted reasonably under the circumstances, but also an abuse of discretion.

The district court also committed legal error in preventing Adobe from presenting its full breach of contract case. The district court ruled that, under New Jersey law, Adobe could only recover "defense" fees and costs—*i.e.*, attorneys' fees and costs incurred solely in defending its customers against PDIC's baseless infringement claims—and not the fees and costs it incurred while pursuing its claim for breach of the covenant not to sue, even if those fees were inextricably intertwined with defending Adobe's customers. The district court's erroneous interpretation of New Jersey law precluded Adobe from proving its substantial damages at trial and prevented Adobe from having the jury trial to which it was entitled.

These errors were compounded by the district court's rulings on PDIC's privilege waiver. PDIC relied on a "good faith" defense to Adobe's breach of contract claim and selectively disclosed privileged materials to support that defense. The district court properly found that PDIC waived attorney-client and work product privileges, and that "fairness" required "examination of protected

communications." Yet the court limited the scope of the waiver to the cases in which Adobe intervened. The district court did so in contravention of the "widely applied standard" that "waiver applies to all other communications relating to the same subject matter." *In re EchoStar Commc'ns Corp.*, 448 F.3d 1294, 1299 (Fed. Cir. 2006); *see Brigham & Women's Hosp. Inc. v. Teva Pharms. USA, Inc.*, 707 F. Supp. 2d 463, 471-472 (D. Del. 2010). This ruling deprived Adobe of the opportunity to discover further evidence showing PDIC's bad faith, and was an abuse of discretion.

Because the district court erred, the Final Judgment entered on August 25, 2017, in favor of PDIC should be reversed or vacated, and remanded.

STATEMENT OF ISSUES ON APPEAL

1. Whether the district court erred in denying sanctions under 35 U.S.C. § 285 and Rule 11 of the Federal Rules of Civil Procedure where, *inter alia*, PDIC's litigation conduct was deemed "exceptional" and PDIC's counsel conducted no independent pre-suit investigation.

2. Whether the district court erred in ruling that, under New Jersey law, only "purely defensive [attorneys'] fees" are recoverable, Appx98—and "defense fees that are 'inextricably intertwined' with affirmative fees are ***not*** recoverable," Appx87(¶ 14)—as damages for breach of a patent license agreement's covenant not to sue.

3. Whether the district court erred in finding that the scope of PDIC's privilege waiver was limited by case number as opposed to subject matter, thereby preventing Adobe from receiving the additional evidence PDIC withheld during discovery probative of the issues to be tried.

STATEMENT OF THE CASE

A. Adobe Acquired A Broad License To The '056 Patent And A Covenant Not To Sue

The '056 Patent, which issued on March 14, 1989, relates to encoding of image data into JPEG files. Appx117-134. In 2009—two years after the patent expired—PDIC, a non-practicing entity, acquired rights to the patent. Appx2117.

After PDIC confronted Adobe alleging infringement of the '056 Patent, Adobe and PDIC entered into an enforceable agreement ("License" or "Agreement"), *see* Appx1538-1542, which granted Adobe a fully paid-up license to the '056 Patent, on June 6, 2011, Appx1539-1540(§§ 3.1, 3.2). The Agreement defines "Adobe Related Entities" as "Adobe's … licensees, customers, and end users," Appx1538(§ 1.3), and "Licensed Product(s)" as "any and all past, present, and future Adobe products … of any kind singly or in combination with any other products." Appx1538(§ 1.4). The License covers Adobe Photoshop®, one of the most common programs used to encode image data into JPEG files, and Scene7, which processes JPEG files for display when an Adobe customer's website is requested. Appx1960-1961(¶¶ 24-25).

PDIC granted a release and "an irrevocable, unrestricted, fully paid-up, perpetual covenant not to sue Adobe" and its licensees, customers, and end users for any '056 Patent infringement claims arising "in whole or in part" from manufacture or use of an "Adobe Licensed Product." Appx1538-1539(§§ 1.3, 3.1); *see* Appx1216 ("[PDIC] does not dispute that the License Agreement … is a valid license and covenant not to sue."). As consideration, Adobe paid PDIC $200,000. Appx1540(§ 4.1).

B. PDIC Filed Baseless Complaints Against Adobe's Customers To Extract Nuisance Value Settlements

On December 21, 2012—five years after the '056 Patent expired and less than a year before the statute of limitations ran—PDIC filed the first of fifty-one nearly identical patent infringement actions against various defendants, most of which were Adobe customers. *See, e.g.*, Appx1001-1003; Appx5239-5241; Appx5303-5305; Appx5338-5340; Appx5373-5375; Appx5408-5410; Appx5443-5445; Appx5478-5480; Appx5513-5516. PDIC alleged that defendants infringed by "encod[ing] image data into JPEG files for purposes of producing JPEG images of products sold through Defendant's websites and/or converting existing images of such products into JPEG images of said products having different sizes and/or image quality, all for display on Defendant's websites for … selling said products." *See, e.g.*, Appx1002(¶ 9). The alleged infringing activity for most of

the defendants resulted merely from their use of Adobe products to display images on their websites; products that were licensed the previous year.

Shortly after filing the actions, PDIC sent each defendant a low-cost settlement offer that expired in ten days. PDIC indicated it was "entitled to recover damages for infringement of the patent that occurred prior to its expiration [on December 8, 2007] but within six years of the date [PDIC] filed suit." Appx2117-2118. The letter also included the price at which PDIC was willing to resolve the matter "without the need for protracted litigation." *Id.* In its lawsuit against L.L. Bean Inc. ("L.L. Bean") (Case No. 13-cv-325), PDIC demanded $125,000—a fraction of what it would have cost to litigate. *Id.* While Adobe worked to seek dismissal of the claims against customers who requested indemnity, some customer-defendants agreed to settle their cases with PDIC by paying nuisance-value fees. Appx3644-3645; Appx3842-3843; Appx5189(30:4-13).

1. Adobe repeatedly sought dismissal of the lawsuits against its licensed customers.

Beginning in 2013, Adobe again became entangled with PDIC. Adobe's customers unsurprisingly requested Adobe provide indemnity and defense in the infringement actions brought by PDIC. *See, e.g.*, Appx2146-2154; Appx1658-1660 (Adobe's indemnification obligation). Adobe's initial efforts included fielding numerous inquiries from its customers and their counsel, and reminding PDIC of its obligations under the Agreement. *See, e.g.*, Appx2146-2154. Unable

to resolve the disputes, on September 20, 2013, Adobe moved to intervene in PDIC's action against L.L. Bean. Appx1550-1567. Adobe explained that, in addition to L.L. Bean, many other defendants were seeking Adobe's involvement because their alleged infringement stemmed from the use of Adobe products to create JPEG content displayed on their websites. *See, e.g.*, Appx1658-1660; Appx1550-1567.

While its motion to intervene was pending, Adobe, in consultation with PDIC, sent a letter to Adobe's customers. Appx2175-2176. The letter advised defendants that Adobe and PDIC had previously agreed to the License; that it extended broad protection from infringement, including a covenant not to sue Adobe's customers for using Adobe products; and that PDIC had agreed that the License was in full force. *Id*. Given PDIC's acknowledgement, Adobe contacted PDIC numerous times seeking dismissal of the pending lawsuits, specifically on January 13, January 30, February 13, March 13, and May 2, 2014. Appx2178-2218. PDIC refused to engage in any meaningful discussion or provide any basis for its infringement allegations distinct from defendants' use of Adobe's products, which were protected from suit under the License.

The day before the hearing on Adobe's motion to intervene in the L.L. Bean case, PDIC submitted a letter to the district court, admitting—for the first time—that defendants' use of Adobe products was covered by the License. Appx2220-

2222. PDIC conceded that even the "slim window of possible infringement" was foreclosed. Appx2220. PDIC represented that it would "dismiss L.L. Bean, as well as other defendants" whose websites were created with Adobe-licensed products. Appx2221.

The following day, PDIC told the district court that it had "assured" Adobe "that [PDIC] intend[s] to honor [its] agreement with Adobe," that PDIC does "not intend to go after [Adobe's] customers," and that PDIC was "not going to violate that agreement." Appx2227(4:18-5:4); *see* Appx2228(5:16-23) ("[PDIC's] view of things is that this case is about to be closed out."). One week later, PDIC dismissed its claims against L.L. Bean. Appx2242-2245.

In view of PDIC's representations, Adobe contacted PDIC on July 16, 2014, and sought immediate dismissal of the remaining cases against its other licensed customers. Appx2247-2249. PDIC refused. Adobe and defendants thereafter continued to request dismissal, or even an explanation of how PDIC's infringement allegations did not implicate licensed activity. In response, PDIC sent Adobe a vaguely worded e-mail: "At this time, PDIC has not concluded that any purported Adobe customer shall remain as a defendant in the ongoing litigation. … PDIC's investigation continues." Appx2251.

To hasten the dismissals, Adobe provided PDIC evidence—including records of its product sales to defendants, and copies of the end-user license

agreements—demonstrating that PDIC's infringement allegations were meritless. *See, e.g.*, Appx1649-1704; Appx1712-1773; Appx1775-1824; Appx2186-2218 (volume sales tables); Appx1123-1124 (listing the uncontested proof provided by Adobe and its customers). Some defendants also sent PDIC declarations and letters explaining that they used Adobe products to display images on their websites during the alleged infringement period. *See, e.g.*, Appx1647; Appx1706-1710. For instance, PDIC received a declaration from Nordstrom on October 24, 2014, which made clear it only used Adobe products to create images on its websites in 2007. Appx2427-2428. PDIC failed to dismiss the Nordstrom action for seven more months, and did so only after Adobe intervened. Appx384; Appx5538-5539 (Nordstrom dismissed May 28, 2015).

2. Adobe intervened and sought sanctions.

On October 24, 2014, the same day PDIC received the Nordstrom declaration, counsel for Adobe reiterated Adobe's concerns with PDIC's litigation conduct in a teleconference with PDIC. When asked about his Rule 11 basis for filing suit, PDIC's outside counsel admitted he was not aware of the basis for PDIC's claims and did not know what encoding software defendants used to create JPEG images during the alleged infringement period. Appx1208(¶¶ 2-4). Shortly thereafter, Adobe sent PDIC a letter stating that PDIC's continued prosecution of

claims based on licensed activity was unwarranted, frivolous, a breach of contract, and in violation of Rule 11. Appx1156-1157. PDIC ignored Adobe's letter.

On November 26, 2014, Adobe filed an omnibus motion to intervene on behalf of nine of its licensed customers, who had requested indemnity at that time. Appx1024-1029; Appx1030-1052. The district court granted the opposed motion. It determined that Adobe could intervene as a matter of right because Adobe had a "significant protectable interest in the ligation." Appx2061-2062(81:25-82:2). This finding was based on the facts that some of the accused acts of infringement "may have been done with Adobe products," Appx2062(82:7-9); that defendants had requested Adobe indemnify them for any liability, Appx2062(82:10-12); that the lawsuits created a cloud over Adobe's products, Appx2062(82:13-15); and that they involved disputes over the meaning of the License, Appx2062(82:16-20). The district court further recognized that Adobe's interests were "not adequately represented by the existing parties." Appx2063(83:5-12). The district court also granted permissive intervention because the cases would be "most effectively" resolved if Adobe was a party. Appx2063-2064(83:14-84:1).

More than twenty months after PDIC filed suit—PDIC's counsel asked its expert, Dr. Omid Kia, to determine whether the images on ten defendants' websites were created with Adobe products. Appx4477-4487. Though Adobe and the district court were not aware until days before trial, PDIC's expert advised PDIC in

December 2014 that there was no evidence of infringement for several defendants. Appx4478-4479 (Limited Brands: "No infringement observed"; Nordstrom: "All images were made by Adobe"; Office Depot: "The few pages and images that [were] accessible all had [A]dobe product signature"; QVC: "All images on the landing page are made by Adobe products"; Staples: "very few jpeg images, all of which used the Abode [sic] tool. Does not infringe"; The Gap: "All found images were made by Adobe").[1] PDIC, however, pursued claims that its own expert believed were meritless.

On January 14, 2015, Adobe moved for sanctions based on PDIC's failure to conduct even a minimal pre-suit investigation, attempts to improperly extract nuisance-value settlements, and failure to dismiss its lawsuits even after receiving confirmation that its claims were frivolous. Appx1495-1500; Appx1501-1529. PDIC's outside counsel and PDIC's President and General Counsel, Thomas Meagher (who had signed the Agreement for PDIC), filed declarations in opposition. Appx1879-1883; Appx1884-1892. Absent from outside counsel's declaration was any assertion that he or anyone at his firm conducted a pre-suit investigation; reviewed defendants' websites; conducted any independent analysis; read the asserted patent or file history; conducted a patent validity analysis; or

[1] During discovery, PDIC refused on multiple occasions to produce Dr. Kia for deposition. Appx4171-4174.

asked Thomas Meagher what, if any, pre-suit review PDIC conducted. Appx1884-1892.

The scope of PDIC's entire pre-filing review was described in Thomas Meagher's seven-paragraph declaration: he claimed that he or his unnamed "agent" reviewed defendants' websites using a website called "archive.org" to determine whether, in 2007, each employed enlargeable JPEG images, which he understood to "employ[] JPEG encoding and infringed the '056 patent." Appx1882(¶ 4). He failed to explain, however, how he or his "agent" reviewed defendants' websites given that PDIC and its counsel were unable to "perform image analysis on five of the Alleged Licensee's websites." *See*, *e.g.*, Appx1862; Appx1891(¶ 15); Appx1169. Moreover, Thomas Meagher failed to specify when he or his "agent" allegedly reviewed defendants' websites; if any of the alleged "JPEG images of products being sold on the websites" were non-Adobe images; what, if any, claim construction or infringement analysis led to a belief that each (or any) of the asserted '056 Patent claims were infringed; or what, if any, patent validity analysis was undertaken.

At a hearing on the motion, PDIC conceded that there was nothing in the record to indicate its outside counsel performed any pre-filing investigation, Appx2005(25:7-14); that Thomas Meagher's declaration was the only evidence before the court regarding the extent of the pre-suit investigation, Appx2001-

2002(21:22-22:7); that Thomas Meagher failed to perform any claim construction analysis, Appx2002-2003(22:25-23:10); and that Thomas Meagher failed to consider the License with Adobe even though he had signed and had actual knowledge of it, Appx2006-2007(26:10-27:10).

The district court denied without prejudice Adobe's motion for sanctions. It found that "the conduct of plaintiff's and plaintiff's counsel [was] at least close to the line that Rule 11 requires the court to draw." Appx2064(84:5-7). The district court declined to decide "which side of [the] line plaintiff and plaintiff's counsel [fell] under," stating: "They may well have conducted a just barely adequate investigation given all the facts and circumstances prior to suit. … But they very well may not have." Appx2064(84:7-20). The district court instructed that Adobe was "free" to renew its motion. Appx2064(84:16-20).

C. After Adobe Petitioned The Court, PDIC Dismissed Its Infringement Claims

On May 8, 2015, Adobe filed a complaint in intervention, seeking relief for patent misuse and breach of contract. Appx1955-1967. Although the court dismissed Adobe's patent misuse claim, it allowed Adobe's breach of contract claim to proceed. Appx16-21; Appx47(¶¶ 1, 3). Adobe alleged that PDIC breached the License by suing Adobe's customers for patent infringement. Appx1955-1967. Adobe sought damages covering "any fees, costs, or expenses [that Adobe] incurred and [would] incur in connection with defending its

customers for the use of Adobe's licensed products and services, including but not limited to its own attorneys' fees." Appx1965(¶ 44).

After "consult[ing] with an expert to confirm that the statements [averring use of Adobe products to display website images] in each defendant's declaration were true," Appx2981; Appx2987, PDIC dismissed with prejudice its claims against defendants in the cases in which Adobe intervened. Appx384; Appx5538-5539 (Nordstrom dismissed May 28, 2015); Appx2067-2068; Appx234; Appx5362-5363; Appx265; Appx5397-5398; Appx295; Appx5432-5433 (Office Depot, Sears, Limited Brands, and Gap dismissed July 7, 2015); Appx174; Appx5292-5293; Appx204; Appx5327-5328; Appx355; Appx5502-5503 (J.C. Penney, QVC, and Costco dismissed July 28, 2015); Appx325; Appx5467-5468 (Williams-Sonoma dismissed July 31, 2015). PDIC still, however, maintained its actions against other Adobe customers that had later requested indemnity and defense.[2]

[2] On December 7, 2016, PDIC dismissed its infringement claims against Guitar Center and Musician's Friend, the last remaining Adobe customers that submitted a formal, written request for defense and indemnification. *Princeton Digital Image Corp. v. Musician's Friend, Inc.*, No. 13-cv-00520, Stipulation of Dismissal (D. Del. Dec. 6, 2016) (ECF No. 18). It took more than three years of Adobe's active participation in these cases to obtain the dismissals. PDIC's lawsuits against Amazon and Netflix, however, continued.

D. Adobe Filed A Renewed Motion For Sanctions

On August 21, 2015, as permitted by the district court, Adobe filed a renewed motion for sanctions under Rule 11 and § 285. Appx2071-2076; Appx2077-2105. Adobe argued that (1) PDIC and its counsel failed to conduct a reasonable pre-suit investigation, Appx2092-2095; (2) PDIC and its counsel filed lawsuits against Adobe's customers to extract nuisance-value settlements, Appx2096-2098; (3) PDIC maintained its frivolous lawsuits despite uncontroverted evidence that defendants' use of Adobe's products compelled dismissal, Appx2098-2100; and (4) PDIC made inconsistent statements to the court and filed papers with no basis in law or fact, Appx2100-2102.

In opposition, PDIC presented a new, "server-level" infringement theory, a theory that appeared nowhere in any of its complaints or prior submissions to the court. *See*, *e.g.*, Appx2625-2626(¶¶ 30-36). Under this theory, PDIC claimed it was justified in maintaining its actions—even when faced with evidence that Adobe customers used Adobe products—because those customers enlarged images "on-the-fly" at the web server level, rather than through use of Adobe products. Appx2597; Appx2606. PDIC again included declarations from its outside counsel and Thomas Meagher, but neither provided an explanation for why PDIC delayed revealing this theory or why the facts regarding its purported *pre-suit* investigation had changed.

1. The court found the cases "exceptional."

The court found PDIC's infringement cases "exceptional" under § 285. Appx39-40. It found the following factors weighed in favor of exceptionality:

- "[C]ounsel did not learn of the Adobe License prior to filing suit," and "counsel did not undertake any independent investigation." Appx27-28. The court found it "striking" that Thomas Meagher—who was "fully familiar with the '056 Patent" and "the Adobe License"—"did not make counsel aware of the existence of the Adobe License." Appx28.

- "[Thomas] Meagher did not attempt to identify ***any*** suppliers of software that may have executed the JPEG functionality … accused under PDIC's 'web server' theory of infringement." Appx29. The court was "troubled that [Thomas] Meagher, PDIC, and its counsel wholly failed to connect ***any*** of the dots between Scene7, the [d]efendants' websites, and the Adobe License before suing [d]efendants." Appx30.

- "PDIC[] delay[ed] … disclosing its web server theory of infringement." Appx30. Rather than waiting "2 ½ years," it would have been "preferable" for PDIC to "have articulated its web server theory of infringement" before Adobe "served its Rule 11 motion." Appx30-31.

- PDIC made "inconsistent representations before the [c]ourt"—including its May 5, 2015, representation that counsel "conducted no pre-suit investigation ***whatsoever***," as contrasted with its later representations that "counsel ***independently*** reviewed claim charts and discussed matters with [Thomas] Meagher." *Id*.

- PDIC was "far from clear" about its interpretation of the Agreement. Appx33.

- PDIC's theory of infringement changed during suit: "At the May 5, 2015 hearing, counsel for PDIC stated that PDIC would drop its lawsuits if accused images were made with Adobe Photoshop®. Later, PDIC suggested, under its new web server theory, that [d]efendants could still infringe even if they only used Adobe

> Photoshop® to create all of the accused images, so long as the 'Enlarged Product View' JPEG functionality was not implemented using Scene7." Appx32 (internal citations omitted); *see* Appx29 n.20.

- PDIC made "minimal effort to develop facts (pre-or post-suit) related to infringement." Appx33. The court found it "problematic" that PDIC "contracted to license Adobe and Adobe's customers, obtaining substantial financial consideration in exchange, and then decided to sue some of those very customers—insisting vaguely that the suit extended only to those customers' unlicensed conduct, and requiring those customers (or Adobe) to demonstrate what was licensed." Appx33.

- PDIC "delay[ed] in dismissing the Nordstrom action." Appx33.

The court also examined PDIC's litigation conduct—including its "far from ideal pre-suit investigation"; "somewhat careless, dilatory" conduct; "repeated" and "at times hard-to-believe" "protestations that PDIC had no intent to accuse any licensed conduct of infringement"; "unexplained delay in dismissing at least one of the [cases in which Adobe intervened]"; and "failure to carefully, consistently, and thoroughly respond to Adobe's reasonable inquiries as well the [c]ourt's questions." Appx40. Faced with this litigation misconduct, the court concluded these cases "stand out from the rest" and were "exceptional." *Id*.

2. The court refused to award fees.

Notwithstanding its "exceptional" case finding, the district court did not award fees under § 285 or Rule 11. The denial of fees under § 285 was based on the court's view that Adobe litigated the cases "aggressive[ly]." Appx40-41. Yet, as the court found, it was PDIC—not Adobe—who "could have done more to

advance the litigation much more efficiently," engaged in "somewhat careless and dilatory conduct," "extended [the] litigation," and "increased the amount of resources expended by the parties." *Id*. The district court excused this behavior by noting that PDIC's actions were the "result of the unique circumstances of these cases," which included "motion practice based on wholly-undeveloped theories of license interpretation and patent infringement." Appx41. The district court overlooked that PDIC—not Adobe—was responsible for advancing these "wholly-undeveloped theories."

The district court also criticized Adobe for filing "***two*** motions for sanctions before the case even got to the discovery phase." Appx41. Yet the court previously held that the first motion was a close call, denying it without prejudice, and specifically granted leave for Adobe to file its second motion. Appx2064(84:16-20). And the district court was mistaken; discovery was well underway, as evidenced by the docket report and Adobe's citations to and oral arguments based on PDIC's discovery responses. *See, e.g.*, Appx2095 (citing admissions of PDIC's expert); Appx2835(64:3-10).

The district court denied fees under Rule 11 because it "[could not] say that PDIC's pre-suit investigation was inadequate or that any filing was made for any improper purpose or without a reasonable factual or legal inquiry taking place prior to the filing." Appx42.

E. PDIC Withheld Critical Discovery

In defense of Adobe's breach of contract claim, PDIC asserted that it brought and litigated the infringement actions in good faith. Appx5270. Adobe sought discovery relating to this defense, including documents related to PDIC's pre- and post-suit investigation, evidence that Adobe's customers were using Adobe products to engage in the alleged infringement, and the reasons for dismissing its infringement actions. Appx2894-2989.

In support of its defense, PDIC selectively disclosed privileged information. For instance, PDIC produced an e-mail labeled "CONFIDENTIAL AND PRIVILEGED," between Thomas Meagher—acting as PDIC's general counsel—and his brother William Meagher. Appx3409. Thomas asked William to investigate litigation targets and attached a list of companies using the internet for commerce in 2007. *Id*.; *see* Appx3412-3419. He instructed William to exclude companies he had not heard of or guessed did not "make a ton of money." Appx3409. Thomas' "goal [was] to end up with a list of 10-30 companies that made substantial use of JPEG encoding in 2007 and made a lot of money during 2007." *Id*. Both Thomas and William also provided deposition testimony relating to this e-mail and confirmed that it was privileged. Appx3270-3271(189:5-190:6); Appx3443-3453(54:11-97:21).

Despite producing and testifying about privileged communications, PDIC withheld other privileged information on the same subject matter central to the parties' disputes.[3] Adobe moved to compel. Appx3340-3346; Appx3347-3367. On August 1, 2017, the court granted Adobe's motion, holding that "fairness" required "examination of protected communications." Appx4205 (because PDIC could not "'use the privilege as a sword rather than a shield' and thereby 'divulge whatever information is favorable to [the client's] position and assert the privilege to preclude disclosure of the detrimental facts.'") (*quoting In re Grand Jury Subpoena Issued to Galasso*, 913 A.2d 78, 87 (N.J. Super. Ct. App. Div. 2006)).

PDIC moved for "reargument," asserting that it had not waived privilege and that, even if it had, the scope of the privilege was limited. Appx4214; *see* Appx3466. PDIC also argued that complying with the district court's order would require a "massive undertaking." Appx4214.

Even though it "[wa]s not persuaded that there [wa]s a 'need to correct a clear error of law or fact or to prevent manifest injustice,'" the district court granted PDIC's motion and narrowed its order, "given the parties' disputes about

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[3] PDIC produced other privileged communications, including a confidential claim chart prepared for Apple regarding the '056 Patent. Appx3321-3325. PDIC also described some of its pre-suit activities in its interrogatory responses, Appx2968-2969; and stated that, in deciding whether to dismiss the cases against defendants, PDIC consulted with (an unidentified) expert to confirm that images on defendants' websites were in fact created with Adobe software as stated in defendants' sworn declarations, Appx2981.

the scope of the [c]ourt's previous order, the approaching trial date, and the fact that infringement actions involving the '056 patent remain pending." Appx74-75. It affirmed that PDIC had waived privilege, but ordered PDIC to supplement its document production and interrogatory responses only "with respect to the present cases." *Id*.

Adobe immediately requested reconsideration, arguing that the district court improperly narrowed its order and that PDIC was obligated to produce all documents concerning the same subject matter. Appx4312-4320. At the pretrial conference, PDIC itself indicated that the universe of documents withheld under the now-waived privilege were materially different in volume from the eighteen privileged documents produced for the nine cases proceeding to trial. Appx5116(62:13-21).

The district court denied Adobe's motion "without prejudice to renew after the trial." Appx5129-5130(75:14-76:3). The court explained that Adobe could raise "the privilege waiver issue again after [the] trial" and try to "persuade" the court that PDIC "should have produced more." Appx5131(77:2-8). The court could then decide whether "the whole trial … was somehow wrong or unfair and needs to be redone." Appx5131(77:2-7).

F. The Court Limited The Type Of Damages Adobe Could Recover To "Purely Defensive" Fees

On the eve of trial, the district court reversed course from earlier rulings and limited the type of damages Adobe could recover in its breach of contract action. PDIC had previously argued in a motion for leave to file an early summary judgment motion that New Jersey law does not allow attorneys' fees and litigation expenses as damages for breach of contract. Appx3054-3056. The district court denied PDIC's motion. Appx3166; *see* Appx3173-3175(7:11-9:5). PDIC tried unsuccessfully two more times for summary judgment on the issue of damages.

In its second motion, PDIC asserted the same arguments as its prior motion but added—without support—that, even if Adobe could recover fees incurred in defending its customers from PDIC's infringement claims, Adobe could not recover fees incurred in pursuit of its affirmative breach of contract claim. Appx3579-3602. Adobe responded that fees incurred because of a party's breach of contract are recoverable as compensatory damages under New Jersey law, and emphasized that all its attorneys' fees were attributable to its defense of PDIC's baseless infringement claims against its customers. Appx3785-3786.

The district court ruled that, under New Jersey law, a party can recover attorneys' fees incurred due to another party's breach of a covenant not to sue, but only if it can demonstrate obvious breach or bad faith. Appx63-64. The district court believed that a reasonable factfinder could find that PDIC's breach of the

covenant not to sue was obvious or in bad faith. Appx64. The court, however, found that Adobe could not "collect as damages for the breach of contract any attorney fees Adobe incurred in the affirmative breach-of-contract suit." *Id*. Thus, in denying PDIC's second motion, the district court ordered Adobe to disaggregate its defense fees from its affirmative fees in a supplemental expert report. Appx65; Appx68-71.

Although Adobe disagreed with the district court's ruling, it expressly preserved its rights and sought to comply with the court's order. Adobe filed a supplemental expert report on August 7, 2017, which excluded over $1 million in fees incurred after December 7, 2016—fees to which Adobe submits it was entitled to recover under a correct reading of the applicable law. Appx4261-4268. Adobe's expert opined that Adobe's fees incurred through December 7, 2016—the date PDIC dismissed its infringement claims against the last Adobe customers that had tendered a written request for defense and indemnity—were in defense of its customers, and thus recoverable. Appx4265(¶ 7).

In response, PDIC moved for summary judgment a third time, arguing that Adobe's supplemental expert report failed to disaggregate defensive fees from affirmative fees. Appx4255-4256. The motion neither included any expert analysis, as PDIC never hired a damages expert to analyze Adobe's attorneys' fees, nor proposed an alternative damages calculation. Adobe maintained that when

defensive fees are "inextricably intertwined" with affirmative fees, those fees are recoverable. *See*, *e.g.*, Appx5059-5064(5:16-10:6).

Four days before trial, the district court struck Adobe's supplemental expert report as not compliant with its order on PDIC's second summary judgment motion because it did not separate defense fees from affirmative fees. Appx81-82. The district court further ruled that Adobe's expert did not opine that the defense and affirmative fees were inextricably intertwined and that, in any case, New Jersey law does not permit recovery of affirmative fees, even if inextricably intertwined with defense fees. Appx84-85.

The district court, however, denied PDIC's third motion for summary judgment, saying, even without the supplemental expert report, "[t]here [was] sufficient evidence of record of Adobe's purely defensive fees, including Adobe's billing records, on which a reasonable juror could find that Adobe has proven the damages element of its breach-of-contract claim." Appx86. Thus, the court ordered Adobe to file a letter that:

> "(i) disclos[ed] the total amount (in dollars) of defense fees Adobe is seeking as breach-of-contract damages (i.e., only those fees that Adobe incurred in defending its customers in the infringement suits and ***no fees associated with Adobe's breach-of-contract claim***; defense fees that are 'inextricably intertwined' with affirmative fees are ***not*** recoverable), and (ii) identify[] with particularity the record bases (e.g., the specific legal bills) on which Adobe intends to rely to support its calculation of the amount of damages it is seeking."

Appx87.

Adobe disagreed with the district court's interpretation of the law and the record, but again preserved its rights and endeavored to comply with the order. Adobe filed a letter indicating it was seeking $517,694 as "affirmative" damages. Appx4512. *Compare* Appx4265(¶ 8) (noting that the total fees Adobe incurred in defending its customers between September 3, 2013 and December 7, 2016 was approximately $1.35 million).

On the morning that trial was scheduled to begin, and in response to PDIC's fourth motion for summary judgment, the district court ruled that Adobe "did not comply" with the court's order because Adobe's damages figure included fees associated with affirmative claims—or at least affirmative fees that are inextricably intertwined with defense fees—such as those incurred in November 2014 when Adobe was preparing its motion to intervene and complaint. Appx5203-5205. The district court found that it was "undisputed" that "some amount of Adobe's legal fees are purely defensive" under the court's definition, and therefore "a reasonable juror could find that Adobe has proven some damages." Appx5205(46:13-17). Therefore, the only way the district court could grant summary judgment "would be not due to a lack of evidence but due to noncompliance as a sanction to Adobe." Appx5205(46:17-19). The court ordered Adobe to present a "purely defensive number to the jury" and to redact "any documents it seeks to introduce into evidence." Appx5205-5206(46:22-47:7).

Adobe immediately asked the district court for guidance on what it meant by "purely defensive"—*i.e.*, what categories of fees were included and excluded in the court's ruling. Appx5207-5209(48:15-50:21); *see* Appx5210-5211(51:10-52:25) (explaining that Adobe had made judgment calls it believed were responsive to the court's rulings but each time the court indicated Adobe was wrong and noncompliant); Appx5223(64:6-12); *see generally* Appx5160-5231. The court provided no further guidance. Appx5209(50:22-24); Appx5217(58:18-25).

G. Adobe Stipulated To Judgment Because It Could Not Establish "Purely Defensive" Damages Under The Court's Rulings

Adobe concluded that it could not identify a damages number of "purely defensive fees" under the court's erroneous articulation of the law. Accordingly, Adobe informed the court that it did not have damages to present to a jury, and requested, with the consent of PDIC, that the court enter a stipulated judgment from which Adobe could appeal. Appx5226-5228(67:12-69:10).

The court entered final judgment in favor of PDIC and against Adobe. Appx108. Adobe filed a timely notice of appeal, and PDIC cross appealed. Appx5236-5238.

SUMMARY OF THE ARGUMENT

1. The district court abused its discretion by denying Adobe's request for fees. Under 35 U.S.C. § 285, the court found PDIC's litigation conduct exceptional for several reasons including, for example, that PDIC's theory of

infringement changed. Appx29 n.20. Yet, the court denied fees on the unsupported ground that Adobe litigated aggressively. Appx41. But it was PDIC's conduct—not Adobe's—that "extended [the] litigation" and "increased the resources expended." Appx34. This Court's caselaw, including *Oplus Technologies, Ltd. v. Vizio, Inc.*, 782 F.3d 1371 (Fed. Cir. 2015) ("*Oplus*"), instructs that fees should have been awarded here, as PDIC's misconduct forced Adobe to incur unnecessary litigation expenses.

The district court also abused its discretion by denying sanctions under Rule 11. The district court's opinion contains factual findings that support a Rule 11 violation and an award of fees, for instance that "[c]ounsel for PDIC did not undertake any independent investigation," Appx27, and "did not consider the Adobe License before filing suit." Appx28. The district court impermissibly excused PDIC's "incomplete and far from ideal" pre-suit investigation, Appx35, and disregarded record evidence—including that PDIC filed over fifty nearly-identical infringement actions and immediately sought exploding, nuisance-value settlements—that supported a finding that the infringement suits were filed for an improper purpose. *See Eon-Net LP v. Flagstar Bancorp*, 249 F. App'x 189, 195-98 (Fed. Cir. 2007), *aff'd* 653 F.3d 1314 (Fed. Cir. 2011).

2. The district court improperly ruled that, under New Jersey law, "only those fees that Adobe incurred in defending its customers in the infringement suits

and ***no fees associated with Adobe's breach-of-contract claim*** [are recoverable breach of contract damages]; defense fees that are 'inextricably intertwined' with affirmative fees are ***not*** recoverable." Appx87(¶ 14). This conclusion was legal error and represents new law in New Jersey. Fees incurred in Adobe's breach of contract claim are recoverable compensatory damages under New Jersey law because they are the natural and probable consequence of PDIC's breach, *see Pickett v. Lloyd's*, 621 A.2d 445, 474 (N.J. 1993), and would not have incurred but for PDIC's breach, *see Goodyear Tire & Rubber Co. v. Haeger*, 137 S. Ct. 1178, 1184 (2017). These fees are the actual measure of damages of PDIC's breach of the covenant not to sue. Moreover, Adobe's breach of contract claim is inextricably intertwined with its customers' license defense. Thus, this claim is defensive in nature, and fees incurred prosecuting it are recoverable as defense costs. *See Voorhees v. Preferred Mut. Ins. Co.*, 588 A.2d 417, 425 (N.J. Super. Ct. App. Div. 1991).

3. The district court correctly determined that PDIC waived both the attorney-client and attorney work product privileges, but it misapplied the law by limiting the scope of that waiver to the nine cases in which Adobe intervened. Indeed, "[t]he widely applied standard" is that the "the waiver applies to all other communications relating to the ***same subject matter***." *In re EchoStar Commc'ns Corp.*, 448 F.3d 1294, 1299 (Fed. Cir. 2006) (emphasis added). The district

court's ruling deprived Adobe of probative evidence and an opportunity for a fair trial on the full scope of relevant facts. This ruling was an abuse of discretion.

The district court's errors require reversal, or vacatur, and remand of (1) its March 28, 2016, decision denying sanctions; (2) its August 9, 2017, order limiting the scope of PDIC's privilege waiver; and (3) its August 1, 17, and 21, 2017, rulings regarding damages.

ARGUMENT

I. THE COURT ERRED IN DENYING SANCTIONS

A. Standard Of Review

This Court reviews for abuse of discretion the denial of attorneys' fees under 35 U.S.C. § 285. *Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.*, 134 S. Ct. 1744, 1747 (2014). Section 285 "imposes one and only one constraint on district courts' discretion to award attorney's fees in patent litigation: [t]he power is reserved for 'exceptional' cases." *Octane Fitness, LLC v. Icon Health & Fitness, Inc.*, 134 S. Ct. 1749, 1755-1756 (2014). "[A]n 'exceptional' case is simply one that stands out from others with respect to the substantive strength of a party's litigating position (considering both the governing law and the facts of the case) or the unreasonable manner in which the case was litigated." *Id.* at 1756. A district court abuses its discretion under § 285 when its ruling rests on an erroneous legal

conclusion or on a clearly erroneous assessment of the evidence. *Id*.; *see also Apple Inc. v. Samsung Elecs. Co.*, 809 F.3d 633, 639 (Fed. Cir. 2015).

Similarly, this Court reviews a denial of Rule 11 sanctions for an abuse of discretion, which occurs if the district court based its ruling on an erroneous view of the law or on a clearly erroneous assessment of the evidence. *See Raylon, LLC v. Complus Data Innovations, Inc.*, 700 F.3d 1361, 1367 (Fed. Cir. 2012), *cert. denied*, 134 S. Ct. 94 (2013); *see also CTC Imports & Exports v. Nigerian Petroleum Corp.*, 951 F.2d 573, 577 (3d Cir. 1991).[4]

B. The District Court Abused Its Discretion By Denying Attorneys' Fees Under § 285

"The court in exceptional cases may award reasonable attorney fees to the prevailing party." 35 U.S.C. § 285. Here, the district court found the cases PDIC filed against Adobe's customers "exceptional." Denying Adobe fees in the face of PDIC's litigation misconduct—as documented by uncontested facts—was an abuse of discretion.

1. The district court properly found the cases exceptional based on PDIC's egregious litigation conduct.

The court's opinion contains a litany of reasons as to why PDIC's litigation conduct was deemed exceptional; yet the court inexplicably refused to award fees

[4] This Court applies regional circuit law to Rule 11 cases and Federal Circuit law to § 285 cases. *See Digeo, Inc. v. Audible, Inc.*, 505 F.3d 1362, 1366-1367 (Fed. Cir. 2007).

and costs. Appx7-8; Appx27-33 (*e.g.*, PDIC's counsel "did not learn of the Adobe License prior to filing suit"; PDIC "delay[ed]" "2 1/2 years" to "disclos[e] its web server theory of infringement," which was "after Adobe [successfully] moved to intervene"; "Mr. Meagher's articulation of PDIC's web server theory of infringement was not included in his original … declaration describing PDIC's pre-suit investigation"); *see supra* 16-18. These reasons are more than sufficient under governing law to award fees and costs, especially where courts have found exceptional cases based on the strength and reasonableness of infringement claims and pre-litigation and litigation conduct. *See, e.g.*, *AdjustaCam, LLC v. Newegg, Inc.*, 861 F.3d 1353, 1361 (Fed. Cir. 2017) (reversing and remanding for entry of attorney fee award where plaintiff maintained baseless infringement case and behaved "dubious[ly]" in litigating the case); *Monolithic Power Sys., Inc. v. O2 Micro Int'l, Ltd.*, 726 F.3d 1359, 1367 (Fed. Cir. 2013) (finding case exceptional where plaintiff "withdrew its claims and granted covenants not to sue after substantial litigation had taken place"); *Eon-Net LP v. Flagstar Bancorp,*, 653 F.3d 1314, 1324 (Fed. Cir. 2011) ("[M]any varieties of misconduct can support a district court's exceptional case finding, including lodging frivolous filings and engaging in vexatious or unjustified litigation."); *Microstrategy Inc. v. Crystal Decisions, Inc.*, 555 F. Supp. 2d 475, 480 (D. Del. 2008) (finding patent owner's conduct manifestly unreasonable where patent owner neglected to reevaluate its position

and continued to assert infringement claims in the face of clear and convincing contrary evidence).

Based on the district court's extensive findings regarding PDIC's litigation conduct—which "extended litigation" and "increased resources expended … by the parties and the [c]ourt"—the district court correctly found these cases exceptional. Appx34.

2. PDIC's litigation misconduct should have resulted in an attorney fee award.

After its lengthy recitation of Plaintiffs' litigation misconduct and correct finding that PDIC's infringement cases were exceptional based on that conduct, the district court nevertheless denied an award of attorneys' fees because, in the court's view, Adobe litigated "aggressively." Appx41. This ruling was an abuse of discretion.

a. Whether Adobe litigated aggressively is not a reason to deny fees under this Court's case law.

The district court's subjective conclusion that Adobe litigated aggressively does not support a denial of fees. The district court cited no caselaw—and Adobe is aware of none—in which fees were denied in an exceptional case solely because the moving party was perceived to have proceeded aggressively. Rather, this Court's caselaw emphasizes that fees should be awarded where plaintiff engages in litigation misconduct that forces defendant to incur needless expenses.

For instance, in *Oplus*, like here, the district court found the case "exceptional" but refused to award fees. *Oplus'* exceptional finding was based on plaintiff's misconduct—including that plaintiff delayed the litigation, "misused the discovery process," "flout[ed] its own obligations," and "used improper litigation tactics." 782 F.3d at 1373. In refusing to award fees, the district court stated that "[a]though [plaintiff's] behavior [had] been inappropriate, unprofessional, and vexatious," there was "little reason to believe that significantly more attorney fees or expert fees ha[d] been incurred than would have [incurred] in the absence of [plaintiff's] vexatious behavior." *Id*. at 1373-1374. This Court vacated, finding the denial of fees an abuse of discretion. It held that there was "nothing in the opinion or in the record [that] substantiates the court's decision not to award fees," as plaintiff's conduct "caused additional process and wasted party and judicial resources." *Id*. at 1374-1375. In the face of such misconduct, defendant incurred additional expenses and plaintiff's misconduct should weigh in favor of awarding attorneys' fees. *Id*; *see also Kilopass Tech., Inc. v. Sidense Corp.*, 738 F.3d 1302, 1313 (Fed. Cir. 2013) ("[T]he aim of § 285 is to compensate a defendant for attorneys' fees it should not have been forced to incur.").

Oplus dictates that fees should have been awarded here. Adobe, like the defendant in *Oplus*, incurred additional litigation expenses due to PDIC's misconduct. For instance, on July 1, 2014, in opposing Adobe's first motion to

intervene, PDIC represented that "the [L.L. Bean] case is about to be closed out" and that the remaining defendants using Adobe's products would be dismissed. Appx2228(5:16-23); Appx2234(11:3-6). One year later, after Adobe incurred significant additional fees in filing a second motion to intervene to enforce its Agreement and a motion for sanctions, PDIC finally complied with its prior assurances to "move on those dismissals." Appx2235(12:3-7). This delay was significant, especially as the metadata PDIC relied on to dismiss its claims was publicly available before it filed suit. Appx2509(30:18-23); Appx2509(31:21-32:20).

PDIC's belated dismissal of the Nordstrom action provides another example of fees Adobe incurred because of PDIC's misconduct. On May 5, 2015, PDIC represented that if it received a declaration from any of the defendants disclaiming any use of non-Adobe software, it would "walk away." Appx2059(79:19-24). But Nordstrom had provided a declaration seven months earlier—before Adobe intervened. PDIC waited until May 19, 2015 to dismiss the Nordstrom case. PDIC provided no explanation for its delay, nor is there any.

Indeed, the Court identified numerous instances where PDIC delayed the litigation. *See* Appx31 ("delay[ed] in revealing the true extent of its pre-suit investigation and its detailed theory of non-Adobe infringement at the web server complicated and delayed resolution of these cases"); Appx33 ("delay[ed] in

dismissing the Nordstrom action"); Appx35 ("delayed in revealing the details of its web server theory"), Appx40. In these circumstances, fees were warranted. *See MarcTec, LLC v. Johnson & Johnson*, 664 F.3d 907, 920-921 (Fed. Cir. 2012) (affirming award of fees where plaintiff "initiated a frivolous lawsuit" with regard to infringement allegations and "persisted in advancing unfounded arguments that unnecessarily extended [the] litigation and caused … needless litigation expenses"); *Cognex Corp. v. Microscan Sys., Inc.*, 2014 WL 2989975, at *4 (S.D.N.Y. June 30, 2014) (awarding fees after determining that litigation tactics "wasted the Court's time and have required plaintiffs to expend significant resources").

b. The district court's record and findings show Adobe was not aggressive.

The district court's reason for not awarding fees—that Adobe chose "to litigate these cases aggressively," Appx41, was inconsistent with the record and the district court's own findings. For instance, the court recognized that PDIC failed to "carefully, consistently, and thoroughly respond to Adobe's reasonable inquiries as well the Court's questions." Appx40. The court likewise recognized that PDIC's protestations that it had no intent to accuse any licensed conduct of infringement were "at times hard-to-believe." *Id*. Indeed, the court observed that PDIC's "lack of clarity—and arguable inconsistency—in what was explained to the [c]ourt contributed to the court's May 2015 statements about the apparent

inadequacy of the pre-suit investigation and likely encouraged Adobe to proceed to renew its request for sanctions," and "extend[ed] these proceedings." Appx31-32. These findings compel the opposite conclusion: Adobe proceeded reasonably and responsively as necessary to urge PDIC to dismiss its meritless cases. Thus, the court's opinion that "PDIC's somewhat careless and dilatory conduct" was somehow the result of Adobe's filings is unsupported.

The record and the district court's findings support a grant of fees. *See, e.g.*, *MarcTec*, 664 F.3d at 920-921. The district court's conclusion that Adobe litigated aggressively is irreconcilable with its own findings of PDIC's improper, wasteful, and vexatious behavior. As such, it was a further abuse of discretion to deny § 285 fees on this flawed basis.

C. The District Court Abused Its Discretion By Denying Attorneys' Fees Under Rule 11

Rule 11 "provides that an attorney who fails to either (1) read the pleading; (2) make a reasonable inquiry into the factual and legal legitimacy of the pleading; or (3) file the pleading only for a proper purpose, shall be sanctioned." *Simmerman v. Corino*, 27 F.3d 58, 62 (3d Cir. 1994).

1. PDIC's failure to conduct a reasonable pre-suit investigation violated Rule 11.

The district court based its denial of Rule 11 sanctions on its incorrect view that PDIC's "most recent submissions to the [c]ourt"—which were "arguab[ly]

inconsistent[]" with its earlier submissions—demonstrated an adequate pre-suit investigation. Appx31-32; Appx42. This finding is unsupported, and was an abuse of discretion.

PDIC conducted no pre-suit investigation demonstrating that it believed images on defendants' websites in 2007 were encoded with non-Adobe products. *See, e.g.*, Appx2506-2507(21:22-22:7) (acknowledging that Thomas Meagher's "very short declaration" was the only evidence of any pre-suit investigation); *see also* Appx1858-1860 (Thomas Meagher describing his pre-suit investigation); Appx2625-2626(¶¶ 30-36) (same); Appx2005(25:7-14); Appx2002-2003(22:25-23:10). And neither Thomas Meagher nor PDIC's outside counsel ever contended that they "performed [an] independent claim construction or analysis, nor … any formal written infringement analysis" before filing these cases relating to the alleged "server level" infringement theory. These facts alone warranted sanctions. *See View Eng'g, Inc. v. Robotic Vision Sys., Inc.*, 208 F.3d 981, 985-986 (Fed. Cir. 2000) (affirming the district court's imposition of Rule 11 sanctions where counsel "performed neither a formal nor an informal analysis of any sort" and thus failed to conduct a "reasonable inquiry for the purpose of filing patent infringement claims").

Instead of conducting an adequate investigation prior to filing over fifty infringement suits, PDIC impermissibly developed a post hoc rationale well into

litigation and changed its alleged theory of infringement. *See Judin v. United States*, 110 F.3d 780, 784-785 (Fed. Cir. 1997) ("[Plaintiff and his counsel's] violation of Rule 11 was not cured by the fact that, after filing the complaint, [plaintiff] consulted with an expert and was able to make 'colorable' arguments in response to a motion for summary judgment of noninfringement."). For instance, "[u]nder the theory of infringement PDIC argued at the May 5, 2015 hearing, images created using Adobe Photoshop® 'somewhere along the line' ***would not*** infringe due to the Adobe License." Appx29 n.20 (quoting Appx2625-2626). This theory was the basis of the dismissal of most of the customer-defendants—and aligns with at least PDIC's interrogatory responses. Appx1002(¶ 9); Appx1978(¶ 68); Appx2972-2973. But "[u]nder PDIC's new web server theory of infringement, PDIC now implies that resized versions of images created using Adobe Photoshop® ***would*** infringe under the Adobe License." Appx29 n. 20. As the district court found, the second theory was disclosed after the dismissal of most of the defendants. Appx30. PDIC's post hoc attempts to justify why it brought and maintained frivolous claims cannot cure its failure to conduct a reasonable pre-suit investigation. *See Judin*, 110 F.3d at 784-785.[5]

[5] Notwithstanding its change in theory, the court credited (without support) Thomas Meagher's declaration that PDIC possessed its web server theory of infringement before it filed its infringement actions, Appx34-40. It did so even though Thomas Meagher's statements in his second declaration were inconsistent with his prior representations—s*ee, e.g.*, Appx32 (describing Thomas Meagher's

2. PDIC's filing and maintaining baseless claims for the improper purpose of extracting settlement fees violated Rule 11.

The district court also denied Rule 11 sanctions on the separate basis that PDIC's infringement suits were not filed for an improper purpose. Appx42. This finding was erroneous and an abuse of discretion; the facts illustrate that PDIC's complaints were indeed filed—and maintained—for the improper purpose of extracting nuisance value settlements from Adobe's customers.

Rule 11 is a safeguard against claims filed "for any improper purpose, such as to harass, cause unnecessary delay, or needlessly increase the cost of litigation." Fed. R. Civ. P. 11(b)(1). Courts have recognized that a "pattern of filing nearly identical complaints against a wide variety of companies and then offering to settle those complaints for a relatively small amount of money is one indicia of [an] improper purpose." *Eon-Net LP v. Flagstar Bancorp*, 249 F. App'x 189, 195-198 (Fed. Cir. 2007); *cf. Summit Data Sys., LLC v. EMC Corp.*, 2014 WL 4955689, at

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multiple positions on whether he could access defendants' websites); were not included in his declaration opposing Adobe's first motion for sanctions, Appx1879-1883; and were inconsistent with PDIC's own representations that its "investigation [into whether suit is proper] continues" eighteen months after filing suit, Appx2251. The court's reliance on Thomas Meagher's declarations in denying fees was an abuse of discretion. *See Taltech Ltd. v. Esquel Enters. Ltd.*, 604 F.3d 1324, 1334 (Fed. Cir. 2010) (affirming exceptional-case finding and fee award based in part on witness's "pattern of changing his testimony to suit the theory du jour").

*4 (D. Del. 2014) (finding case exceptional where patentee sought settlements worth a fraction of what case would cost to litigate).

Despite having received consideration from Adobe for a license that covered Adobe and its customers, PDIC filed more than fifty virtually identical cases for infringement of an expired patent against Adobe's customers—at best without investigating their use of Adobe software at all, or knowingly ignoring such use. Upon doing so, PDIC's counsel immediately offered exploding, nuisance value-settlements in exchange for dismissal of the complaints, giving the defendants only ten days to accept. Appx2117-2118. This conduct demonstrates that PDIC attempted to make quick money off claims that could not possibly prevail before defendants discovered that their use of Adobe products did not give rise to any patent infringement liability under the License and the covenant not to sue. PDIC's plan worked for some defendants who, facing the threat of costly litigation, agreed to settle. *See* Appx3644-3645; Appx3842-3843; Appx5189(30:4-13). Under such facts, Rule 11 sanctions are highly appropriate. *See Eon-Net*, 653 F.3d at 1326; *Summit*, 2014 WL 4955689, at *4.

The district court abused its discretion in denying attorneys' fees under Rule 11. This Court should reverse and remand for a determination of the amount owed.

3. The denial of sanctions in these cases undermines the purpose of Rule 11.

Rule 11—when faithfully applied—creates an "incentive to 'stop, think and investigate more carefully before serving and filing papers.'" *Cooter & Gell v. Hartmax Corp.*, 496 U.S. 384, 398 (1990) (quoting Amendments to Fed. R. Civ. P., 97 F.R.D. 165, 192 (1983)). But unless the sanctions are weighty and the threat of their imposition likely, the Rule will have no effect. Rather than "stop, think and investigate," PDIC filed suits without conducting any pre-suit investigation and for an improper purpose. Unless this Court enforces Rule 11, PDIC's litigation strategy of filing baseless infringement actions to extract nuisance-value settlements will remain profitable, and the judicial system—and the companies defending against such suits—will bear the cost. Rule 11 sanctions serve to deter this behavior, and were warranted here.

II. THE COURT ERRED IN LIMITING ADOBE'S POTENTIAL RECOVERY TO ONLY "PURELY DEFENSIVE" FEES

A. Standard Of Review

On issues not unique to patent law—like here, regarding the appropriate measure of contract damages—this Court applies the law of the appropriate regional circuit. *See Novamedix, Ltd. v. NDM Acquisition Corp.*, 166 F.3d 1177, 1180 (Fed. Cir. 1999). Here, the district court determined that New Jersey law

governs the License, Appx16; thus, this Court will apply the law of the Third Circuit.

The Third Circuit exercises "plenary review" over the district court's legal determinations, including "with respect to whether the district court applied the appropriate measure of contract damages in a legal sense." *Berg Chilling Sys., Inc. v. Hull Corp.*, 369 F.3d 745, 754 (3d Cir. 2004); *Scully v. US WATS, Inc.*, 238 F.3d 497, 507 (3d Cir. 2001). As a result, this Court should review the district court's legal conclusions regarding the appropriate measure of contract damages de novo.

B. The Court Erred As A Matter Of Law In Holding That Adobe Could Not Recover Fees Associated With Its Breach Of Contract Claim

The district court held that, under New Jersey law, "only those fees that Adobe incurred in defending its customers in the infringement suits and ***no fees associated with Adobe's breach-of-contract claim***" are recoverable breach of contract damages. Appx87(¶ 14). Because Adobe's fees are recoverable as a form of compensatory damages for breach of contract under New Jersey law and would not have been incurred but for PDIC's breach, the court erred as a matter of law.

1. Adobe Is Entitled To Recover Its Attorneys' Fees As Compensatory Damages Caused By PDIC's Breach.

Under New Jersey law, Adobe is entitled to recover damages sufficient to put Adobe in as good of a position as it would have been had PDIC not breached its covenant not to sue Adobe's customers. *See Totaro, Duffy, Cannova & Co. v.*

Lane, Middleton & Co., 921 A.2d 1100, 1107 (N.J. 2007) (holding that compensatory damages are designed to "put the innocent party into the position he or she would have achieved had the contract been completed"); *Lieberman v. Employers Ins. of Wausau*, 419 A.2d 417, 425 (N.J. 1980). Adobe sought compensation for being forced to litigate—including by defending its customers and asserting claims against PDIC for improperly bringing and maintaining infringement actions—even though PDIC promised not to sue at the outset. The district court adopted PDIC's position that the American Rule prevents Adobe from claiming attorney fees as consequential damages. Appx61-65 This ruling was legal error.

The general principle regarding the award of attorneys' fees under the "American Rule" is that the prevailing party in a lawsuit is not entitled to recover its fees. *Truesdell v. Philadelphia Hous. Auth.*, 290 F.3d 159, 163 (3d Cir. 2002). While New Jersey generally adheres to the American Rule, the rule does not apply where, as here, a party seeks attorneys' fees that directly arise from the breach. *See Dorofee v. Planning Bd. of Pennsauken Township*, 453 A.2d 1341, 1343 (N.J. Super. Ct. App. Div. 1982) ("the recovery of counsel fees arising out of breach of contract" is appropriate where such fees represent the actual damages and "is not precluded by [New Jersey's court rules codifying limited exceptions to the American Rule]").

Under New Jersey law, compensatory damages include "all of the natural and probable consequences" that flow from the breach of contract. *Pickett v. Lloyd's*, 621 A.2d 445, 474 (N.J. 1993). These damages include attorneys' fees. *See, e.g.*, *Verhagen v. Platt*, 61 A.2d 892, 894-895 (N.J. 1948) ("[T]he defendants caused the plaintiff to have incurred expenses in litigation or settlement of litigation … resulting from the defendants' breach of contract and the plaintiff is entitled to recover the expenses which are the natural and probable result of the defendants' acts."); *Gerhardt v. Continental Ins. Cos.*, 225 A.2d 328, 334 (N.J. 1966) ("Since the insurer defaulted on its obligation to defend the insured in the workmen's compensation proceeding, it must bear, as a traditional element of damage, the expense including the reasonable counsel fee incurred by the insured in defending there in its stead.").

The standard for when attorneys' fees are recoverable as consequential damages from the breach of a covenant not to sue was established in *Artvale, Inc. v. Rugby Fabrics Corp.*, 363 F.2d 1002 (2d Cir. 1966), which has been adopted by New Jersey courts, *Borbely v. Nationwide Mut. Ins. Co.*, 547 F. Supp. 959, 980-981 (D.N.J. 1981). *Artvale* held that the recoverability of attorneys' fees is a matter of the contracting parties' intent. *Id.* at 1008. A covenant not to sue could be drafted in such terms that a party would be liable for attorneys' fees for any breach, no matter how reasonable the suit. *Id*. Where the contract does not make

clear when an award of attorneys' fees would be appropriate, however, a covenant not to sue should be "read as imposing liability only for suits brought in obvious breach or otherwise in bad faith." *Id.* Here, the district court found that this standard had been met. Appx64-65.

Following *Artvale*, courts in the District of New Jersey held that, to obtain attorneys' fees from a breach of a covenant-not-to-sue claim, the plaintiff must produce evidence of the defendant's "bad faith in bringing the suit." *Borbely*, 547 F. Supp. at 980-981; *see Riveredge Assocs. v. Metropolitan Life Ins. Co.*, 774 F. Supp. 897, 901-902 (D.N.J. 1991) ("[A]ttorneys' fees are a proper element of damages when the right violated is the right to be free from suit. … If the covenant breached is a promise not to file suit in bad faith, then the logical measure of damages is the direct consequence of breach of that right: the costs of defending the wrongful suit.").

Other courts have similarly held that attorneys' fees should be awarded for breach of a covenant not to sue where the fees are the direct consequence of the breach. *See, e.g.*, *Lubrizol Corp. v. Exxon Corp.*, 957 F.2d 1302, 1306-1307 (5th Cir. 1992) (affirming award of attorneys' fees for obvious breach of covenant not to sue); *Anchor Motor Freight, Inc. v. International Bhd. of Teamsters*, 700 F.2d 1067, 1072 (6th Cir. 1983) (holding American Rule inapplicable where attorneys' fees are the measure of actual damages, and permitting fees as a measure of actual

damages arising from a counterclaim charging breach of a covenant not to sue contained in a collective bargaining agreement); *Cefali v. Buffalo Brass Co.*, 748 F. Supp. 1011, 1026-1028 (W.D.N.Y. 1990) ("[T]o give the covenant [not to sue] effect, [defendant] should be awarded reasonable [attorneys'] fees as damages.").

New Jersey law regarding consequential damages establishes that PDIC is liable for the attorneys' fees Adobe incurred due to PDIC's breach. Adobe does not seek to shift fees incurred in enforcing a contract; in that situation, the American Rule would normally prohibit recovery. But the American Rule is not implicated in the instant circumstances. Rather, Adobe seeks consequential damages suffered because of PDIC's breach—those fees that are "the natural and probable consequences of the breach" of the covenant not to sue. Courts frequently distinguish between cases "forbidding the award of litigation expenses" and those permitting recovery of litigation expenses as consequential damages. *See Artvale*, 363 F.2d at 1007-1008; *Anchor Motor Freight*, 700 F.2d at 1072 (explaining that the American rule prevents only an award of attorneys' fees to "the successful litigant in the case at hand," and does not apply when the fees "are the subject of the law suit itself" (internal quotation marks omitted; emphasis removed)); *Riveredge Assocs.*, 774 F. Supp. at 901-902 (rejecting plaintiff's invocation of the "American rule").

Because Adobe's attorneys' fees are in fact damages that flow directly from the breach of a covenant not to sue, the court erred as a matter of law in holding that Adobe cannot collect its fees as damages in its breach of contract action. This Court should reverse.

2. PDIC's Breach Was The But-For Cause of Adobe's Attorneys' Fees

The Supreme Court has recognized a cause-in-fact test for monetary damages. *Goodyear Tire & Rubber Co. v. Haeger*, 137 S. Ct. 1178, 1184 (2017) (holding that when sanctions are ordered pursuant to court's inherent authority, the attorneys' fees award must be limited to fees that the party seeking sanctions would not have incurred but for the bad faith); *see also Gilbreth Int'l Corp. v. Lionel Leisure, Inc.*, 622 F. Supp. 478, 487 (E.D. Pa. 1985), *aff'd*, 802 F.2d 469 (Fed. Cir. 1986) (award of attorneys' fees is "designed 'to compensate a prevailing party for monies … he would not have had to spend but for the losing party's misconduct.'") (internal quotation marks omitted).

Adobe would not have incurred attorneys' fees but for PDIC's breach. Appx3656(¶ 77). Adobe was contractually obligated to defend against PDIC's infringement suits brought against Adobe's customers in breach of the Agreement, and enforce the terms of that Agreement. All its fees, therefore, are recoverable. *See Goodyear Tire & Rubber Co.*, 137 S. Ct. at 1178, 1184.

C. The Court Erred As A Matter Of Law In Holding That Defense Fees That Are "Inextricably Intertwined" With Affirmative Fees Are Not Recoverable

Even if Adobe's attorneys' fees were not recoverable compensatory damages, the district court erred by holding that "defense fees that are 'inextricably intertwined' with affirmative fees are ***not*** recoverable." Appx87(¶ 14). This ruling represents new law and contradicts binding New Jersey law.

PDIC's motions for summary judgment incorrectly assumed that Adobe's attorneys' fees were somehow divisible in the categories of "affirmative" and defensive" fees, and the district court erroneously agreed. New Jersey courts have held, however, that when fees are expended in support of multiple claims, it is frequently the case that "any precise allocation of expenses would be impossible"; such circumstances, however, should not result in the reduction of any fee award. *See, e.g.*, *Voorhees v. Preferred Mut. Ins. Co.*, 588 A.2d 417, 425 (N.J. Super. Ct. App. Div. 1991) (holding that insurer was required to reimburse plaintiff for the full amount of defense costs—including those for which insurer had no duty to defend—because "a great deal of the defense costs [were] incurred in general preparation and cannot be separated by distinct claims or time periods."); *Norton v. Wilshire Credit Corp*, 36 F. Supp. 2d 216, 220 (D.N.J. 1999) ("The work done by the petitioner on the separate claims was inextricably intertwined and it is

unnecessary, in this case, for the plaintiff to document exactly which claim is being worked on. No reduction will be made on this basis.").

New Jersey law is consistent with law from other courts concluding that claims for affirmative relief may be "defensive in nature and prosecuted to limit or defeat … liability." *Oscar W. Larson Co. v. United Capitol Ins. Co.*, 845 F. Supp. 458, 461 (W.D. Mich. 1993). In such cases, "the costs that [the party] incur[s] in prosecuting these claims are properly considered as defense costs." *Id*. For example, *Safeguard Scientifics, Inc. v. Liberty Mutual Insurance Co.*, 766 F. Supp. 324, 329 (E.D. Pa. 1991), *aff'd in part, rev'd in part*, 961 F.2d 209 (3d Cir. 1992), has been cited extensively by other courts for these principles. *Safeguard* involved a dispute about an insurance policy under which Liberty Mutual agreed to insure Safeguard against damages for personal and advertising injury. A third party sued Safeguard for breach of contract, breach of fiduciary duty, libel, slander, and defamation. Safeguard counterclaimed for breach of contract and fraud. Safeguard and the third party eventually settled, and Safeguard sought to recover all its attorneys' fees from Liberty Mutual. Liberty Mutual argued that Safeguard could not recover the expenses incurred in the prosecution of its counterclaims because the insurance contract contained only a "duty to defend." *Id.* at 333. The court rejected this argument, finding that "the pursuit of the counterclaims was inextricably intertwined with the defense of [the third-party's] claims and was

necessary to the defense of the litigation as a strategic matter." *Id.* at 334. Thus, Liberty Mutual's "duty to defend extend[ed] to the counterclaims raised in the same proceeding." *Id.*

Safeguard Scientifics was affirmed in relevant part. *Safeguard Scis., Inc. v. Liberty Mut. Ins. Co.*, 1992 U.S. App. LEXIS 38473 (3d Cir. Mar. 19, 1992) (unpublished). The Third Circuit rejected Liberty Mutual's argument that the district court erred in awarding damages for breach of the duty to defend notwithstanding that Safeguard failed to offer any proof as to what portion of its legal fees was attributable to defending against the third party's claims and what portion was attributable to prosecuting its affirmative counterclaims. Accordingly, "the district court's conclusion that the counterclaims were strategic and were utilized in defense of the [third party's] action was amply supported by the evidence"; "[i]n such cases, the insurer bears the burden of defending the entire suit." *Id.* at *14-15; *see also Ultra Coachbuilders, Inc. v. General Sec. Ins. Co.*, 229 F. Supp. 2d 284, 289 (S.D.N.Y. 2002) (insurer had to pay for prosecution of insured's counterclaims that were "inextricably intertwined with the defense of [defendant's] claims and necessary to the defense of the litigation as a strategic matter"); *TIG Ins. Co. v. Nobel Learning Communities, Inc.*, 2002 WL 1340332, at *15 (E.D.P.A. June 18, 2002) ("As the prosecution of the affirmative claims was essential to the defense against the counterclaim, it was logically encompassed by

TIG's duty to defend Nobel."); *Smart Style Indus., Inc. v. Pennsylvania Gen. Ins. Co.*, 930 F. Supp. 159, 164-165 (S.D.N.Y. 1996) (insurer required to pay insured's attorneys' fees incurred prosecuting affirmative claims for declaratory relief where costs for defending and prosecuting were inseparable).

Numerous decisions have cited *Safeguard Scientifics* for the proposition that an inextricably intertwined counterclaim is part of the duty to defend, including in the Third Circuit. *See, e.g., Post v. St. Paul Travelers Ins. Co.*, 691 F.3d 500, 521 (3d Cir. 2012) ("Had Post asserted counterclaims in Mercy's suit against him, no doubt the expenses incurred by him to prosecute the counterclaims would have been covered by the Policy," citing *Safeguard Scientifics*).[6]

The district court incorrectly rejected these cases because they "arise in the insurance context." Appx84. In fact, several cases arise outside of insurance law. For example, New Jersey allows a prevailing plaintiff to recover attorneys' fees

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[6] *See also GMAC Mortgage, LLC v. First Am. Title Ins. Co.*, 2012 WL 669965, at *2 (D. Mass. Feb. 28, 2012) (certifying question on "in for one, in for all" rule, citing *Safeguard Scientifics*); *Great West Cas. Co. v. Marathon Oil Co.*, 315 F. Supp. 2d 879, 882 (N.D. Ill. 2003) (noting "general rule" that duty to defend extends to inextricably intertwined counterclaims, citing *Safeguard Scientifics*); *Ultra Coachbuilders, Inc.*, 229 F. Supp. 2d at 289 (awarding insured cost of counterclaim, citing *Safeguard Scientifics*); *Aerosafe Int'l, Inc. v. ITT Hartford of Midwest*, 1993 WL 299372, at *5 (N.D. Cal. July 23, 1993) ("The court can discern no meaningful reason why [the *Safeguard Scientifics*] rule should not apply to the state cross-complaint and federal antitrust action prepared, but not filed, by Aerosafe's lawyers"); *Nashua Corp. v. Liberty Mut. Ins. Co.*, 1997 WL 89163, at *10 (Mass. Sup. Ct. Feb. 18, 1997) (noting that duty to defend applies to insured's counterclaims and cross-claims, citing *Safeguard Scientifics*).

incurred in defense of a counterclaim in actions under the Consumer Fraud Act (CFA). *Garmeaux v. DNV Concepts, Inc.*, 151 A.3d 992, 997 (N.J. App. Div. 2016) (holding that a CFA plaintiff can obtain counsel fees in defense of counterclaims that involve a "common core of CFA-related facts," and finding that counterclaim for fraudulent concealment was "inextricably related" to CFA claim). Other non-insurance decisions from across the judiciary also stand for the same proposition. *See Diamond v. John Martin Co.*, 753 F.2d 1465, 1467 (9th Cir. 1985) ("Attorney's fees need not be apportioned when incurred for representation of an issue common to both a cause of action for which fees are proper and one in which they are not allowed[;] … [t]he recognized barrier to segregation for purposes of calculating fee awards is inextricably intertwined issues."); *Norton*, 36 F. Supp. 2d at 220 (awarding attorneys' fees in Fair Debt Collection Practices Act action where work done by petitioner on separate claims was inextricably intertwined); *Arthur D. Little Int'l, Inc. v. Dooyang Corp.*, 995 F. Supp. 217, 223 (D. Mass. 1998) (holding that plaintiff was entitled to fees for work done on all counterclaims because plaintiff's "work on the … counterclaims was … interconnected with the [state Consumer Protection Act] claim" and plaintiff "logically had to succeed in rebutting the counterclaims to succeed on its … [state Consumer Protection Act] claim.").[7]

[7] Even if many cases do arise in the insurance context, this is not a relevant

Here, Adobe's breach of contract claim was "inextricably intertwined" with the license defense of its customers. Adobe's breach of contract claim "was necessary to the defense of [its customers] as a strategic matter," *Safeguard Scientifics*, 766 F. Supp. at 334, and "prosecuted to limit or defeat [the customers'] liability," *Larson*, 845 F. Supp. at 461; *see also Effective Teleservs., Inc. v. Smith*, 132 So. 3d 335, 339 (Fla. Dist. Ct. App. 2014) ("Claims are inextricably intertwined when a determination of the issues in one action would necessarily be dispositive of the issues raised in the other.") (internal quotation marks omitted).

When PDIC breached its covenant not to sue by asserting infringement claims against Adobe's customers, Adobe was on notice for indemnification. Adobe stepped into the litigation to defend its customers by intervention and an affirmative action; Adobe was never a party, and could not file a counterclaim. Adobe's complaint in intervention sought a declaratory judgment that the '056 Patent is unenforceable due to misuse—a claim that was dismissed after PDIC dismissed its infringement claims—and breach of contract. Appx1955-1967.

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distinction. Appx84. The insurance cases inform the analysis and contain the right law and analytical tools to guide the damages analysis here. The district court, therefore, did not need to create new, divergent law in deciding PDIC's summary judgment motions. *Cf. eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391-392 (2006) (analogizing the Patent Act to the Copyright Act, and holding that "familiar principles apply with equal force"). Moreover, Adobe incurred attorneys' fees while satisfying its obligation to its customers to indemnify and defend them. Insurance cases are entirely analogous as indemnity is a form of insurance.

Adobe's breach of contract claim, if successful, would result in a declaratory judgment and injunction barring further pursuit of PDIC's claims against Adobe's customers. Appx3206-3207. Indeed, PDIC's dismissals were prompted only by Adobe's petitions to the court. And, as PDIC admitted, Adobe's claims prompted PDIC to analyze—more than twenty months after filing suit—whether defendants used Adobe products to encode JPEG images on their websites, and ultimately dismiss its wrongfully filed suits. *See, e.g.*, Appx4416-4438. Accordingly, the court erred as a matter of law in holding that "[d]efensive fees that [are] inextricably intertwined [with] affirmative fees are not recoverable."[8] Appx5203(44:23-24).

D. The District Court's Approach Is Also Flawed As A Matter Of Policy

The district court's approach punishes Adobe for taking actions to mitigate damages, and prevents Adobe from recovering the costs of mitigation contrary to New Jersey law. *See Oritani Savings & Loan Ass'n v. Fidelity & Deposit Co. of*

[8] After the court made its (erroneous) legal ruling, several factual questions—including what actions were affirmative or defensive—remained for the jury to decide. The district court determined for itself, however, that fees incurred in November 2014 when Adobe filed is motion to intervene were affirmative. *See, e.g.*, Appx5204(45:4-13). That finding is contrary to the evidence that raises, at a minimum, factual questions regarding whether Adobe's motion to intervene was affirmative—or, at least, inextricably intertwined with the defense of PDIC's infringement allegations. *See* Appx4477-4487 ("We have a response to a Motion to Intervene filed by Adobe due. … Is there any way you can get your response as to whether or not the [d]efendants … used Adobe products to us tomorrow?") (post hoc question posed by PDIC counsel to its expert).

Md., 744 F. Supp. 1311, 1321 (D.N.J. 1990) ("[R]easonable costs incurred by a plaintiff in an attempt to mitigate its losses are recoverable as a traditional element of damages."). By proactively stepping into these cases to defend its customers the only way it could, as a non-party—by filing a motion to intervene with a pleading, asserting breach of contract and patent misuse claims, and seeking injunctive and other relief to enforce a license defense on behalf of its customers—Adobe sought a quick resolution of PDIC's claims.

If Adobe had allowed the claims to result in settlements or judgments, Adobe may have been liable to its customers for defense costs and indemnity. Those costs would have been recoverable as consequential damages in a breach of contract action against PDIC. Instead of waiting for its customers to resolve the cases themselves, Adobe intervened in defense of its customers to bring about a more efficient resolution to those cases. Adobe should not be punished for doing so by having its efforts characterized as "affirmative." Adobe is entitled to recover any expenditures made in its attempt to resolve PDIC's wrongful claims against its customers.

Similarly, the district court's approach is against public policy insofar as its rulings not only constitute new law on the amount of damages that Adobe could recover for PDIC's breach, but it also would effectively render void and without force the long-utilized contract provision of a covenant not to sue. If a party

cannot recover but-for, consequential damages for another party's breach of its covenant not to sue, there would be no practical repercussions for a breach and such provisions would be futile. The district court's ruling that only "purely defensive fees" are recoverable as damages is contrary to law and public policy, and should be vacated.

III. THE COURT ERRED IN LIMITING THE SCOPE OF PDIC'S PRIVILEGE WAIVER

A. Standard Of Review

The Federal Circuit applies the law of the regional circuit with respect to questions of waiver of the attorney-client and work product privileges. *Fort James Corp. v. Solo Cup Co.*, 412 F.3d 1340, 1346 (Fed. Cir. 2005). The Third Circuit reviews the district court's ruling regarding waiver of privilege for an abuse of discretion. *In re Chevron Corp.*, 633 F.3d 153, 161 (3d Cir. 2011).

B. PDIC Waived Privilege As To Its Pre-Suit Investigation And Litigation Conduct

The district court correctly found that PDIC waived attorney-client and attorney work product privileges on issues relating to its pre-suit investigation, litigation conduct, and dismissal of defendants. PDIC relied on a "good faith" defense, which injected its state of mind in bringing and maintaining actions against Adobe's customers, and selectively disclosed privileged materials in support of that defense. *See*, *e.g.*, Appx3285(247:17-19); Appx3085(20:8-18); *see*

also supra at 20-22. PDIC's choices resulted in a waiver. *See Rhone-Poulenc Rorer Inc. v. Home Indem. Co.*, 32 F.3d 851, 863 (3d Cir. 1994) ("[A] party can waive the attorney client privilege by asserting claims or defenses that put [attorney client communications at] issue … [, such as] where the client asserts a claim or defense, and attempts to prove that claim or defense by disclosing or describing an attorney client communication.").

C. PDIC Waived Privilege As To All Documents Relating To Specific Subject Matters, Not Civil Action Numbers

On PDIC's "Motion for Reargument," the district court narrowed its order regarding PDIC's production of privilege documents to a waiver applying only to nine cases in which Adobe intervened. Appx74-75. The court's decision was contrary to settled law and an abuse of discretion—likely depriving Adobe of evidence probative of PDIC's bad faith.

First, as the court acknowledged, Appx75, PDIC's motion for reargument did not set forth any basis on which reconsideration could have been granted: "an intervening change in the controlling law"; "new evidence that was not [previously] available"; or "the need to correct a clear error of law or fact." *Max's Seafood Cafe ex rel. Lou-Ann, Inc. v. Quinteros*, 176 F.3d 669, 677 (3d Cir. 1999). Rather, PDIC made the same arguments it made in opposition to Adobe's motion to compel—arguments the district court already rejected. The district court granted the motion anyway, not because it was proper, but because of the

"approaching trial date." Appx75. This decision rewarded PDIC for its delay in complying with the court's order.

Second, the court erred by narrowing its order to "discovery with respect to the present cases." Appx75. When a court determines that a party has waived privilege with respect to a communication, that waiver generally extends "to all other communications relating to the same subject matter." *Fort James Corp.*, 412 F.3d at 1349 (Fed. Cir. 2005); *Brigham & Women's Hosp. Inc. v. Teva Pharms. USA, Inc.*, 707 F. Supp. 2d 463, 471-472 (D. Del. 2010) ("[T]he widely applied standard for determining the scope of a waiver of attorney-client privilege is that the waiver applies to all other communications relating to the same subject matter."). Subject matter waiver is appropriate where, as here, "a party intentionally puts protected information into the litigation in a selective, misleading and unfair manner." Fed. R. Evid. 502 advisory committee note. Subject matter waiver exists "so that a party is prevented from disclosing communications that support its position while simultaneously concealing communications that do not." *Fort James Corp.*, 412 F.3d at 1349.

All of PDIC's infringement suits implicated the same claims and defenses; indeed, many of the privileged documents that PDIC selectively disclosed during discovery were relevant to cases beyond the nine in which Adobe intervened, *see, e.g.*, Appx3409-3427, and PDIC's considerations regarding dismissal were the

same in each case, *see, e.g.*, Appx3540(155:16-156:3) (acknowledging that PDIC's evidence that Adobe's customers encoded new JPEG images on their website servers would "be the same for every single one of these declarants"). Moreover, Adobe's breach of contract claim was not limited to PDIC's filing and maintaining actions against the nine defendants who were the parties to the underlying actions. The district court itself repeatedly recognized that "information about all PDIC cases asserting the '056 patent are relevant and discoverable by Adobe." Appx3339; Appx3191(25:3-11).

Narrowing the waiver to the nine cases in which Adobe intervened also created an unfair advantage to PDIC. *See In re Teleglobe Commc'ns Corp.*, 493 F.3d 345, 361 (3d Cir. 2007), as amended (Oct. 12, 2007) (noting that when one party makes a tactical, selective waiver of privilege, the court must ensure the waiver encompasses additional information that needs to be disclosed to avoid any unfair litigative advantage). The district court provided PDIC with an opportunity to improperly withhold responsive documents and to make its own assessment as to what documents fell within the scope of the court's order. *See Fort James Corp.*, 412 F.3d at 1349. In fact, PDIC conceded that it was aware of—and was withholding—many documents falling within the scope of Adobe's document request, even though PDIC had waived privilege. Appx5170(11:19-24).

The privileged documents PDIC produced were highly probative. They confirmed, for instance, that PDIC's expert had advised PDIC it had no case against Adobe customers and exposed PDIC's egregious litigation conduct in blocking Adobe from taking a deposition of PDIC's expert. PDIC's acknowledgement that it had more responsive, privileged, unproduced documents across all its infringement cases makes it reasonable to infer that Adobe did not have the full story and potentially was seriously prejudiced in preparing its case. *See* Appx4214 (stating it would be "massive undertaking" to produce all the responsive documents); Appx5107(53:11-20); Appx5117(63:1-4) (stating that the full scope of the withheld privileged documents was a "very different situation" from the eighteen documents PDIC produced for the nine cases going to trial).

For these reasons, PDIC's privilege waiver should have applied to all documents relating to PDIC's pre-suit investigation, litigation conduct, and reasons for dismissing the defendants. *See In re OptumInsight, Inc.*, 2017 WL 3096300, at *3-4 (Fed. Cir. July 20, 2017) (nonprecedential) (recognizing that privilege waiver was not limited to what was known about the issues at the time of the disclosure but extended to the subject matter of the issues). The court's narrowing of PDIC's waiver was contrary to the law, prejudicial, and an abuse of discretion.[9]

[9] The court appeared to recognize the potential harm, but avoided the issue by stating that Adobe could renew its privilege waiver argument after trial. *See, e.g.*, Appx5131(77:2-7). After a trial, Adobe would not have new information

CONCLUSION

This Court should reverse or vacate the district court's Final Judgment entered on August 25, 2017, including its March 28, 2016, order denying Adobe's motion for sanctions; its August 1, 17, and 21, 2017, orders regarding recoverable damages; and its August 9, 2017, order granting PDIC's motion regarding PDIC's waiver of privilege; and remand the case to the district court to determine fees pursuant to § 285 or Rule 11, and, a trial on the merits under the appropriate law governing recoverable damages.

Respectfully submitted,

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January 29, 2018

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regarding documents withheld by PDIC, and even if Adobe was somehow successful in its renewed motion, a second trial would needlessly waste more party and judicial resources.

ADDENDUM

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CONFIDENTIAL MATERIAL OMITTED

The material omitted on Addendum pages Appx5-6, Appx17, Appx33, and Appx36, describes the confidential terms of a license agreement between Adobe Systems Incorporated and Princeton Digital Image Corporation.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. OFFICE DEPOT INC., Defendant.	)	C.A. No. 13-239 **FILED UNDER SEAL**
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. J.C. PENNEY COMPANY, INC., Defendant.	)	C.A. No. 13-287 **FILED UNDER SEAL**
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. QVC INC., Defendant.	)	C.A. No. 13-288 **FILED UNDER SEAL**

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. SEARS HOLDINGS COMPANY, Defendant.	)	C.A. No. 13-289 **FILED UNDER SEAL**

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. LIMITED BRANDS, INC., Defendant.	)	C.A. No. 13-326 **FILED UNDER SEAL**

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. GAP INC., Defendant.	)	C.A. No. 13-330 **FILED UNDER SEAL**

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. WILLIAMS-SONOMA INC., Defendant.	)	C.A. No. 13-331 **FILED UNDER SEAL**
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. COSTCO WHOLESALE CORP., Defendant.	)	C.A. No. 13-404 **FILED UNDER SEAL**
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. NORDSTROM.COM LLC, NORDSTROM.COM INC., and NORDSTROM INC., Defendants.	)	C.A. No. 13-408 **FILED UNDER SEAL**

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MEMORANDUM OPINION

March 28, 2016
Wilmington, Delaware

CONFIDENTIAL MATERIAL FILED UNDER SEAL REDACTED

STARK, U.S. District Judge:

Several motions are pending before the Court in these multiple related patent cases: (1) Intervenor Adobe System Incorporated's ("Adobe")[1] Rule 12(b)(6) Motion to Dismiss Plaintiff Princeton Digital Image Corporation's ("PDIC" or "Princeton") Counterclaim (C.A. No. 13-404 D.I. 52)[2] ("Adobe's Motion to Dismiss"),[3] (2) Adobe's Renewed Motion for Sanctions (D.I. 65) ("Adobe's Motion for Sanctions"),[4] (3) PDIC's Motion to Dismiss Claims in Intervention of Adobe (D.I. 66) ("PDIC's Motion to Dismiss"),[5] and (4) Adobe's Cross Motion for Judgment on the Pleadings (D.I. 75) ("Adobe's Motion for Judgment on the Pleadings").[6]

I. BACKGROUND

[redacted], PDIC and Adobe entered into an agreement ("Adobe License") whereby PDIC duly licensed its U.S. Patent No. 4,813,056 ("'056 patent") to Adobe and Adobe's customers. (*See generally* D.I. 12 Ex. 2) The Adobe License included a covenant by PDIC not

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[1]The Court previously granted Adobe's Omnibus Motion to Intervene as a matter of right in all of the above-captioned cases pursuant to Rule 24(a)(2) and permissively pursuant to Rule 24(b)(1)(B). (*See, e.g.*, C.A. No. 13-404 D.I. 44)

[2]All docket citations hereinafter are to C.A. No. 13-404 unless otherwise specified.

[3]Adobe filed identical motions seeking to dismiss PDIC's counterclaim, and the parties submitted identical briefing with respect to these motions, in all of the above-captioned cases ***except*** C.A. No. 13-408.

[4]Identical motions and briefing were submitted by the parties in all of the above-captioned cases with respect to this motion.

[5]Identical motions and briefing were submitted by the parties in all of the above-captioned cases with respect to this motion.

[6]Identical motions and briefing were submitted by the parties in all of the above-captioned cases with respect to this motion.

to sue Adobe's customers for infringement of the '056 patent by their use of Adobe's products. (*See id.*)

In 2013, PDIC filed the above-captioned lawsuits against Office Depot Inc., J.C. Penney Company, Inc., QVC Inc., Sears Holding Company, Limited Brands, Inc., Gap Inc., Williams-Sonoma Inc., Costco Wholesale Corp., Nordstrom.com LLC, Nordstrom.com Inc., and Nordstrom Inc. (collectively, "Defendants").[7] As each of these Defendants are Adobe customers, on November 26, 2014 Adobe moved to intervene in these lawsuits. (D.I. 10) Adobe argued that it had a right to intervene due to its customers' requests for indemnity under the Adobe License and because of PDIC's refusal to "engage in further discussions" with Adobe, which would be necessary to "clarify and resolve" the lawsuits. (*See* D.I. 11 at 9, 11) The Court granted Adobe's motion to intervene on May 5, 2015. (*See* D.I. 44)

On May 8, 2015, Adobe filed a complaint in intervention (D.I. 46), alleging (1) breach of contract based on PDIC's infringement suits against Defendants, which Adobe argued violated the covenant not to sue Adobe's customers contained in the Adobe License, and (2) patent misuse by PDIC for its assertion of the '056 patent, which Adobe characterized as an attempt to "collect double royalties" from Adobe's customers after already receiving [redacted] from Adobe under the Adobe License. (*See* D.I. 46 at 8-9) On May 29, 2015, PDIC filed an answer to Adobe's complaint in intervention and counterclaim in all of the above-captioned actions, with the exception of C.A. No. 13-408.[8] (D.I. 50) PDIC's counterclaim alleged breach of the implied

[7]The nine suits which the Court is addressing here are a subset of the 51 related suits PDIC filed in this District in 2012 and 2013, all asserting infringement of the '056 patent.

[8]PDIC did not respond to Adobe's complaint in C.A. No. 13-408. Consequently, on March 8, 2016, the Clerk of Court entered default against PDIC in that action. (*See* C.A. No. 13-

covenant of good faith and fair dealing based on, among other things, Adobe's failure to cooperate with PDIC in resolving questions about whether Defendants were licensed under the Adobe License. (*See id.* at 9-12)

Meanwhile, on January 14, 2015, while Adobe's motion to intervene was pending before the Court, Adobe filed a motion for sanctions against PDIC. (D.I. 25) The Court held a hearing on May 5, 2015, at which it heard argument on the sanctions motion (as well as on Adobe's motion to intervene). (*See* D.I. 51 ("2015 Tr.")) At the conclusion of the hearing, the Court denied Adobe's motion for sanctions but without prejudice to Adobe's opportunity to renew its request for sanctions after filing its complaint in intervention. (*See* D.I. 44; *see also* D.I. 51 at 81-86) The focus of Adobe's original motion for sanctions was whether PDIC's counsel had conducted an adequate pre-suit investigation in compliance with their obligations under Federal Rule of Civil Procedure 11. On this issue, the Court stated at the May 2015 hearing:

> . . . . I am not imposing sanctions at this point, but that denial is very much without prejudice.
>
> What is clear to me is that the conduct of plaintiff and plaintiff's counsel is at least close to the line that Rule 11 requires the Court to draw. What I can't tell today and what I think under the circumstances I do not need to spend the time trying to decide [today] is which side of that line plaintiff and plaintiff's counsel fall [on].
>
> They may well have conducted a just barely adequate investigation given all the facts and circumstances prior to suit. They may have just enough to in good faith have continued with these cases up to at least today. But they very well may not have.

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408 D.I. 88) PDIC filed a motion to set aside default on March 11 (C.A. No. 13-408 D.I. 89), which remains pending.

(2015 Tr. at 84)

On May 8, 2015, Adobe filed its complaint in intervention against PDIC. (*See* D.I. 46) Thereafter, between May 19, 2015 (*see, e.g.*, C.A. No. 13-408 D.I. 51) and July 30, 2015 (*see, e.g.*, D.I. 13-331 D.I. 62), PDIC dismissed its claims against each of the Defendants in the above-captioned suits. (*See, e.g.*, D.I. 62) (July 21, 2015 stipulation of dismissal between PDIC and Costco)

On August 21, 2015, Adobe filed a renewed motion for sanctions. (D.I. 65) Adobe's renewed sanctions motion again contends that PDIC failed to conduct an adequate pre-suit investigation before suing Defendants. (*See* D.I. 67 at 10-13) It further alleges that PDIC maintained baseless litigation positions "after receiving uncontroverted evidence," particularly relating to the Adobe License, that should have compelled dismissal. (*See id.* at 10) The renewed motion also contends that PDIC engaged in "persistent frivolous, wanton, and vexatious litigation conduct." (*Id.* at 18) Adobe seeks relief under Rule 11 as well as attorney fees under 35 U.S.C. § 285 (for an "exceptional" patent case), 28 U.S.C. § 1927 (for unreasonable or vexatious multiplication of proceedings), and sanctions pursuant to the Court's inherent authority. (*See id.*)

Also on August 21, 2015, PDIC filed a motion to dismiss the patent misuse and breach of contract claims in Adobe's complaint in intervention. (D.I. 66) With respect to patent misuse, PDIC argues that there is no case or controversy, and further that Adobe fails to state a claim on which relief may be granted. (*See* D.I. 68 at 8, 10) With respect to Adobe's breach of contract claim, PDIC alleges that the Court lacks jurisdiction. (*See id.* at 16-20)

In responding to PDIC's motions on September 9, 2015, Adobe cross-moved for

judgment on the pleadings on its breach of contract claim. (*See* D.I. 75, 77) Abode contends that PDIC breached its express covenant not to sue Adobe's customers for using products licensed under the Adobe License, adding that PDIC "in bad faith filed, maintained, and vexatiously litigated these baseless cases against Adobe's licensed customers for years." (*See* D.I. 77 at 1-2)

The parties completed briefing on all pending motions on October 8, 2015. (*See generally* D.I. 53, 57, 60, 67, 68, 74, 77, 84, 85, 89, 90) The Court heard oral argument on March 8, 2016. (*See* Transcript ("Tr."))

II. LEGAL STANDARDS

A. Motion to Dismiss for Failure to State a Claim

Evaluating a motion to dismiss under Federal Rule of Civil Procedure 12(b)(6) requires the Court to accept as true all material allegations of a complaint. *See Spruill v. Gillis*, 372 F.3d 218, 223 (3d Cir. 2004). "The issue is not whether a plaintiff will ultimately prevail but whether the claimant is entitled to offer evidence to support the claims." *In re Burlington Coat Factory Sec. Litig.*, 114 F.3d 1410, 1420 (3d Cir. 1997) (internal quotation marks omitted). Thus, the Court may grant such a motion to dismiss only if, after "accepting all well-pleaded allegations in the complaint as true, and viewing them in the light most favorable to plaintiff, plaintiff is not entitled to relief." *Maio v. Aetna, Inc.*, 221 F.3d 472, 481-82 (3d Cir. 2000) (internal quotation marks omitted).

However, "[t]o survive a motion to dismiss, a civil plaintiff must allege facts that 'raise a right to relief above the speculative level on the assumption that the allegations in the complaint are true (even if doubtful in fact).'" *Victaulic Co. v. Tieman*, 499 F.3d 227, 234 (3d Cir. 2007) (quoting *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555 (2007) (internal citations and quotation

marks omitted)). A claim is facially plausible "when the plaintiff pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009). "The complaint must state enough facts to raise a reasonable expectation that discovery will reveal evidence of [each] necessary element" of a plaintiff's claim. *Wilkerson v. New Media Tech. Charter Sch. Inc.*, 522 F.3d 315, 321 (3d Cir. 2008) (internal quotation marks omitted).

The Court is not obligated to accept as true "bald assertions," *Morse v. Lower Merion Sch. Dist.*, 132 F.3d 902, 906 (3d Cir. 1997) (internal quotation marks omitted), "unsupported conclusions and unwarranted inferences," *Schuylkill Energy Res., Inc. v. Pennsylvania Power & Light Co.*, 113 F.3d 405, 417 (3d Cir. 1997), or allegations that are "self-evidently false," *Nami v. Fauver*, 82 F.3d 63, 69 (3d Cir. 1996).

B. Motion to Dismiss for Lack of Subject Matter Jurisdiction

"Federal Rule of Civil Procedure 12(b)(1) authorizes dismissal of a complaint for lack of jurisdiction over the subject matter, or if the plaintiff lacks standing to bring his claim." *Samsung Elec. Co., Ltd. v. ON Semiconductor Corp.*, 541 F. Supp. 2d 645, 648 (D. Del. 2008). A Rule 12(b)(1) motion to dismiss for lack of subject matter jurisdiction may present either a facial attack or a factual attack. *See CNA v. United States*, 535 F.3d 132, 139 (3d Cir. 2008); Fed. R. Civ. P. 12(b)(1). A facial attack concerns an alleged pleading deficiency, while a factual attack concerns the failure of a plaintiff's claim to comport factually with the jurisdictional prerequisites. *See CNA*, 535 F.3d at 139. Where the motion presents a facial challenge to the Court's jurisdiction, or one based purely on the allegations in the complaint, the Court must accept well-pleaded factual allegations as true and may consider only the complaint and any

documents upon which it is based. *See Petrusha v. Gannon Univ.*, 462 F.3d 294, 302 n.3 (3d Cir. 2006). Where subject matter jurisdiction is challenged based upon the sufficiency of jurisdictional facts, the Court is not required to attach any presumptive truthfulness to the allegations in the complaint and may consider matters outside the pleadings to satisfy itself that it has jurisdiction. *See Animal Sci. Products, Inc. v. China Minmetals Corp.*, 654 F.3d 462, 469 n.9 (3d Cir. 2011), *as amended* (Oct. 7, 2011). In either case, the plaintiff bears the burden of persuasion. *See Kehr Packages, Inc. v. Fidelcor, Inc.*, 926 F.2d 1406, 1409 (3d Cir. 1991).

C. Motion for Judgment on the Pleadings

Pursuant to Federal Rule of Civil Procedure 12(c), a party may move for judgment on the pleadings "[a]fter pleadings are closed – but early enough not to delay trial." When evaluating a motion for judgment on the pleadings, the Court must accept all factual allegations in a complaint as true and view them in the light most favorable to the non-moving party. *See Rosenau v. Unifund Corp.*, 539 F.3d 218, 221 (3d Cir. 2008). This is the same standard as applies to a Rule 12(b)(6) motion to dismiss. *See Turbe v. Gov't of Virgin Islands*, 938 F.2d 427, 428 (3d Cir. 1991); *see also Maio*, 221 F.3d at 482.

A Rule 12(c) motion will not be granted "unless the movant clearly establishes that no material issue of fact remains to be resolved and that he is entitled to judgment as a matter of law." *Rosenau*, 539 F.3d at 221. "The purpose of judgment on the pleadings is to dispose of claims where the material facts are undisputed and judgment can be entered on the competing pleadings and exhibits thereto, and documents incorporated by reference." *Venetec Int'l, Inc. v. Nexus Med., LLC*, 541 F. Supp. 2d 612, 617 (D. Del. 2008); *see also Burlington Coat Factory*, 114 F.3d at 1426 (explaining that any documents integral to pleadings may be considered in

connection with Rule 12(c) motion). "The issue is not whether a plaintiff will ultimately prevail but whether the claimant is entitled to offer evidence to support the claims." *Burlington Coat Factory*, 114 F.3d at 1420 (internal quotation marks omitted).

The Court may consider matters of public record as well as authentic documents upon which the complaint is based if attached to the complaint or as an exhibit to the motion. *See Oshiver v. Levin, Fishbein, Sedran & Berman*, 38 F.3d 1380, 1384 n.2 (3d Cir. 1994). The Court may also take judicial notice of the factual record of a prior proceeding. *See Oneida Motor Freight, Inc. v. United Jersey Bank*, 848 F.2d 414, 416 n.3 (3d Cir. 1988). Ultimately, a motion for judgment on the pleadings can be granted "only if no relief could be afforded under any set of facts that could be proved." *Turbe*, 938 F.2d at 428.

D. Motion for Sanctions

1. Rule 11

Federal Rule of Civil Procedure 11 "provides that an attorney who fails to either (1) read the pleading; (2) make a reasonable inquiry into the factual and legal legitimacy of the pleading; or (3) file the pleading only for a proper purpose, shall be sanctioned." *Simmerman v. Corino*, 27 F.3d 58, 62 (3d Cir. 1994). Additionally, "sanctions are proper when, *inter alia*, a party 'insist[s] upon a position after it is no longer tenable . . . .'" *Balthazar v. Atl. City Med. Ctr.*, 137 F. App'x 482, 490 (3d Cir. 2005) (citing Advisory Committee's Note to Rule 11). "Absent exceptional circumstances, a law firm must be held jointly responsible for a violation committed by its partner, associate, or employee." Fed. R. Civ. P. 11(c)(1).

2. 28 U.S.C. § 1927

"Any attorney or other person admitted to conduct cases in any court of the United States

or any Territory thereof who so multiplies the proceedings in any case unreasonably and vexatiously may be required by the court to satisfy personally the excess costs, expenses, and attorneys' fees reasonably incurred because of such conduct." 28 U.S.C. § 1927. The Third Circuit has interpreted § 1927 to permit fee awards where "an attorney has (1) multiplied proceedings; (2) in an unreasonable and vexatious manner; (3) thereby increasing the cost of the proceedings; and (4) doing so in bad faith or by intentional misconduct." *In re Prudential Ins. Co. Am. Sales Practice Litig. Agent Actions*, 278 F.3d 175, 188 (3d Cir. 2002). In cases where a party is represented by counsel, § 1927 "is designed to discipline counsel only and does not authorize imposition of sanctions on the attorney's client." *Zuk v. E. Pennsylvania Psychiatric Inst. of the Med. Coll. of Pennsylvania*, 103 F.3d 294, 297 (3d Cir. 1996).

3. Inherent Authority

"[A]n award of fees and costs pursuant to the court's inherent authority to control litigation will usually require a finding of bad faith." *Prudential*, 278 F.3d at 188. The Supreme Court has authorized lower courts to use their "inherent power to police" themselves and "assess attorney's fees when a party has acted in bad faith, vexatiously, wantonly, or for oppressive reasons." *Chambers v. NASCO, Inc.*, 501 U.S. 32, 45-46 (1991) (internal quotation marks omitted).

4. 35 U.S.C. § 285

In "exceptional" patent cases, a court may "award reasonable attorney fees to the prevailing party." 35 U.S.C. § 285. The Supreme Court has held that an "exceptional" case is "one that stands out from others with respect to the substantive strength of a party's litigating position (considering both the governing law and the facts of the case) or the unreasonable

manner in which the case was litigated." *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749, 1756 (2014). "[A] district court may award fees in the rare case in which a party's unreasonable conduct – while not necessarily independently sanctionable – is nonetheless so 'exceptional' as to justify an award of fees." *Id.* at 1757. A finding of bad faith is not required to award attorney fees under § 285. *See id.* The burden is on the movant to prove by a preponderance of the evidence that it should receive an award of attorney fees under § 285. *See id.* at 1758. Ultimately, a court must make a discretionary decision based on the totality of circumstances. *See id.* at 1756.

III. DISCUSSION

A. Adobe's Motion to Dismiss

Adobe moves under Rule 12(b)(6) to dismiss PDIC's counterclaim for breach of the implied covenant of good faith and fair dealing ("implied covenant") in the Adobe License.[9] (*See* D.I. 52)

1. Choice of Law

The Adobe License does not include a choice of law provision. Although the parties agree that Delaware choice of law rules should apply, they disagree as to the ultimate issue of which state's law governs interpretation of the Adobe License. (*See* D.I. 53 at 9; D.I. 57 at 6) The Court agrees that Delaware choice of law rules are applicable. "'The conflict of laws rules to be applied by the federal court in Delaware must conform to those prevailing in Delaware's state courts.'" *Underhill Inv. Corp. v. Fixed Income Disc. Advisory Co.*, 319 F. App'x 137, 140

[9]PDIC asserted this counterclaim in all of the above-captioned actions, except C.A. No. 13-408, as PDIC did not respond to Adobe's complaint in that action.

(3d Cir. 2009) (quoting *Klaxon Co. v. Stentor Elec. Mfg. Co.*, 313 U.S. 487, 496 (1941)).

Applying Delaware choice of law rules, Adobe argues that New Jersey law should govern the Adobe License, whereas PDIC argues for Delaware law. (*See* D.I. 53 at 8-10; D.I. 57 at 6-7) Courts in Delaware use the "most significant relationship test" to determine which state's law governs a contract that does not include a choice of law provision. *See Cohen v. Formula, Inc.*, 750 F. Supp. 2d 495, 501 (D. Del. 2010) (citing *Travelers Indem. Co. v. Lake*, 594 A.2d 38, 41 (Del. 1991)). The Restatement (Second) of Conflicts of Laws ("Restatement"), used for choice of law in Delaware, instructs that a Court must search for the forum with the most significant "relationship ***to the transaction***" – where "transaction" refers collectively to events taking place at the place of ***negotiation*** of the contract ***and*** the place of ***performance*** under the contract. *Cohen*, 750 F. Supp. 2d at 501 (quoting § 188 of the Restatement) (emphasis added).

The Adobe License was negotiated by Adobe in California and by PDIC in New Jersey. (*See* D.I. 53 at 9; D.I. 57 at 6) Adobe's performance consisted of payment to PDIC via a bank located in New Jersey. (*See* D.I. 53 at 9-10; D.I. 60 at 3 n.1) This payment was the most significant affirmative act required by either party under the Adobe License, given that PDIC's performance consisted primarily of not suing Adobe or Adobe's customers. Adobe alleges (and PDIC does not dispute) that PDIC conducted business in New Jersey. (*See* D.I. 53 at 9; *see also Cohen*, 750 F. Supp. 2d at 501 (quoting Restatement's listing of "place of business of the parties" as relevant factor for choice of law)) The only potentially relevant activity identified by the parties which took place in Delaware was litigation before this Court.

The Restatement also lists the "domicile, residence, nationality, [and] place of incorporation" of the parties as relevant factors. *Falkenberg Capital Corp. v. Dakota Cellular,*

Inc., 925 F. Supp. 231, 235 (D. Del. 1996). "Adobe is incorporated in Delaware and has its principal place of business in California. Princeton is incorporated in Texas and, though it claims its principal place of business is also in Texas . . . , it conducts business from New Jersey." (D.I. 53 at 9)

Considering all of these factors, the Court determines that New Jersey law should govern in these circumstances, primarily because a significant part of the performance and negotiation of the Adobe License took place in New Jersey. "[W]hen the place of negotiation and place of performance are in the same state. a court should generally apply the law of that state." *Falkenberg*, 925 F. Supp. at 235 (citing Restatement § 188 (1971) cmt. f). New Jersey has the most significant relationship to the transaction. Therefore, the Court will interpret the Adobe License under the law of New Jersey.

2. Implied Covenant of Good Faith and Fair Dealing

"A covenant of good faith and fair dealing is implied in every contract in New Jersey." *Wilson v. Amerada Hess Corp.*, 773 A.2d 1121, 1126 (N.J. 2001). "Although the implied covenant of good faith and fair dealing cannot override an express term in a contract, a party's performance under a contract may breach that implied covenant even though that performance does not violate a pertinent express term." *Id.* "Good faith performance or enforcement of a contract emphasizes faithfulness to an agreed common purpose and consistency with the justified expectations of the other party; it excludes a variety of types of conduct characterized as involving 'bad faith' because they violate community standards of decency, fairness or reasonableness." *Id.* (citing Restatement (Second) of Contracts § 205 cmt. a (1981)). "[T]he task here is to identify in that context the parties' reasonable expectations." *Id.* at 1127.

PDIC argues that Adobe breached the implied covenant by failing to "cooperate over interpretation" of the Adobe License and "supplying an unreasonable interpretation" of the Adobe License. (*See* D.I. 57 at 8-9) It is unclear what PDIC means by "cooperate over interpretation" of the agreement, but the Court understands PDIC's argument to be that Adobe is advocating an unreasonable interpretation of the Adobe License. Contract interpretation is a question of law. *See Selective Ins. Co. of Am. v. Hudson E. Pain Mgmt. Osteopathic Med. & Physical Therapy*, 46 A.3d 1272, 1276 (N.J. 2012). The Adobe License expressly grants to both parties the right to enforce terms of the agreement (*see* D.I. 12 Ex. 2 at 3-4), which necessarily includes a right to reasonably interpret the Adobe License.

[redacted] (D.I. 12 Ex. 2 at 1) (emphasis added) PDIC argues that Adobe's interpretation of the agreement "would extend licenses to products that were not 'Licensed Products' and beyond any remuneration received by Princeton under the Agreement." (D.I. 57 at 11) However, in the Court's view, the relevant terms are broad enough to render reasonable Adobe's interpretation of the agreement as covering use of JPEG images created using Adobe's Photoshop® product in combination with other products.[10] In light of the above, the Court determines that there is no set of facts, viewing PDIC's counterclaim in the light most favorable to PDIC, that would support a claim for relief under PDIC's "cooperation over interpretation" theory of breach of the implied covenant.

[10]The Court is not called upon at this time to make a final decision as to which interpretation is the correct or most reasonable interpretation of the Adobe License.

PDIC also argues that Adobe breached the implied covenant by failing to "cooperate and supply corroborating evidence that any defendant was a customer" of Adobe and covered by the Adobe License. (*See* D.I. 57 at 8-9) This theory of breach of the implied covenant fails to state a claim for relief under New Jersey law because PDIC fails to plead bad faith. "Bad faith or ill motive is an essential element of a claim for breach of the implied covenant of good faith and fair dealing." *Coldwell Banker Real Estate, LLC v. Plummer & Associates, Inc.*, 2009 WL 3230840, at *4 (D.N.J. Oct. 2, 2009) (citing *Seidenberg v. Summit Bank*, 348 N.J. Super. 243, 257 (App. Div. 2002)). PDIC argues that it pleads bad faith merely by pleading breach of the covenant of ***good faith*** and fair dealing. (*See* D.I. 57 at 11) However, the Court agrees with Adobe that such formulaic recitation of bad faith is insufficient under *Twombly*, 550 U.S. at 555.[11]

For the foregoing reasons, the Court will grant Adobe's Motion to Dismiss PDIC's claim for breach of the implied covenant of good faith and fair dealing. (D.I. 52)[12]

B. PDIC's Motion to Dismiss

PDIC moves to dismiss the patent misuse and breach of contract claims asserted by Adobe in Adobe's complaint in intervention. (D.I. 66) PDIC moves under Rules 12(b)(1) and 12(b)(6), for lack of subject matter jurisdiction and failure to state a claim on which relief may be

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[11]PDIC's failure to allege bad faith is an additional, independent reason why PDIC's "cooperation over interpretation" theory, discussed above, also fails as a matter of law.

[12]PDIC requests leave to amend its counterclaim, in lieu of the Court dismissing it. (*See* D.I. 57 at 12) This request will be denied. Amendment would be futile. *See Forman v. Davis*, 371 U.S. 178, 182 (1962) (holding that generally leave to amend should be granted except where there is showing of, among other things, "futility of amendment"). None of the conduct PDIC characterizes as breaching the implied covenant was prohibited by the Adobe License.

granted.[13]

1. Patent Misuse

PDIC moves to dismiss Adobe's patent misuse claim based on the lack of a case or controversy. (*See* D.I. 68 at 10-11) Patent misuse is "the patentee's act of impermissibly broadening the physical or temporal scope of the patent grant with anticompetitive effect." *Princo Corp. v. Int'l Trade Comm'n*, 616 F.3d 1318, 1328 (Fed. Cir. 2010) (internal brackets and quotation marks omitted). "[E]xistence of a case or controversy must be evaluated on a claim-by-claim basis." *Jervis B. Webb Co. v. S. Sys., Inc.*, 742 F.2d 1388, 1399 (Fed. Cir. 1984); *see also DaimlerChrysler Corp. v. Cuno*, 547 U.S. 332, 352 (2006) ("[O]ur standing cases confirm that a plaintiff must demonstrate standing for each claim he seeks to press.").

In its answering brief to PDIC's motion, Adobe does not address PDIC's argument regarding lack of a case or controversy with respect to patent misuse. (*See generally* D.I. 77) But Adobe, as the party opposing a Rule 12(b)(1) motion, bears the burden of proving that this jurisdictional requirement is met. *See Development Fin. Corp. v. Alpha Housing & Health Care*, 54 F.3d 156, 158 (3d Cir. 1995) (stating that party asserting jurisdiction "bears the burden of showing that its claims are properly before the district court"). Under the circumstances, Adobe's failure to address whether there is any case or controversy with respect to Adobe's patent misuse claim is reason enough for the Court to dismiss Adobe's claim.

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[13]Adobe argues that PDIC's motion is untimely. (*See* D.I. 77 at 1) However, during a teleconference with the parties on August 6, 2015, the Court authorized PDIC to file a motion to dismiss. (*See* Transcript (D.I. 72) at 20-21) ("So I do further authorize and direct that the due date for any renewed motion for sanctions is the same time frame I set out for the plaintiff to file a motion to dismiss . . . .") Moreover, "[u]nder Rule 12(b)(1), a challenge to a federal court's subject matter jurisdiction may be brought at any time." *Singer v. Com'r of I.R.S.*, 2000 WL 14874, at *1 (E.D. Pa. Jan. 10, 2000).

Additionally, the Court agrees with PDIC. "Patent misuse is an affirmative defense to an accusation of patent infringement . . . ." *Virginia Panel Corp. v. MAC Panel Co.*, 133 F.3d 860, 868 (Fed. Cir. 1997). Given that stipulations of dismissal of PDIC's patent infringement complaint have been entered in each of the above-captioned cases, there is no longer any assertion of patent infringement in any of these cases. Nor is there any threat that PDIC will attempt to assert the '056 patent against Adobe or against any entity in privity with Adobe.[14] Nor does Adobe point to any other type of ongoing purported misuse of the '056 patent. *See Steiner v. Lewmar, Inc.*, 2013 WL 5755578, at *5 (D. Conn. Oct. 22, 2013) ("[S]ince the Plaintiff[] ha[s] effectively waived any potential patent infringement claim, it would appear that the rationale for a patent misuse defense does not apply in this case.").

Adobe implies that past damages resulting from misuse of the '056 patent constitute ongoing harm from patent misuse. (*See* D.I. 77 at 16) ("Unless and until Princeton cures its patent misuse and the consequences have dissipated, ***including making Adobe whole from the harm it has suffered*** due to Princeton's patent misuse, equity should bar Princeton from recovering for any alleged infringement of the '056 Patent.") The Court disagrees. First, "monetary damages may not be awarded under a declaratory judgment counterclaim based on patent misuse, because patent misuse simply renders the patent unenforceable." *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1428 (Fed. Cir. 1997) (internal quotation marks omitted).

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[14]This distinguishes the situation here from that confronted in *Linzer Products Corp. v. Sekar*, 499 F. Supp. 2d 540, 560-61 (S.D.N.Y. 2007), a case on which Adobe relies for the proposition that in limited circumstances patent misuse may be brought as an independent action. (*See* C.A. 13-404 D.I. 77 at 13) Again, Adobe cites no authority for the proposition that there is a case or controversy or that it has standing with respect to patent misuse under the circumstances presented here.

Second, to the extent PDIC's assertion of the '056 patent may have constituted patent misuse, such misuse has now been purged by PDIC's dismissal with prejudice of all claims against Defendants in the above-captioned suits. (*See* D.I. 68 at 10; *see also Qualcomm Inc. v. Broadcom Corp.*, 548 F.3d 1004, 1026 (Fed. Cir. 2008) ("[A]n unenforceability remedy in the patent misuse context is limited to rendering the patent unenforceable until the misuse is purged . . . .")

Accordingly, the Court will grant PDIC's motion to dismiss with respect to Adobe's patent misuse claim.

2. Breach of Contract

PDIC moves to dismiss Adobe's breach of contract claim for lack of subject matter jurisdiction. (*See* D.I. 68 at 16-20) "Jurisdiction normally attaches at the time of filing based on pleadings." *Nilssen v. Motorola, Inc.*, 203 F.3d 782, 784 (Fed. Cir. 2000). At the time Adobe filed its complaint in intervention in each of the above-captioned cases, there was a pending case or controversy, arising under the U.S. patent laws, between PDIC and each of the individual Defendants – namely, PDIC's infringement claims related to the '056 patent. Therefore, at the time Adobe filed its complaint, the Court had subject matter jurisdiction pursuant to 28 U.S.C. § 1338.[15] In addition, the Court had supplemental jurisdiction under 28 U.S.C. § 1367 over Adobe's breach of contract claims, which arise under state law.[16] Adobe's breach of contract

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[15]"The district courts shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents . . . ." 28 U.S.C. § 1338.

[16]28 U.S.C. § 1367(a) states, in pertinent part, "in any civil action of which the district courts have original jurisdiction, the district courts shall have supplemental jurisdiction over all other claims that are so related to claims in the action within such original jurisdiction that they form part of the same case or controversy under Article III of the United States Constitution.

claim is part of the same case or controversy and derives from the same "common nucleus of operative fact" as the underlying patent disputes between PDIC and Defendants. *See United Mine Workers of Am. v. Gibbs*, 383 U.S. 715, 725 (1966) ("The state and federal claims [in context of § 1367 jurisdiction] must derive from a common nucleus of operative fact."). Moreover, to the extent the Court has discretion to exercise supplemental jurisdiction over Adobe's breach of contract claim, now that the underlying patent infringement disputes between PDIC and Defendants have been dismissed, the Court finds that it is appropriate to do so.[13] The Court has already expended significant resources on these matters. It would be wasteful of judicial resources to require the parties to re-start their conflict in state court at this point.[14]

Accordingly, the Court will deny PDIC's motion to dismiss with respect to Adobe's claim for breach of contract.

C. Adobe's Motion for Judgment on the Pleadings

Adobe moves for judgment on the pleadings on its breach of contract claim. PDIC responds that this motion is untimely for reasons including that the pleadings are not yet closed. (*See* D.I. 89 at 1-4; Fed. R. Civ. P. 12(c) ("***After the pleadings are closed*** – but early enough not to delay trial – a party may move for judgment on the pleadings.") (emphasis added)) Adobe

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Such supplemental jurisdiction shall include claims that involve . . . intervention of additional parties."

[13]28 U.S.C. § 1367(c)(3) states: "The district courts may decline to exercise supplemental jurisdiction over a claim under subsection (a) if the district court has dismissed all claims over which it has original jurisdiction."

[14]Because the Court has jurisdiction over Adobe's breach of contract claim under §§ 1338 and 1367, the Court need not address the parties' arguments regarding the possible presence also of diversity jurisdiction under 28 U.S.C. § 1332.

admits that the pleadings are not closed and cites no authorization from the Court to file its motion at this time. (*See generally* D.I. 90) Accordingly, the Court will deny Adobe's motion for judgment on the pleadings.

D. Adobe's Motion for Sanctions

Adobe renewed its motion for sanctions. In its motion, Adobe moves under § 285 of the patent laws, as well as Federal Rule of Civil Procedure 11, 28 U.S.C. § 1927, and the Court's inherent authority. The Court addresses each of these potential bases for sanctions in the sections below.

1. 35 U.S.C. § 285

a. Invocation of Patent Laws

An award of attorney fees under § 285 is available in cases arising under U.S. patent laws and in non-patent cases where non-patent issues are "intertwined with the patent issues" such that "the rights at issue . . . properly invoke patent laws." *Interspiro USA, Inc. v. Figgie Int'l Inc.*, 18 F.3d 927, 933 (Fed. Cir. 1994); *see also NOVA Chemicals Corp. v. Dow Chem. Co.*, 2015 WL 5766257, at *5 (D. Del. Sept. 30, 2015).[15] However, "'[w]hen an action embraces both patent and non-patent claims, no fees under § 285 can be awarded for time incurred in litigation of the non-patent issues.'" *Gjerlov v. Schuyler Labs., Inc.*, 131 F.3d 1016, 1025 (Fed. Cir. 1997) (quoting *Machinery Corp. of Am. v. Gullfiber AB*, 774 F.2d 467, 475 (Fed. Cir. 1985)).

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[15]PDIC has not argued that § 285 does not apply on the basis that the above-captioned cases are not patent cases or that the cases do not involve issues sufficiently "intertwined" with patent issues under *Interspiro*. Therefore, PDIC has waived this argument. *See LG Display Co. v. AU Optronics Corp.*, 2010 WL 5463305, at *4 (D. Del. Dec. 29, 2010). Nonetheless, the Court feels it is important to address this threshold issue of whether § 285 is even a proper basis on which Adobe may seek attorney fees in this case.

PDIC initiated these suits by suing Defendants for patent infringement. Adobe argues for attorney fees under § 285 based, in part, on PDIC's decision to file these suits without adequate pre-suit investigation. The adequacy of PDIC's pre-suit investigation turns on the legitimacy of PDIC's infringement theories, an issue that necessarily invokes patent law. Moreover, many (probably most) of the issues that were put before the Court in connection with Adobe's motion for sanctions – such as the plausibility or strength of PDIC's "web server infringement theory" (*see* D.I. 76 ¶¶ 30-36), the parties' competing interpretations of the Adobe License and what otherwise infringing acts it covers, the reasonableness of PDIC's settlement offers in light of the expiration of the patent and the impact of the patent damages statute, and the validity of the '056 patent in light of its survival of reexamination by the United States Patent and Trademark Office ("PTO") – are sufficiently "intertwined" with patent issues to "invoke patent laws" under *Interspiro*.

Therefore, the Court concludes that § 285 is applicable to the above-captioned cases and that Adobe may be able to obtain an award of attorney fees based on this statute.[16]

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[16]Going forward, given the rulings announced in this Memorandum Opinion, the above-captioned cases will involve only Adobe's breach of contract claims. If either party perceives a good faith basis at the conclusion of the case to seek attorney fees under § 285, such fees will be potentially available only to the prevailing party (an issue discussed immediately below) and ***only*** for time spent litigating Adobe's breach of contract claim ***to the extent that claim does not invoke only state law***. *See Gjerlov*, 131 F.3d at 1025 (vacating award of attorney fees for breach of contract claim that invoked only state law); *see also Gerawan Farming, Inc. v. Rehrig Pac. Co.*, 2013 WL 6491517, at *9 (E.D. Cal. Dec. 10, 2013) (limiting award of attorney fees under § 285 to claims and conduct that sufficiently invoke patent laws); *David Austin Roses, Ltd. v. Jackson & Perkins Wholesale, Inc.*, 2010 WL 555674, at *2 (D. Or. Feb. 16, 2010) (apportioning fees related to patent issues and fees related to breach of contract issues and awarding fees under § 285 for former but not for latter).

PDIC's server-level theory alleges infringement of the '056 patent by Adobe's customers but only when those customers are using non-Adobe products in implementing "on the fly" JPEG

b. Prevailing Party

PDIC argues that Adobe cannot recover attorney fees under § 285 because Adobe is not the "prevailing party." (*See, e.g.*, D.I. 74 at 16; Tr. at 61-62) Section 285 expressly limits an award of attorney fees to the prevailing party, stating: "The court in exceptional cases may award reasonable attorney fees to the ***prevailing party***." 35 U.S.C. § 285 (emphasis added). "Federal Circuit law governs the determination of which party has prevailed." *SSL Servs., LLC v. Citrix Sys., Inc.*, 769 F.3d 1073, 1086 (Fed. Cir. 2014).

To be a prevailing party, the Federal Circuit requires that (1) the party receive at least some relief on the merits and (2) such relief materially alter the legal relationship between the parties by modifying one party's behavior in a way that "directly benefits" the opposing party. *See id.* "A party does not need to prevail on all claims to qualify as the prevailing party." *Id.* "Traditionally, § 285 requests are determined by the court upon the resolution of all substantive issues in a patent case." *Tech. Innovations, LLC v. Amazon.com, Inc.*, 2013 WL 4409462, at *3 (D. Del. Aug. 15, 2013) (citing *Highmark, Inc. v. Allcare Health Mgmt. Sys., Inc.*, 701 F.3d 1351, 1353 (Fed. Cir. 2012)). "[A] limitation exists within the statute with respect to timing such that attorney fees are properly determined under § 285 once ***all*** of the substantive issues in a case reach resolution." *Id.* (emphasis added). There can only be one "prevailing party" under § 285. "Therefore, it follows that attorney fees pursued under § 285 can only be awarded after the substantive issues in the case have been resolved and the prevailing party has been determined." *Id.*

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resizing functionality. (*See* D.I. 76 ¶¶ 30-36) PDIC may be able to show that it did not breach the Adobe License by showing that use of non-Adobe products infringed under PDIC's server-level theory. It would appear that resolution of this issue would necessarily invoke patent laws.

The proceedings involving PDIC and Adobe – as opposed to those that were initially brought by PDIC against Defendants, which have now been dismissed – are still in their early stages, as the pleadings are not even closed. Adobe's breach of contract claims remain pending and it is possible that either Adobe or PDIC may seek to amend its respective pleadings before these cases are finally decided. PDIC has prevailed against Adobe's allegations of patent misuse. Adobe has prevailed on PDIC's claim for breach of the implied covenant of good faith and fair dealing. All suits against Defendants were dismissed, vindicating Adobe's intervention in the above-captioned lawsuits to defend its customers. PDIC may have received compensation as part of settlements with some or all of the Defendants.

In light of the stage of these proceedings, and because the Court agrees with PDIC that Judge Robinson's well-reasoned analysis in *Tech. Innovations* applies to the circumstances of the instant cases (*see* D.I. 74 at 16 n.10), the Court cannot determine at this time whether PDIC or Adobe is the prevailing party. However, the Court will assume, solely for purposes of evaluating Adobe's renewed motion for sanctions, that Adobe is the prevailing party. Given that the Court will be denying Adobe's motion in any event, there is no prejudice to PDIC from the Court entertaining this assumption.[17]

c. Exceptional Case

Adobe argues that these cases are exceptional because: (1) PDIC failed to conduct an adequate pre-suit investigation, (2) PDIC filed and maintained baseless claims for the improper

[17]Should whoever turns out to be the prevailing party at the conclusion of these cases believe it has a good faith basis to file a motion pursuant to § 285, that motion will necessarily have to be based on evidence unavailable today (e.g., litigation conduct that occurs in the future). As explained below, attorney fees are not warranted under § 285 based on PDIC's claims and conduct up to this point in these cases.

purpose of extracting nuisance-value settlements, (3) PDIC maintained suits and objectively-frivolous legal positions long after becoming aware of information compelling dismissal, and (4) PDIC engaged in frivolous, wanton, and vexatious litigation conduct. (*See* D.I. 67 at 10-20) PDIC responds that these are not exceptional cases. (*See, e.g.*, D.I. 30 at 17-18; D.I. 74 at 17-18; Tr. at 72)

Under the totality of the circumstances, the Court finds numerous factors that favor finding these cases exceptional, but also numerous factors pointing in the other direction. Still other considerations are neutral. The Court addresses these issues below.

i. Factors favoring finding of "exceptional" case

Adobe alleges that PDIC conducted an insufficient pre-suit investigation before suing Defendants. (*See* D.I. 67 at 10-13) Counsel[18] for PDIC did not undertake any independent investigation but relied entirely on the pre-suit investigation of their client, Mr. Thomas Meagher, PDIC's President, as the basis for filing suit. (*See* 2015 Tr. at 21-22 (The Court: "[A]ll I have is Mr. Meagher's very short declaration if I want to understand what pre-suit investigation your client did . . . . Isn't that correct?" Mr. Pazuniak: "With respect to a pre-suit investigation, that is correct."); *see also* D.I. 31 at 1-3 (Mr. Meagher, describing his pre-suit investigation); D.I. 76 ¶¶ 30-36 (same)) Some aspects of the pre-suit investigation were deficient, which weighs in favor of making an exceptional case finding.

For example, counsel did not learn of the Adobe License prior to filing suit. As noted, counsel did not undertake any independent investigation, and so did not discover the Adobe

[18]These cases do not require the Court to consider the relative roles and responsibilities of Delaware counsel and non-Delaware referring counsel as, in each of these cases, PDIC is represented solely by Delaware counsel.

License on their own. Nor did PDIC or Mr. Meagher inform counsel of the existence of the Adobe License. Therefore, counsel did not consider the Adobe License before filing suit. (*See* Tr. at 42)

PDIC's Mr. Meagher had extensive experience with the '056 patent prior to PDIC filing its series of suits here in Delaware. In his earlier capacity as counsel at General Electric Company ("GE"), at a time when GE owned the '056 patent, Mr. Meagher was personally involved in licensing the '056 patent to "no less than ten (10) companies."[19] (D.I. 76 ¶ 8) Mr. Meagher has declared (without dispute from Adobe) that he was "fully familiar with the '056 patent," including being familiar with licensing negotiations involving Adobe. (*Id.* at 4-11) Given Mr. Meagher's knowledge, it is striking that he did not make counsel aware of the existence of the Adobe License so counsel could evaluate its impact prior to signing 51 complaints asserting patent infringement against entities that included numerous Adobe customers, whose rights to practice the '056 patent may have been implicated by the Adobe License. Recent cases in this District discuss the significant impact meritorious license defenses can have on patent litigation. *See, e.g.*, *Summit Data Sys., LLC v. EMC Corp.*, 2014 WL 4955689, at *5 (D. Del. Sept. 25, 2014), *aff'd sub nom. Summit Data Sys. LLC v. NetApp Inc.*, 620 F. App'x 955 (Fed. Cir. 2015) (granting attorney fees under § 285 because, *inter alia*, plaintiff brought lawsuit under theory of infringement that was barred by license); *Bayer Cropscience AG v. Dow Agrosciences LLC*, 2015 WL 1197436, at *8 (D. Del. Mar. 13, 2015) ("Bayer defends itself by claiming that it was 'unaware' that Dow had a license until Dow

[19] "The '056 Patent had been developed at GE, was owned by GE," and GE licensed the patent to "various companies who were practicing the patented technology." (D.I. 76 ¶ 7)

opposed Bayer's motion to amend the *Bayer I* Complaint. If that were the case, by Bayer's own admission, Bayer had a duty to investigate such license defense before filing another lawsuit."). In the circumstances here, Mr. Meagher's failure to broach the subject of a potential license defense with counsel prior to filing suit is a factor favoring finding this case to be exceptional.

Another example of deficiencies in the pre-suit investigation is that Mr. Meagher did not attempt to identify ***any*** suppliers of software that may have executed the JPEG functionality now accused under PDIC's "web server" theory of infringement. (*See* D.I. 76 ¶¶ 30-36)[20] Mr. Meagher indicates that he "may have encountered" a reference to "Scene7," an ***Adobe*** product (*see* D.I. 74 at 20), during his pre-suit investigation, but claims that he was "not aware that Scene7 was an Adobe company." (D.I. 76 ¶ 48) Mr. Meagher indicates that he reviewed internetretailer.com's "Internet Retailer 2008 Top 500 Guide" ("Guide") when conducting his pre-suit investigation into Defendants' websites. (*See id.* at 12) In that very Guide, there are indications that Scene7 was used in at least some of Defendants' websites – including Office Depot (for "[c]ontent [m]anagement" and "[r]ich [m]edia") and Sears Holdings Company (for "[r]ich [m]edia") (*see* Guide at 90, 100) – and the Guide's publisher's website, internetretailer.com, includes an article from 2007 entitled "***Imaging technology giant Adobe acquires rich media provider Scene7***" (*see* Kurt Peters, *Imaging technology giant Adobe acquires rich media provider Scene7*, Internet Retailer (May 3, 2007, 12:00 AM),

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[20]Under the theory of infringement PDIC argued at the May 5, 2015 hearing, images created using Adobe Photoshop® "somewhere along the line" ***would not*** infringe due to the Adobe License. (2015 Tr. at 29) Under PDIC's new web server theory of infringement, PDIC now implies that resized versions of images created using Adobe Photoshop® ***would*** infringe even under the Adobe License. (*See* D.I. 76 at ¶¶ 30-36) (calling such resized images "separate act[s] of infringement")

https://www.internetretailer.com/2007/05/03/imaging-technology-giant-adobe-acquires-rich-media-provider-scen (last visited March 28, 2016)). As Adobe has pointed out, it acquired Scene7 in May 2007, well before the instant lawsuits were filed, and publicly announced its acquisition. (*See* C.A. No. 13-325 D.I. 25 Ex. 17 (Adobe-Scene7 merger agreement); C.A. No. 13-325 D.I. 22 Ex. E (press release announcing Adobe's acquisition of Scene7) The Court is troubled that Mr. Meagher, PDIC, and its counsel wholly failed to connect ***any*** of the dots between Scene7, the Defendants' websites, and the Adobe License before suing Defendants.

Another factor weighing in favor of an exceptional case finding is PDIC's delay in disclosing its web server theory of infringement. In particular, PDIC waited until September 9, 2015 to disclose its web server theory in any detail. (*See* D.I. 76) This was 2 ½ years after filing the above-captioned cases, after Adobe had moved to intervene and had its motion granted, and after Adobe had filed ***two*** motions for sanctions – motions in which Adobe sought sanctions for reasons including an allegedly inadequate pre-suit investigation. Notably, Mr. Meagher's articulation of PDIC's web server theory of infringement was not included in his original (January 30, 2015) declaration describing PDIC's pre-suit investigation. (*See* D.I. 31) Counsel for PDIC admitted that he was "embarrassed" by the short length of Mr. Meagher's original description of PDIC's pre-suit investigation. (*See* Tr. at 34) While the Court credits Mr. Meagher's declaration statements[21] that PDIC had possession of its web server theory of infringement before it filed any of the above-captioned lawsuits (*see* D.I. 76 ¶¶ 30-36), it would have been far preferable for PDIC to have disclosed this theory long before these cases devolved

[21]Although Adobe raises doubts about the veracity of certain portions of Mr. Meagher's second declaration (*see, e.g.*, D.I. 85 at 2), Adobe presented no witness to dispute Mr. Meagher's statements and declined the opportunity to examine him at the hearing (*see* Tr. at 73).

into the protracted sanctions battle they became. Had PDIC disclosed Mr. Meagher's more detailed version of his pre-suit investigation and articulation of the web server theory of infringement during, for example, the Rule 11 safe harbor period before Adobe filed its first motion for sanctions, the parties and the Court may have been able to avoid the subsequent motions, briefing, hearings, and now opinions addressing sanctions.[22] PDIC's delay in revealing the true extent of its pre-suit investigation and its detailed theory of non-Adobe infringement at the web server complicated and delayed resolution of these cases.

PDIC's inconsistent representations before the Court also weigh in favor of an exceptional case finding. At the hearing on May 5, 2015, PDIC suggested that counsel conducted no pre-suit investigation ***whatsoever***, referring only to counsel's reliance on Mr. Meagher as "highly experienced patent counsel, knowledgeable patent counsel, and the referring counsel." (*See* D.I. 51 at 24-25) Later, in PDIC's answering brief in opposition to Adobe's renewed motion for sanctions, PDIC implied that counsel did ***not*** actually rely solely rely on Mr. Meagher, but in fact counsel ***independently*** reviewed claim charts and discussed matters with Mr. Meagher. (*See* D.I. 74 at 5) The Court accepts as true the latter representation – which depicts a far more laudable approach to meeting counsel's obligations than what was previously implied. But the lack of clarity – and arguable inconsistency – in what was explained to the

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[22]Even more preferable would have been for PDIC to have articulated its web server theory of infringement well prior to when Adobe served its Rule 11 motion, in connection with one or more of the repeated times when counsel for Adobe asked PDIC about its non-Adobe basis for maintaining the lawsuits. (*See* D.I. 67 at 5-7) Had PDIC done so, Adobe would certainly have explained to PDIC that Scene7 is an Adobe product, and the parties quite likely could have resolved their then necessarily narrowed dispute about the application of the Adobe License to Scene7 and to manipulations of images at a web server when performed with non-Adobe software.

Court contributed to the Court's May 2015 statements about the apparent inadequacy of the pre-suit investigation and likely encouraged Adobe to proceed to renew its request for sanctions, thereby extending these proceedings.

There are other inconsistencies in what PDIC has represented to the Court. In PDIC's opposition brief to Adobe's first motion for sanctions, PDIC stated that it could not access five of the nine Defendants' websites because they were either "corrupted" or "blocked." (D.I. 30 at 5-6) In other words, PDIC stated it could only access at most four of the nine Defendants' websites. Later, however, in his September 2015 second declaration, Mr. Meagher stated that as part of his early 2013 pre-suit investigation he ***was*** able "to eventually access at least portions of most [i.e., five or more] of the websites of the Defendants." (D.I. 76 ¶¶ 32, 34)

At the May 5, 2015 hearing, counsel for PDIC stated that PDIC would drop its lawsuits if accused images were made with Adobe Photoshop®. (*See* 2015 Tr. at 39-40) Later, PDIC suggested, under its new web server theory, that Defendants could still infringe even if they only used Adobe Photoshop® to create all of the accused images, so long as the "Enlarged Product View" JPEG functionality was not implemented using Scene7. (*See* D.I. 74 at 6; D.I. 76 at ¶¶ 30-36) The latter position appears to be inconsistent with the representation PDIC had made in May 2015. PDIC seemed to make similar inconsistent statements regarding the scope of the Adobe License. (*Compare* 2015 Tr. at 29-30 (stating use of Adobe Photoshop® to process image made image non-infringing under license) *with* D.I. 74 at 13 (stating image processed with Adobe PhotoShop® could still infringe under license)) The Court recognizes that PDIC now explains that the positions it took at the May 2015 hearing were positions it voluntarily and strategically chose to take, after deciding that rights it believed it retained under the Adobe

License were not worth fighting for in light of Adobe's intervention. (*See, e.g.*, Tr. at 101) That is, PDIC was not in fact agreeing with Adobe's interpretation of the Adobe License, and still does not agree with that interpretation. However, PDIC was far from clear about its position on these points, leading Adobe and the Court to reasonably believe that PDIC had no dispute with Adobe's position. This lack of clarity, too, made the subsequent proceedings more challenging and more demanding on the parties' and the Court's resources.

Another factor weighing in favor of an exceptional case finding is PDIC's minimal effort to develop facts (pre- or post-suit) related to infringement. Even after learning about Scene7, PDIC has produced no evidence that it has put any effort into finding out which third-party (non-Adobe) companies develop software that might be implicated by PDIC's web server theory of infringement. PDIC relied almost exclusively on Adobe and Defendants to prove that Defendants did not infringe, even though PDIC bears the ultimate burden of proving infringement. It is problematic that PDIC contracted to license Adobe and Adobe's customers, obtaining [redacted] in exchange, and then decided to sue some of those very customers – insisting vaguely that the suit extended only to those customers' unlicensed conduct, and requiring those customers (or Adobe) to demonstrate what was licensed.

The Court is also troubled by PDIC's delay in dismissing the Nordstrom action. (*See* C.A. No. 13-408) Adobe alleges, and PDIC does not dispute, that PDIC received a declaration from the Nordstrom Defendants (Nordstrom.com, Nordstrom.com Inc., and Nordstrom Inc.) on October 24, 2014, explaining that the Nordstrom Defendants did not infringe under the Adobe License. (*See* D.I. 67 at 6) On the basis of this declaration, PDIC eventually dismissed its case against the Nordstrom Defendants, but only ***seven months later***, on May 29, 2015. (*See* C.A.

No. 13-408 D.I. 51) PDIC offers no explanation for why it took so long to dismiss the Nordstrom Defendants.

All of the above-described conduct extended litigation in the above-captioned cases and increased the resources expended on this litigation by the parties and the Court. All of these factors, therefore, favor finding these cases to be exceptional within the meaning of § 285.

ii. Factors disfavoring finding of "exceptional" case

Certain factors present here weigh against an exceptional case finding. For example, accepting as true the facts alleged by Mr. Meagher with respect to his pre-suit investigation, PDIC and its attorneys (via Mr. Meagher) performed at least ***some*** pre-suit investigation. As described in his declarations (D.I. 31, 76), Mr. Meagher relied on his extensive litigation and licensing experience with the '056 patent, which led Mr. Meagher to believe that "any system for creating and manipulating JPEG images infringed the '056 patent claims." (D.I. 76 ¶ 11) Accepting as true his representations, Mr. Meagher had a good faith, objectively reasonable belief that the '056 patent was valid and that systems using JPEG technology infringed the '056 patent in the manner understood by Mr. Meagher.

In addition, it was reasonable under the circumstances of these cases for counsel to rely on the extensive expertise of Mr. Meagher. Accepting as true the unrebutted representations in the declarations, counsel reviewed claim charts and had discussions with Mr. Meagher. (*See* D.I. 74 at 5) Moreover, counsel was entitled to rely on past communications with Mr. Meagher (including in connection with PDIC suits on the '056 patent that were filed before the earliest of the above-captioned suits) and his reputation as a "consummate expert" with respect to the '056 patent. (*See, e.g.*, D.I. 78 at 3-5) Counsel was not required to redo the investigative steps

performed by Mr. Meagher before filing the lawsuits.[23] Counsel obviously had no control over the fact that Mr. Meagher did not disclose to them the existence of the Adobe License or its potential relevance. This pre-suit investigation, although incomplete and far from ideal, was adequate under the circumstances to meet counsel's Rule 11 obligations (as further discussed below).

The Court accepts on this record that Mr. Meagher and PDIC possessed a plausible theory of infringement under a reasonable interpretation of the Adobe License. As noted above, the statements by PDIC's counsel that created apparent inconsistencies with respect to PDIC's license and infringement theories do not demonstrate that PDIC ever actually conceded the incorrectness of PDIC's positions or ever actually conceded the correctness of Adobe's alternative positions. (*See, e.g.*, Tr. at 16-18) Relatedly, although PDIC delayed in revealing the details of its web server theory, nothing about the theory is inconsistent with Adobe and PDIC's joint letter sent to Adobe's customers. (D.I. 69-1 Ex. 9) In addition, PDIC's original complaints in these cases discuss infringement at the level of websites (albeit in a very general fashion). (*See* D.I. 1)

Moreover, there are indicia in the record that PDIC's web server theory of infringement is not merely plausible but may actually be a strong basis for asserting unlicensed infringement of

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[23]PDIC quotes *CTC Imports & Exports v. Nigerian Petroleum Corp.*, 951 F.2d 573, 579 (3d Cir. 1991), for the proposition that PDIC was not required to conduct as full of a pre-suit investigation in these cases as would have been required if the '056 patent had not been expired and had PDIC's damages period not been shrinking by the day. (*See* D.I. 74 at 15) The Court disagrees with PDIC that *CTC* supports this proposition. Mr. Meagher stated in his declaration (D.I. 76 ¶ 9) that PDIC acquired the '056 patent in January of 2010. Thus, it was PDIC's own delay that created the supposedly emergent situation pointed to by PDIC, and PDIC cannot use a situation of its own creation as an excuse for any deficiencies in its pre-suit investigation.

the '056 patent by one or more of the Defendants. The record demonstrates that at least some of the Defendants do not rely exclusively on Scene7 in the web servers. (*See* D.I. 74 at 5) Adobe is silent in its briefing on the relative merits of PDIC's web server theory. Adobe has not presented any evidence – expert or otherwise – to challenge the merits of this infringement theory.[24]

It is notable, as well, that the presumption of patent validity which is always present at the start of a patent infringement suit is here, with respect to the '056 patent, a quite strong presumption. This is because of the many licenses third-party entities have taken to the '056 patent and the '056 patent's survival of reexamination in the PTO. (*See* D.I. 76 ¶¶ 8, 17) Adobe has not suggested that it has an untested, meritorious theory as to why the '056 patent is invalid.

Regarding PDIC's license position, PDIC has repeatedly asserted that it is only seeking recovery for infringement ***not*** covered by the license (i.e., infringement not involving Adobe products) in light of the following language in the Adobe License: [redacted] (D.I. 76 ¶ 23) (emphasis added) Again, the Court does not view PDIC's interpretation of the Adobe License – a position PDIC chose not to fight for in the context of its patent infringement allegations against Defendants, after Adobe intervened, but a position PDIC has never abandoned as what it views as the correct reading of the Adobe License – to be unreasonable.

[24] Adobe essentially argues that PDIC formulated the web server infringement theory too late (after filing suit) and/or that PDIC waived its right to proceed on this theory by concessions it had made earlier in the litigation. Adobe does ***not***, however, make any attempt to show that the web server theory of infringement is erroneous, implausible, or frivolous.

As indicated by Mr. Meagher, when PDIC received statements from Defendants that they only used Adobe products with respect to the accused technology, PDIC dismissed its cases against these Defendants. (*See* D.I. 76 ¶ 52) Accepting Mr. Meagher's representations as true, PDIC did not advocate positions that were meritless or frivolous. Nor should it be overlooked that when PDIC learned of Adobe's position with respect to the Adobe License, PDIC worked with Adobe to agree on the text for a letter that Adobe sent to Adobe's customers, advising those customers that PDIC was not suing based on Adobe-related conduct. (*See* D.I. 30 at 2) PDIC's cooperation with Adobe in this undertaking disfavors finding PDIC's litigation conduct exceptional.

What follows from all of this is the very significant fact that even a more thorough pre-suit investigation may well not have led counsel to conclude that these cases should not have been filed. Importantly, given the plausible (and possibly strong) theory of unlicensed infringement of a valid patent that has been (belatedly) articulated by PDIC, it is difficult for the Court to conclude that these cases are of a type that the Court should seek to deter from being filed. That conclusion weighs heavily against a finding of exceptionality.

In light of the above, the Court is not persuaded that these suits were brought for an improper purpose or that the suits were frivolous.

iii. Neutral factors

Other circumstances present in these cases are relevant to the exceptional case analysis, but are neutral and do not weigh for or against a finding of exceptionality.

Adobe emphasizes the total number of 51 "nearly identical" lawsuits brought against Defendants and others alleging the same theory of infringement under the '056 patent. As Adobe

correctly observes, the Federal Circuit has explained that a "pattern of filing nearly identical complaints against a wide variety of companies" can be "one indicia" of a lawsuit having an "improper purpose." *Eon-Net LP v. Flagstar Bancorp.*, 249 F. App'x 189, 197 (Fed. Cir. 2007). But in the cases now before the Court, the record strongly suggests that the '056 patent was a relatively broad, strong patent covering many uses of JPEGs, an undisputedly popular technology. (*See* D.I. 76 ¶¶ 7-17) Hence, the large number of cases filed by PDIC may just as likely reflect widespread infringement of a valid patent, rather than be indicative of abuse of the judicial system for an improper purpose.

Adobe also points to the "nuisance" (i.e., low) value settlement offers PDIC made to Defendants in attempting to settle these cases at an early stage. (*See* D.I. 67 at 14-15) Low value settlement offers, too, have been found by the Federal Circuit to sometimes be part of "exploiting the high cost to defend complex litigation." *Eon-Net LP v. Flagstar Bancorp*, 653 F.3d 1314, 1327 (Fed. Cir. 2011). Nonetheless, Adobe has pointed to no authority for its implicit position that sums sought in settlement must exceed a certain minimum dollar figure in order to qualify as "non-nuisance" offers. More importantly, here it appears equally plausible that PDIC – and Mr. Meagher particularly – knew that any ***non-nuisance reasonable*** settlement offer had to be for a fairly low dollar figure. The '056 patent expired on December, 8 2007; given the six-year statutory limit on recovery of patent infringement damages, *see* 35 U.S.C. § 286, this meant that PDIC could only seek to recover damages accrued up to December 8, 2013. Given that the earliest-filed of the above-captioned cases was filed on February 15, 2013 (*see* C.A. No. 13-239 D.I. 1), PDIC's best-case recovery if it prevailed in the litigation was just under ten months of damages. In this context, the record is not developed to a point where the Court could find that

the low value settlement offers were nuisance offers or instead that they were reasonable offers tailored to the facts here.

Finally, Adobe argues that the fact that PDIC's settlement offers were "exploding" – that is, they were "on the table" for only a limited period, after which they were withdrawn – further evidences PDIC's improper purpose. Federal Circuit precedent has noted "demand for a quick settlement" can support a finding of exceptionality. *Eon-Net LP*, 653 F.3d at 1327. But in the above-captioned cases, because the patent-in-suit was long-expired, the damages available to PDIC were shrinking by the day. Time was of the essence. Furthermore, PDIC, as a small company, may have desired to settle some or all of the suits quickly due to the high costs of maintaining litigation in 51 patent suits.

In short, the number of cases and terms of settlement offered by PDIC ***may*** favor the above-captioned cases being found exceptional, but they equally ***may not*** favor such a finding. In the Court's view, under the circumstances present here, these factors are neutral.

iv. Conclusion with respect to "exceptional" case

As should be clear from the lengthy discussion above, whether the above-captioned cases should be found "exceptional" within the meaning of § 285 presents a difficult, close call. Many factors favor a finding of exceptionality, while many do not, and still others – including factors relied on heavily by Adobe – are neutral in the balance. But the law requires the Court to make a finding one way or the other.

Under a totality of the circumstances analysis, the Court finds that these cases do "stand out from the rest," in comparison to the full panoply of patent cases with which the undersigned has been involved. Indeed, the above-captioned cases are "uncommon," "rare," and "not

ordinary." *Octane Fitness*, 134 S.Ct. at 1756. Therefore, these cases are "exceptional" within the meaning of § 285.

The Court makes this finding not due to the lack of merit to PDIC's case, nor due to bad faith litigation conduct. Instead, these cases "stand out from the rest" due to a combination of: an adequate but far from ideal pre-suit investigation, conducted with haste due to decreasing damages availability based on an expired, but seemingly strong and broad, patent; somewhat careless, dilatory litigation conduct by the patentee; an attempt by the patentee to shift some substantial portion of the costs of identifying the line between licensed and non-licensed conduct to Defendants and Adobe; intervention, permitted by the Court, by an aggressive intervenor, despite PDIC's repeated (though at times hard-to-believe) protestations that PDIC had no intent to accuse any licensed conduct of infringement; PDIC's unexplained delay in dismissing at least one of the above-captioned cases; and PDIC's failure to carefully, consistently, and thoroughly respond to Adobe's reasonable inquiries as well the Court's questions. The overall balance, therefore, leads the Court to find that these cases are "exceptional."

d. Court's Discretion as to Whether to Award Fees

The finding that these cases are "exceptional" makes an award of attorney fees available, but it does not compel such an award. Section 285 provides: "The court in exceptional cases ***may*** award reasonable attorney fees to the prevailing party" (emphasis added). *See also Cimline, Inc. v. Crafco, Inc.*, 2010 WL 2545884, at *3 (D. Minn. June 21, 2010) ("Even an exceptional case does not require in all circumstances the award of attorney fees.") (citing *S.C. Johnson & Son, Inc. v. Carter-Wallace, Inc.*, 781 F.2d 198, 201 (Fed. Cir. 1986)). The Court has decided that the appropriate exercise of its discretion under the totality of circumstances is not to award

attorney fees.

As the Supreme Court stated in *Octane Fitness*, 134 S. Ct. 1756 n.6, "considerations of compensation and deterrence" may inform the § 285 analysis. Regarding considerations of compensation, the Court notes that Adobe has chosen to litigate these cases aggressively, including by intervening, by persisting with litigation even after PDIC dismissed all of its patent infringement allegations against Defendants, and by filing a motion for judgment on the pleadings before the pleadings were even closed. In view of Adobe's litigation choices, a significant portion of Adobe's attorney fees are attributable to ***Adobe's*** actions, and not PDIC's. While certain of PDIC's litigation conduct extended litigation in these cases and increased the amount of resources expended by the parties and the Court, this is not one of the "rare" cases "in which a party's unreasonable, though not independently sanctionable, conduct is ***so*** 'exceptional' as to justify an award." *Octane Fitness*, 134 S. Ct. at 1751 (emphasis added).

With respect to considerations of deterrence, although PDIC could have done more to advance the litigation much more efficiently, there is no singular category of conduct that rises to a level that would warrant deterrence by way of an award of attorney fees. There is no evidence of bad faith or otherwise sanctionable conduct. In many ways, PDIC's somewhat careless and dilatory conduct was a result of the unique circumstances of these cases, involving an aggressive third-party intervenor, ***two*** motions for sanctions before the case even got to the discovery phase, and a flurry of motion practice based on wholly-undeveloped theories of license interpretation and patent infringement.

For the above reasons, Adobe's request for attorney fees under § 285 will be denied.

2. Rule 11

Based on PDIC's most recent submissions to the Court, the Court cannot say that PDIC's pre-suit investigation was inadequate or that any filing was made for any improper purpose or without a reasonable factual or legal inquiry taking place prior to the filing. The substantive merit of PDIC's lawsuits is sufficient under Rule 11, and the Court has already determined that the suits were not brought for an improper purpose. Thus, for the reasons stated above, sanctions under Rule 11 will be denied.

3. 28 U.S.C. § 1927

Sanctions under § 1927 require a finding of bad faith. *See Prudential*, 278 F.3d at 188. "Indications of this bad faith are findings that the claims advanced were meritless, that counsel knew or should have known this, and that the motive for filing the suit was for an improper purpose such as harassment." *Id.* While PDIC's lawsuits were ultimately dismissed, the Court finds that PDIC was not pursuing these actions in bad faith or for an improper purpose, for the reasons already discussed above. Therefore, sanctions under § 1927 will be denied.

4. Court's Inherent Authority

A finding of bad faith is usually required for sanctions under the Court's inherent authority. *See Prudential*, 278 F.3d at 188. For the reasons discussed above, the Court has not found bad faith and does not deem the accused conduct sanctionable under the Court's inherent authority. "Generally, a court's inherent power should be reserved for those cases in which the conduct of a party or an attorney is egregious and no other basis for sanctions exists." *Martin v. Brown*, 63 F.3d 1252, 1265 (3d Cir. 1995). Neither PDIC nor PDIC counsel's behavior was egregious. PDIC has not acted in bad faith, vexatiously, wantonly, or for oppressive reasons.

Therefore, sanctions under the Court's inherent authority will be denied.

IV. CONCLUSION

For the foregoing reasons, the Court will (1) grant Adobe's Motion to Dismiss (D.I. 52), (2) grant in part and deny in part PDIC's Motion to Dismiss (D.I. 66), (3) deny Adobe's Motion for Judgment on the Pleadings (D.I. 75), and (4) deny Adobe's Renewed Motion for Sanctions (D.I. 65). An appropriate Order follows.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. OFFICE DEPOT INC., Defendant.	)	C.A. No. 13-239

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. J.C. PENNEY COMPANY, INC., Defendant.	)	C.A. No. 13-287

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. QVC INC., Defendant.	)	C.A. No. 13-288

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. SEARS HOLDINGS COMPANY, Defendant.	)	C.A. No. 13-289
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. LIMITED BRANDS, INC., Defendant.	)	C.A. No. 13-326
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. GAP INC., Defendant.	)	C.A. No. 13-330

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. WILLIAMS-SONOMA INC., Defendant.	)	C.A. No. 13-331

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. COSTCO WHOLESALE CORP., Defendant.	)	C.A. No. 13-404

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. NORDSTROM.COM LLC, NORDSTROM.COM INC., and NORDSTROM INC., Defendants.	)	C.A. No. 13-408

ORDER

At Wilmington this **28th** day of **March, 2016**, consistent with the Memorandum Opinion issued this date, **IT IS HEREBY ORDERED** that:

1. Adobe's Rule 12(b)(6) Motion to Dismiss PDIC's Counterclaim (C.A. No. 13-239 D.I. 53; C.A. No. 13-287 D.I. 53; C.A. No. 13-288 D.I. 53; C.A. No. 13-289 D.I. 54; C.A. No. 13-326 D.I. 52; C.A. No. 13-330 D.I. 52; C.A. No. 13-331 D.I. 52; C.A. No. 13-404 D.I. 52) is **GRANTED**. PDIC's requests for leave to file an amended complaint (*see, e.g.*, D.I. 57 at 12) are **DENIED**.

2. Adobe's Cross Motion for Judgment on the Pleadings (C.A. No. 13-239 D.I. 74; C.A. No. 13-287 D.I. 76; C.A. No. 13-288 D.I. 76; C.A. No. 13-289 D.I. 76; C.A. No. 13-326 D.I. 73; C.A. No. 13-330 D.I. 73; C.A. No. 13-331 D.I. 76; C.A. No. 13-404 D.I. 75; C.A. No. 13-408 D.I. 70) is **DENIED**.

3. PDIC's Motion to Dismiss Claims in Intervention of Adobe (C.A. No. 13-239 D.I. 64; C.A. No. 13-287 D.I. 66; C.A. No. 13-288 D.I. 66; C.A. No. 13-289 D.I. 65, 66; C.A. No. 13-326 D.I. 63; C.A. No. 13-330 D.I. 63; C.A. No. 13-331 D.I. 67; C.A. No. 13-404 D.I. 66; C.A. No. 13-408 D.I. 61) is **GRANTED IN PART** and **DENIED IN PART**.

4. Adobe's Renewed Motion for Sanctions (C.A. No. 13-239 D.I. 65; C.A. No. 13-287 D.I. 67; C.A. No. 13-288 D.I. 67; C.A. No. 13-289 D.I. 67; C.A. No. 13-326 D.I. 64; C.A. No. 13-330 D.I. 64; C.A. No. 13-331 D.I. 66; C.A. No. 13-404 D.I. 65; C.A. No. 13-408 D.I. 60) is **DENIED**.

5. The Memorandum Opinion has been issued under seal, because large portions of the parties' filings are under seal. It does not appear to the Court that much, if anything, in the

Memorandum should remain under seal. Should any party disagree, it must file a motion to redact particularized, identified, limited portions of the Memorandum Opinion and provide reasoning and citation to pertinent authority for its position. Such a motion is due **no later than March 30, 2016**. If no such motion is filed, the Court will unseal the Memorandum Opinion.

6. It further appears that some of the parties' filings on which the Court has relied in its Memorandum Opinion (e.g., the September 2015 Meagher Declaration) that were filed under seal were not followed up by the filing of redacted versions. The parties shall, no later than April 15, 2016, file redacted versions of any sealed filing in each of the above-captioned cases.

HON. LEONARD P. STARK
UNITED STATES DISTRICT JUDGE

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. OFFICE DEPOT INC., Defendant.	:	C.A. No. 13-239-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. J.C. PENNEY COMPANY, INC., Defendant.	:	C.A. No. 13-287-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. QVC INC., Defendant.	:	C.A. No. 13-288-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. SEARS HOLDINGS COMPANY, Defendant.	:	C.A. No. 13-289-LPS

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. LIMITED BRANDS, INC., Defendant.	: : : : : : : : : : :	C.A. No. 13-326-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. GAP INC., Defendant.	: : : : : : : : : : :	C.A. No. 13-330-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. WILLIAMS-SONOMA INC., Defendant.	: : : : : : : : : : :	C.A. No. 13-331-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. COSTCO WHOLESALE CORP., Defendant.	: : : : : : : : : : :	C.A. No. 13-404-LPS

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. NORDSTROM.COM LLC, NORDSTROM.COM INC., and NORDSTROM INC. Defendants.	: : : : : : : : : : :	C.A. No. 13-408-LPS

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MEMORANDUM OPINION

August 1, 2017
Wilmington, Delaware

STARK, U.S. District Judge:

On June 6, 2011, Adobe Systems Incorporated ("Adobe") and Princeton Digital Image Corporation ("PDIC") entered into a licensing agreement concerning U.S. Patent No. 4,813,056, whereby PDIC agreed not to sue Adobe or its licensees, customers, and end users on any of PDIC's patents. (*See* C.A. No. 13-239-LPS D.I. 196 Ex. 1)[1] In 2013, PDIC brought numerous suits against internet retailers ("Defendants") for infringement of the '056 patent, based on the encoding of JPEG images on their websites. (*E.g.*, D.I. 1) A number of the defendants claimed to be Adobe's licensed customers and sought indemnity and defense from Adobe. As a result, Adobe moved to intervene in 2014. (D.I. 11) In May 2015, the Court granted Adobe's motion, and Adobe filed a complaint in intervention, alleging, among other things, that PDIC breached its contract with Adobe by suing Adobe's customers. (D.I. 47) Subsequently, PDIC dismissed with prejudice the underlying patent infringement claims, leaving only the claims between Adobe and PDIC. (*E.g.*, D.I. 56)

Presently before the Court are PDIC's motion to exclude certain expert testimony and motion for summary judgment. A jury trial is scheduled to begin August 21, 2017.

For the reasons stated below, the Court will deny PDIC's motion to exclude expert opinions and grant in part and deny in part PDIC's motion for summary judgment.

I. LEGAL STANDARDS

A. *Daubert* Motion

In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 597 (1993), the Supreme Court explained that Federal Rule of Evidence 702 creates "a gatekeeping role for the

[1]Unless otherwise noted, the references to the docket are to C.A. No. 13-239-LPS.

[trial] judge" in order to "ensur[e] that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." Rule 702(a) requires that expert testimony "help the trier of fact to understand the evidence or to determine a fact in issue." Expert testimony is admissible only if "the testimony is based on sufficient facts or data," "the testimony is the product of reliable principles and methods," and "the expert has reliably applied the principles and methods to the facts of the case." Fed. R. Evid. 702(b)-(d).

There are three distinct requirements for proper expert testimony: (1) the expert must be qualified; (2) the opinion must be reliable; and (3) the expert's opinion must relate to the facts. *See Elcock v. Kmart Corp.*, 233 F.3d 734, 741 (3d Cir. 2000).

B. Summary Judgment

Under Rule 56(a) of the Federal Rules of Civil Procedure, "[t]he court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." The moving party bears the burden of demonstrating the absence of a genuine issue of material fact. *See Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 585-86 (1986). An assertion that a fact cannot be – or, alternatively, is – genuinely disputed must be supported either by "citing to particular parts of materials in the record, including depositions, documents, electronically stored information, affidavits or declarations, stipulations (including those made for purposes of the motion only), admissions, interrogatory answers, or other materials," or by "showing that the materials cited do not establish the absence or presence of a genuine dispute, or that an adverse party cannot produce admissible evidence to support the fact." Fed. R. Civ. P. 56(c)(1)(A) & (B). If the moving party has carried its burden, the nonmovant must then "come forward with specific facts

showing that there is a genuine issue for trial." *Matsushita*, 475 U.S. at 587 (internal quotation marks omitted). The Court will "draw all reasonable inferences in favor of the nonmoving party, and it may not make credibility determinations or weigh the evidence." *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150 (2000).

To defeat a motion for summary judgment, the nonmoving party must "do more than simply show that there is some metaphysical doubt as to the material facts." *Matsushita*, 475 U.S. at 586; *see also Podobnik v. U.S. Postal Serv.*, 409 F.3d 584, 594 (3d Cir. 2005) (stating party opposing summary judgment "must present more than just bare assertions, conclusory allegations or suspicions to show the existence of a genuine issue") (internal quotation marks omitted). The "mere existence of some alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment;" a factual dispute is genuine only where "the evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48 (1986). "If the evidence is merely colorable, or is not significantly probative, summary judgment may be granted." *Id.* at 249-50 (internal citations omitted); *see also Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986) (stating entry of summary judgment is mandated "against a party who fails to make a showing sufficient to establish the existence of an element essential to that party's case, and on which that party will bear the burden of proof at trial"). Thus, the "mere existence of a scintilla of evidence" in support of the nonmoving party's position is insufficient to defeat a motion for summary judgment; there must be "evidence on which the jury could reasonably find" for the nonmoving party. *Anderson*, 477 U.S. at 252.

II. DISCUSSION

A. PDIC's Motion to Exclude Certain Testimony of Adobe's Experts

PDIC moves to exclude certain opinions of Dr. Andrew B. Lippman, Adobe's expert on liability, and Dr. Stephen L. Becker, Adobe's damages expert. PDIC contends that both experts' opinions improperly rely on letters and declarations that are inadmissible hearsay. PDIC raises additional challenges specific to each expert, contending that Dr. Lippman should not be allowed to testify about a Wayback Machine investigation, Defendants' activities, or Scene7, and that Dr. Becker should not be permitted to testify about Defendants' activities or restitution. The Court disagrees with each of PDIC's positions and will deny PDIC's motion.[2]

1. Reliance on Letters and Declarations

PDIC first contends that both experts' use of hearsay documents is improper. Federal Rule of Evidence 703 "permits experts to rely on hearsay so long as that hearsay is of the kind normally employed by experts in the field." *In re TMI Litig.*, 193 F.3d 613, 697 (3d Cir. 1999). The Court finds Drs. Lippman and Becker's use of alleged hearsay here to be compliant with Rule 703 and, hence, permissible. *See Inline Connection Corp. v. AOL Time Warner Inc.*, 470 F. Supp. 2d 435, 442 (D. Del. 2007).

Dr. Lippman was "asked to review and analyze the evidence that PDIC considered in preparing to file lawsuits asserting infringement of the '056 patent against Adobe's customers" and "to assess and evaluate PDIC's contentions that infringement by Adobe's customers occurs at the web server and does not involve an Adobe product." (D.I. 197 Ex. 8 at ¶ 18) To form his

[2]Adobe contends that PDIC failed to comply with Local Rule 7.1.1, which it views as fatal. (D.I. 199 at 19) As PDIC's motion was filed in compliance with the scheduling order (D.I. 106 at 3), and as the Court is denying it, the Court will consider the motion on the merits.

opinions, Dr. Lippman considered evidence of record, including testimony from Thomas and William Meagher about PDIC's presuit investigation (*see id.* at ¶ 19), as well as letters and declarations from Defendants about how their technology worked (*see id.* at ¶¶ 84-85). In forming his opinions, Dr. Lippman reasonably relied on relevant evidence produced by the parties. The Court is persuaded that this is a type of evidence on which an expert in the field providing an opinion on these topics would rely. *See TMI Litig.*, 193 F.3d at 697.

The same is true with respect to Dr. Becker. Dr. Becker was asked "to offer expert opinions on the amount of damages suffered by Adobe as a result of PDIC's breach of the covenant not to sue provision of the Adobe License." (D.I. 197 Ex. 6 at ¶ 3) His report includes communications between the parties during the relevant period. For example, Dr. Becker cites to various Defendants' requests to Adobe for indemnification. (*See, e.g.*, *id.* at ¶ 44) Dr. Becker's reliance on the letters and declarations is permissible. He was tasked with determining the damages attributable to PDIC's alleged breach, making it entirely reasonable to examine the events and communications between the parties. This is a type of evidence on which a damages expert ordinarily relies.

It is a separate question whether evidence underlying the experts' opinions is admissible and may be presented to the jury. The Court does not at this point resolve this question. It is enough to find, as the Court does, that even if the letters and declarations are hearsay, and even if they are not admitted at trial, "their probative value in helping the jury evaluate the opinion substantially outweighs their prejudicial effect," rendering them proper for the jury to consider in evaluating the credibility of the experts, consistent with Rule 703. Although this evidence consists of documents that resulted from litigation and were "prepared in an adversarial context"

(D.I. 195 at 7), these characteristics do not (here) result in unfair prejudice to PDIC, particularly as the entire basis for Adobe's claim is that PDIC breached its contract by engaging in adversarial litigation against Adobe's customers. It is not unfair for Adobe to use documents stemming from that allegedly breaching conduct, i.e., the patent infringement suits.

2. Dr. Lippman

None of PDIC's specific attacks on Dr. Lippman's opinions provide a meritorious basis for exclusion. PDIC contends that Dr. Lippman's expert report does not adequately disclose an investigation using the Wayback Machine (a publicly-available internet archive) or the results of that investigation. Dr. Lippman's report, however, details PDIC's pre-suit investigation using the Wayback Machine (*see* D.I. 197 Ex. 8 at ¶¶ 58-64), describes various types of metadata associated with images that allows for identification of the software used to create an image (*see id.* at ¶¶ 117-22), and describes what information PDIC could have gleaned from its Wayback Machine investigation had it looked at metadata (*see id.* at ¶¶ 136-37). In his deposition, Dr. Lippman testified that he did some Wayback Machine searches "to see if [he] could determine the source of those images." (D.I. 197 Ex. 7 at 43) Dr. Lippman's report fairly discloses the theory on which he relies (*see, e.g.*, D.I. 197 Ex. 8 at ¶ 137), and his deposition testimony shows that he performed some minimum, additional tests to confirm the veracity of his opinion. While PDIC characterizes this additional testing as irrelevant, since "Dr. Lippman reviewed merely a handful of images on selected websites" (D.I. 195 at 8), PDIC is free to cross-examine Dr. Lippman on these issues at trial.

PDIC next contends that Dr. Lippman should not be allowed to testify that any of the Defendants used any particular technology because his opinion was formed on the basis of

inadmissible letters and declarations. This argument is simply a repeat of PDIC's general argument that the experts cannot rely on hearsay in forming their opinions, and the Court rejects it for the same reasons as given above.

Finally, PDIC asserts that Dr. Lippman cannot properly testify about Scene7, contending that he has no personal knowledge of its functionality as of 2007. Dr. Lippman, a Ph.D. electrical engineer and a senior research scientist at MIT (*see* D.I. 197 Ex. 8 at ¶¶ 2-16), is qualified to offer an opinion here, and his report describes Adobe's acquisition of Scene7, general Scene7 capabilities, and his opinion that use of Scene7 was licensed (*see, e.g.*, *id.* at ¶¶ 31, 94-95). Any alleged shortcoming or deficiency in Dr. Lippman's opinion is an issue of weight and credibility appropriately addressed through cross-examination and/or the presentation of contrary evidence.

3. Dr. Becker

PDIC contends that "Dr. Becker's expert report indicates a possibility that he intends to testify that some or all of the Defendants had been using Adobe Products in order to provide the enlarged or on-the-fly images on their websites," which PDIC asserts is inappropriate because Dr. Becker has no personal knowledge of the technology. (D.I. 195 at 11) PDIC does not, however, identify any specific portions of Dr. Becker's report that it is challenging. Accordingly, Dr. Becker will be allowed to testify consistent with the opinions expressed in his expert report.

PDIC also contends that Dr. Becker's understanding of restitution is contrary to New Jersey law. Although there is no indication that Dr. Becker's understanding of how to measure restitution is inconsistent with governing law, the Court need not reach this issue. As discussed below, the Court finds that restitution is not an available remedy in this case.

B. PDIC's Motion for Summary Judgment

Under New Jersey law, which the Court has determined governs the agreement between PDIC and Adobe, *see Princeton Digital Image Corp. v. Office Depot Inc.*, 2016 WL 1533697, at *6 (D. Del. Mar. 31, 2016), a party asserting breach of contract must show that: (1) a contract existed between the parties; (2) the defendant breached a duty imposed by the contract, (3) the plaintiff performed its obligations under the contract, and (4) the plaintiff was damaged as a result of the breach. *See Miller v. Butler*, 2014 WL 585409, at *3 (D.N.J. Feb. 14, 2014). PDIC moves for summary judgment on the basis that Adobe cannot show that PDIC breached the contract or that Adobe is entitled to damages for any breach. PDIC also seeks to eliminate restitution as a potential alternative theory of Adobe's recoverable damages.

1. Breach of Contract

The parties' agreement "grants to Adobe and Adobe Related Entities an irrevocable, unrestricted, fully paid-up, perpetual covenant not to sue Adobe or Adobe Related Entities with respect to any and all past and present claims . . . based on any of the Princeton patents." (D.I. 196 Ex. 1 at ¶ 3.1) Further, "[t]he covenant not to sue exhausts all claims of all Princeton Patents . . . as to any Licensed Product to the extent that the claims arose in whole or part owing to an Adobe Licensed Product." (*Id.*) Adobe alleges that PDIC breached this covenant not to sue by bringing infringement actions against Defendants, who are Adobe's customers using Adobe products.

PDIC contends that summary judgment is appropriate because Adobe cannot demonstrate that PDIC breached the contract. In particular, PDIC asserts that it "never alleged any infringement against any Adobe product or service, and did not accuse any Defendant of

infringement based on that Defendant's use of an Adobe product or service." (D.I. 193 at 6) Moreover, PDIC argues that Adobe cannot prove that any Defendant actually used Adobe products or services in performing the allegedly infringing acts.

In opposing summary judgment, Adobe contends that PDIC's infringement allegations were written broadly and that PDIC's own statements acknowledge that the complaints can be read to cover Adobe products. Adobe asserts that there is sufficient evidence of record to conclude that Defendants did use Adobe products. Further, according to Adobe, PDIC's contention that Defendants used non-Adobe products is merely speculative and is disputed by Adobe's expert.

The Court agrees with Adobe that there are genuine issues of material fact precluding summary judgment. A reasonable juror could accept Adobe's view that PDIC's infringement allegations – which generally accused Defendants of infringement based on their "encod[ing] image data in JPEG files for purposes of producing JPEG images of products" (D.I. 1 at ¶ 9) – cover the use of Adobe products. A reasonable juror could also conclude that Defendants did, indeed, use Adobe products, based on Adobe's expert and PDIC's admissions. (*See* D.I. 197 Ex. 8 at ¶¶ 135-40; D.I. 73 at 1 ("[T]hree Defendants appear to have used solely Adobe's Scene7 software for the activities accused of infringement . . . .")) There are also genuine factual disputes about PDIC's theory of Defendants' use of non-Adobe products, which a jury will have to resolve by weighing evidence and evaluating witness credibility. (*See* D.I. 181 Ex. 1 at 190-91; D.I. 197 Ex. 8 at ¶ 135)

Accordingly, the Court cannot grant summary judgment based on the purported failure to adduce evidence sufficient to support a reasonable finding of breach.

2. Damages

a. Attorney Fees

Adobe seeks consequential damages stemming from PDIC's alleged breach, claiming that appropriate damages include both attorney fees incurred in defending Defendants against infringement ("defense fees") and attorney fees incurred in pressing Adobe's breach of contract claims ("affirmative fees"). PDIC contends that the American Rule, and New Jersey application of that Rule, prevents Adobe from claiming any attorney fees as consequential damages. PDIC also asserts that even if defense fees are a proper measure of damages, Adobe cannot prove the amount of its defense fees because its expert has not separated defense fees from affirmative fees.

Under New Jersey contract law, "a party who breaches a contract is liable for all of the natural and probable consequences of the breach of that contract." *Pickett v. Lloyd's*, 621 A.2d 445, 454 (N.J. 1993) "In the absence of a contrary agreement, an injured party with the legal right to be compensated for the breach of a contract is entitled to the amount of damages . . . which, ***excluding attorneys' fees and court costs for prosecuting the breach of contract action itself***, will put that party in the same position it would have been in if the breaching party had performed the contract in accordance with its terms, no better position and no worse." *Magnet Res., Inc. v. Summit MRI, Inc.*, 723 A.2d 976, 985 (N.J. Super. Ct. App. Div. 1998) (emphasis added). Accordingly, consistent with the American Rule that "the prevailing litigant is ordinarily not entitled to collect a reasonable attorneys' fee from the loser," *N. Bergen Rex Transp., Inc. v. Trailer Leasing Co.*, 730 A.2d 843, 848 (N.J. 1999), attorney fees incurred in bringing a breach of contract action "are not normally a proper measure of contract damages," *New Flyer of Am., Inc. v. Mid-Newark, L.P.*, 2010 WL 2794249, at *6 (N.J. Super. Ct. App. Div. July 6, 2010).

Otherwise, attorney fees would be consequential damages in nearly every contract claim, as one natural and probable consequence of a breached contract is that a party will bring a lawsuit. *See id.* at *7.

Courts have recognized exceptions to this general rule, often involving circumstances in which a non-breaching party engages in legal proceedings as a result of the breached contract, apart from the breach of contract suit. For example, a breach of a covenant not to sue may result in an underlying suit (i.e., the suit that breaches the contract), as well as a breach of contract suit. Attorney fees may be "a proper element of damages when the right violated is the right to be free from suit." *Riveredge Assocs. v. Metro. Life Ins. Co.*, 774 F. Supp. 897, 901 (D.N.J. 1991). But courts generally limit damages under this theory to those "attorneys' fees and other costs of ***defending against a wrongful action***." *Id.* at 902 (emphasis added); *Gerhardt v. Cont'l Ins. Cos.*, 225 A.2d 328, 334 (N.J. 1966) ("Since the insurer defaulted on its obligation to defend the insured in the workmen's compensation proceeding, it must bear, as a traditional element of damage, the expense including the reasonable counsel fee incurred by the insured in defending there in its stead."); *Verhagen v. Platt*, 61 A.2d 892, 895 (N.J. 1948) ("If a breach of contract is the cause of litigation between the plaintiff and third parties that the defendant had reason to foresee when the contract was made, the plaintiff's reasonable expenditures in such litigation are included in estimating his damages."); *see also Am. Home Assur. Co. v. United Space All., LLC*, 378 F.3d 482, 490 (5th Cir. 2004) ("[T]he recovery of attorney's fees in such circumstances are appropriately based upon the equitable ground that the claimant was required to defend against litigation as a consequence of the wrongful conduct of the defendant."); *Anchor Motor Freight, Inc. v. Int'l Bhd. of Teamsters, Chauffeurs, Warehousemen & Helpers of Am.*, 700 F.2d 1067,

1072 (6th Cir. 1983) ("The Union is not precluded . . . from recovering costs incurred in defending against an action filed in breach of a covenant not to sue."); *Prospect Energy Corp. v. Dallas Gas Partners, LP*, 761 F. Supp. 2d 579, 595-96 (S.D. Tex. 2011) ("When a covenant not to sue is used offensively in a counterclaim for breach of contract, the counterclaimants' attorneys' fees cannot be considered actual damages, but are incidental costs of litigation.").

Because this exception displaces the strong background presumption that parties will carry their own costs in litigation, some courts have also limited these damages to those that arise from an obvious or bad-faith breach of a covenant not to sue (unless there is an indication that the parties intended for the contract to award other damages). *See Riveredge*, 774 F. Supp. at 902 ("If the covenant breached is a promise not to file suit in bad faith, then the logical measure of damages is the direct consequence of breach of that right: the costs of defending the wrongful suit."); *see also Lubrizol Corp. v. Exxon Corp.*, 957 F.2d 1302, 1306-07 (5th Cir. 1992) ("Lubrizol's breach of the parties' covenant not to sue was obvious and . . . the district court rightfully imposed liability"); *Cefali v. Buffalo Brass Co.*, 748 F. Supp. 1011, 1027 (W.D.N.Y. 1990) ("[W]hether fees should be awarded therefore depends on whether the suit was brought 'in obvious breach or otherwise in bad faith.'"). Although not all courts have adopted this view, *see, e.g., Widener v. Arco Oil & Gas Co., Div. of Atl. Richfield Co.*, 717 F. Supp. 1211, 1217 (N.D. Tex. 1989), the parties identify no authority directly on point, and at least two federal courts predicting New Jersey law on this issue have applied the bad-faith or obvious breach requirement. *See Riveredge*, 774 F. Supp. at 902 (requiring showing of bad faith for attorney fee award on implied covenant not to sue); *Borbely v. Nationwide Mut. Ins. Co.*, 547 F. Supp. 959, 980 (D.N.J. 1981) (requiring showing of bad faith for attorney fee award on express covenant not

to sue). The "primary function" of a covenant not to sue "is to serve as a shield rather than as a sword." *Artvale, Inc. v. Rugby Fabrics Corp.*, 363 F.2d 1002, 1008 (2d Cir. 1966). Thus, "[i]n the absence of contrary evidence, sufficient effect is given the usual covenant not to sue if, in addition to its service as a defense, it is read as imposing liability only for suits brought in obvious breach or otherwise in bad faith." *Id.*

Applying this law here, the Court agrees with PDIC that Adobe cannot collect as damages for the breach of contract any attorney fees Adobe incurred in the affirmative breach-of-contract suit. These affirmative fees are not fees that arose because Adobe had to "defend[] against a wrongful action," *Riveredge*, 774 F. Supp. at 902, but are instead the classic type of attorney fees that Adobe, in attempting to vindicate its contract rights, must bear itself. There is no indication that the parties agreed to an arrangement inconsistent with this general presumption.

However, the defense fees – that is, those Adobe incurred in defending Defendants from PDIC's infringement suit, suits that were brought in alleged violation of the covenant not to sue – are the type of fees that may be awarded as damages. Adobe's legal costs in defending its customers are a proper measure of the harm to Adobe caused by PDIC's alleged breach.

Adobe has adduced evidence from which a reasonable factfinder may find that PDIC's breach of the covenant not sue was obvious or in bad faith. The Court reaches this conclusion despite the fact that, in earlier declining to award fees or sanctions under 35 U.S.C. § 285, Rule 11, 28 U.S.C. § 1927, and its inherent authority, the Court found "that PDIC was not pursuing these actions in bad faith or for an improper purpose." *Princeton Digital*, 2016 WL 1533697, at *17-18. The standards for awarding sanctions differ from those governing whether a party "may seek damages for having to defend against that suit," with the latter being less stringent.

Riveredge, 774 F. Supp. at 900.[3]

Nor is the Court persuaded that Adobe cannot disaggregate its defense fees from its affirmative fees. Adobe has produced evidence breaking down its attorney fees and costs by date, attorney, hourly rate, and hours worked. (*See* D.I. 200 Exs. 10-13, 20) Adobe's damages expert, Dr. Becker, indicated that this evidence is sufficiently detailed such that he could separate the defense fees and affirmative fees if so required. (*See* D.I. 200 Ex. 9 at 124-25) By separate order, the Court will direct Adobe to serve a supplemental expert report relating to the revised amount of damages Adobe is seeking in light of today's rulings.

Accordingly, the Court will grant in part and deny in part PDIC's motion for summary judgment on attorney fees as damages.

b. Restitution

Adobe alternatively seeks restitution, amounting to the $200,000 license fee Adobe paid to PDIC. PDIC contends that Adobe cannot claim restitution damages here because there has not been a "total" breach of the contract.

New Jersey has adopted the Restatement (Second) of Contracts' approach to restitution,

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[3]Even if this were not the case, the Court would not view itself as bound by "law of the case doctrine" and compelled to grant summary judgment to PDIC. "Reconsideration of a previously decided issue may . . . be appropriate in certain circumstances, including when the record contains new evidence." *Hamilton v. Leavy*, 322 F.3d 776, 787 (3d Cir. 2003). The sanctions decision was made relatively early in the case, before significant discovery on the breach of contract issue had taken place. In connection with the sanctions decision, the Court "accepted Mr. Meagher's representations as true" on certain points, *Princeton Digital*, 2016 WL 1533697, at *14-15, something a jury would not be obligated to do. Further, the Court noted in connection with its sanctions decision that Adobe had not presented "any evidence – expert or otherwise – to challenge the merits of [PDIC's] infringement theory," *id.* at *15, but Adobe has now done so (*see, e.g.*, D.I. 197 Ex. 8). *See also generally Speeney v. Rutgers*, 369 Fed. App'x 357, 360-61 (3d Cir. 2010) ("[L]aw of the case doctrine only precludes relitigation of issues that the parties had a full and fair opportunity to litigate.").

see Kutzin v. Pirnie, 591 A.2d 932, 941 (N.J. 1991), which entitles the non-breaching party to damages "for any benefit that he has conferred on the other party by way of part performance or reliance," Restatement (Second) of Contracts § 373(a). The Restatement (Second) also provides that "restitution is available only if the breach gives rise to a claim for damages for total breach and not merely to a claim for damages for partial breach." *Id.* at cmt. a; *see also Hansen Bancorp Inc. v. United States*, 367 F.3d 1297, 1309 (Fed. Cir. 2004). A total, or material, breach "is one that 'goes to the essence of the contract,'" *Miller v. Butler*, 2014 WL 585409, at *6 (D.N.J. Feb. 14, 2014), and whether a breach is material is a question of fact for the jury, *Magnet Res.*, 723 A.2d at 982. "When one party commits a material breach of contract, the other party has a choice between two inconsistent rights – it can either elect to allege a total breach, terminate the contract and bring an action or, instead, elect to keep the contract in force, declare the default only a partial breach, and recover those damages caused by that partial breach." 13 Williston on Contracts § 39; *see also Dover Shopping Ctr., Inc. v. Cushman's Sons, Inc.*, 164 A.2d 785, 790 (N.J. Super. Ct. App. Div. 1960).

Here, Adobe fully performed its obligation under the contract by paying $200,000 to PDIC. (*See* D.I. 196 at ¶ 4.1) PDIC's obligations under the contract included a covenant not to sue (*see id.* at ¶ 3), and the Court has already explained above that the record permits a reasonable factfinder to find that PDIC breached that covenant by suing Defendants. The record further contains sufficient evidence from which a reasonable jury could find that this breach was material – for instance, multiple sections of the contract detail the license and covenant not to sue (*see id.* at ¶¶ 2-3), and Adobe evidently viewed the covenant as a necessary provision (*see* D.I. 200 Ex. 15 at 1). Even so, even if the record permits a finding of material breach by PDIC, a

reasonable factfinder could only find that Adobe, nonetheless, elected to keep the contract in force and attempt to recover damages for PDIC's partial breach. Adobe's complaint alleges that "Adobe has a valid and enforceable license to the '056 Patent." (D.I. 47 at ¶ 37) Furthermore, Adobe's requested relief includes "[a]n order enjoining [PDIC] from suing or maintaining suit against other Adobe customers and end users based on their use of Adobe licensed products and services, alone or in combination with other technology." (*Id.* at 10) That is, Adobe is asking the Court to enforce the contract, and not to treat Adobe's actions as a total breach. It follows, pursuant to New Jersey law and the Restatement, that restitution is not available to Adobe.

Accordingly, the Court will grant PDIC's motion for summary judgment that restitution is not available as a remedy.

III. CONCLUSION

For the foregoing reasons, the Court will deny PDIC's motion to exclude certain expert opinions and grant in part and deny in part PDIC's motion for summary judgment on Adobe's breach of contract claim. An appropriate Order follows.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. OFFICE DEPOT INC., Defendant.	:	C.A. No. 13-239-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. J.C. PENNEY COMPANY, INC., Defendant.	:	C.A. No. 13-287-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. QVC INC., Defendant.	:	C.A. No. 13-288-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. SEARS HOLDINGS COMPANY, Defendant.	:	C.A. No. 13-289-LPS

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. LIMITED BRANDS, INC., Defendant.	: : : : : : : : : : :	C.A. No. 13-326-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. GAP INC., Defendant.	: : : : : : : : : : :	C.A. No. 13-330-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. WILLIAMS-SONOMA INC., Defendant.	: : : : : : : : : : :	C.A. No. 13-331-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. COSTCO WHOLESALE CORP., Defendant.	: : : : : : : : : : :	C.A. No. 13-404-LPS

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. NORDSTROM.COM LLC, NORDSTROM.COM INC., and NORDSTROM INC. Defendants.	:	C.A. No. 13-408-LPS

ORDER

At Wilmington, this **1st** day of **August, 2017**:

For the reasons set forth in the Memorandum Opinion issued this date,

IT IS HEREBY ORDERED that:

1. Plaintiff's motion for summary judgment (C.A. No. 13-239-LPS D.I. 192; C.A. No. 13-287-LPS D.I. 192; C.A. No. 13-288-LPS D.I. 192; C.A. No. 13-289-LPS D.I. 191; C.A. No. 13-326-LPS D.I. 189; C.A. No. 13-330-LPS D.I. 189; C.A. No. 13-331-LPS D.I. 191; C.A. No. 13-404-LPS D.I. 190; C.A. No. 13-408-LPS D.I. 205) is **GRANTED IN PART** and **DENIED IN PART**.

2. Plaintiff's motion to exclude certain expert testimony (C.A. No. 13-239-LPS D.I. 194; C.A. No. 13-287-LPS D.I. 194; C.A. No. 13-288-LPS D.I. 194; C.A. No. 13-289-LPS D.I. 193; C.A. No. 13-326-LPS D.I. 191; C.A. No. 13-330-LPS D.I. 191; C.A. No. 13-331-LPS D.I. 193; C.A. No. 13-404-LPS D.I. 192; C.A. No. 13-408-LPS D.I. 207) is **DENIED**.

3. The parties shall meet and confer and submit a joint status report, no later than **August 3**, advising the Court as to the impact, if any, on any disputes (including motions *in limine*) presented in the proposed pretrial order (C.A. No. 13-239-LPS D.I. 218), and advising the

Court of the specific number of ***hours*** each side requests for its presentation at trial. Having completed its preliminary review of the proposed pretrial order, and in light of today's rulings, the Court's current view is that the parties require no more than ***six (6) hours per side*** for their trial presentations.

4. No later than **August 7**, Adobe shall serve on PDIC a supplemental expert report relating to the amount of damages it is seeking, in light of today's rulings.

5. The pretrial conference is rescheduled and will be held on **August 10, 2017** beginning at **4:00 p.m.**

HON. LEONARD P. STARK
UNITED STATES DISTRICT JUDGE

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. OFFICE DEPOT INC., Defendant.	:	C.A. No. 13-239-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. J.C. PENNEY COMPANY, INC., Defendant.	:	C.A. No. 13-287-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. QVC INC., Defendant.	:	C.A. No. 13-288-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. SEARS HOLDINGS COMPANY, Defendant.	:	C.A. No. 13-289-LPS

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. LIMITED BRANDS, INC., Defendant.	:	C.A. No. 13-326-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. GAP INC., Defendant.	:	C.A. No. 13-330-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. WILLIAMS-SONOMA INC., Defendant.	:	C.A. No. 13-331-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. COSTCO WHOLESALE CORP., Defendant.	:	C.A. No. 13-404-LPS

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. NORDSTROM.COM LLC, NORDSTROM.COM INC., and NORDSTROM INC. Defendants.	:	C.A. No. 13-408-LPS

MEMORANDUM ORDER

At Wilmington this **9th** day of **August, 2017**, having reviewed the parties' briefs on PDIC's motion for reargument (D.I. 223) and Adobe's response (D.I. 231),[1]

IT IS HEREBY ORDERED that PDIC's motion (D.I. 223) is GRANTED IN PART and DENIED IN PART.

1. The Court is not persuaded that there is a "need to correct a clear error of law or fact or to prevent manifest injustice" with respect PDIC's waiver of privilege, *Max's Seafood Café by Lou-Ann, Inc. v. Quinteros*, 176 F.3d 669, 677 (3d Cir. 1999), as the Court finds that the documents discussed by PDIC are privileged communications or work product disclosed by PDIC to support its claim that it was acting in good faith in bringing the infringement suits. Nor does the Court's conclusion – in a separate dispute between the parties – that Adobe did not waive privilege persuade the Court that it made a legal or factual error here. Hence, the motion is DENIED except to the limited extent stated below.

[1]District of Delaware Local Rule 7.1.5(a) does not allow for reply briefs in support of reargument motions. Accordingly, PDIC's reply brief (D.I. 232) is STRICKEN. However, even if considered, the reply brief would not alter the outcome announced here.

2. However, given the parties' disputes about the scope of the Court's previous order, the approaching trial date, and the fact that infringement actions involving the '056 patent remain pending, the motion is GRANTED IN PART in that the Court HEREBY CLARIFIES the relief granted, as follows: (i) PDIC shall supplement its document production and interrogatory responses for Interrogatory No. 8 and Request for Production Nos. 2-5, 8-9, 12-15, 17-23, 25-27, and 48 to the extent that PDIC withheld any discovery concerning these topics on privilege grounds, by producing documents identified as PDIC_Privilegel through PDIC_Privilege18 on PDIC's privilege log (D.I. 125 Ex. 5) and supplementing its interrogatory response, and (ii) this Order is limited to discovery with respect to the present cases (i.e., C.A. No. 13-239-LPS; C.A. No. 13-287-LPS; C.A. No. 13-288-LPS; C.A. No. 13-289-LPS; C.A. No. 13-326-LPS; C.A. No. 13-330-LPS; C.A. No. 13-331-LPS; C.A. No. 13-404-LPS; C.A. No. 13-408-LPS).

3. Notwithstanding the Court's holding above, if either party continues to wish the Court to consider granting the alternative relief sought by Adobe, either party may make such a request at the pretrial conference tomorrow.

4. IT IS FURTHER ORDERED that, contrary to the position stated by Adobe in the August 3rd joint status report (D.I. 222 at 7), the Court's August 1 memorandum opinion did resolve the issue that Adobe must satisfy the bad-faith or obvious breach standard to recover attorney fees as damages. (*See* D.I. 220 at 12-13)

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PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. COSTCO WHOLESALE CORP., Defendant.	:	C.A. No. 13-404-LPS

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. NORDSTROM.COM LLC, NORDSTROM.COM INC., and NORDSTROM INC. Defendants.	:	C.A. No. 13-408-LPS

MEMORANDUM ORDER

At Wilmington this 17th day of August, 2017, having reviewed the parties' briefs on Adobe's motion to disqualify PDIC's counsel Sean O'Kelly (D.I. 240, 246, 256), PDIC's motion to strike the supplemental expert report of Dr. Becker (D.I. 241, 247, 257), and PDIC's motion for summary judgment (D.I. 234), as well as additional briefing recently filed by the parties,[1]

IT IS HEREBY ORDERED that:

1. Adobe's motion to disqualify Mr. O'Kelly (D.I. 240) is GRANTED.

2. The Court has the inherent authority to supervise the professional conduct of attorneys appearing before it, including the power to disqualify an attorney from a representation. *See United States v. Miller*, 624 F.2d 1198, 1201 (3d Cir. 1980). Motions to disqualify are "generally disfavored" and, therefore, require the moving party to show clearly that "continued representation would be impermissible." *Talecris Biotherapeutics, Inc. v. Baxter Int'l Inc.*, 491 F. Supp. 2d 510, 513 (D. Del. 2007). However, because "[t]he maintenance of public confidence

[1]All references to the docket index ("D.I.") are to C.A. No. 13-239, unless otherwise noted.

in the propriety of the conduct of those associated with the administration of justice is so important," a court may disqualify an attorney "for failing to avoid even the appearance of impropriety." *Kabi Pharmacia AB v. Alcon Surgical, Inc.*, 803 F. Supp. 957, 960 (D. Del. 1992). Resolving the question of whether to disqualify counsel requires the Court to "carefully sift all the facts and circumstances," *Nemours Found. v. Gilbane, Aetna, Fed. Ins. Co.*, 632 F. Supp. 418, 423 (D. Del. 1986) (internal quotation marks omitted), which the Court approaches with "cautious scrutiny," mindful of a litigant's right to the counsel of its choice, *Laker Airways, Ltd. v. Pan Am. World Airways*, 103 F.R.D. 22, 28 (D.D.C. 1984).

3. Attorney conduct is governed by the ethical standards of the court before which the attorney appears. *See In re Corn Derivatives Antitrust Litig.*, 748 F.2d 157, 160 (3d Cir. 1984). The District of Delaware has adopted the Model Rules of Professional Conduct of the American Bar Association ("Model Rules"). *See* D. Del. LR 83.6(d). Applicable here is Model Rule 3.7(a), which provides:

> A lawyer shall not act as advocate at a trial in which the lawyer is likely to be a necessary witness unless: (1) the testimony relates to an uncontested issue; (2) the testimony relates to the nature and value of legal services rendered in the case; or (3) disqualification of the lawyer would work substantial hardship on the client.

4. The Court finds that Mr. O'Kelly, PDIC's trial counsel, is likely to be a necessary witness at trial and does not fall into one of the exceptions of Rule 3.7(a).[2] Mr. O'Kelly appears on both PDIC and Adobe's "may call" witness lists and has personal knowledge of relevant facts, including about PDIC's conduct before and after filing the infringement suits, which is probative

[2]Although PDIC expressed some concerns about Adobe's lead trial counsel, Ms. Elliott (D.I. 239), PDIC did not request any relief from the Court (D.I. 249), despite being provided an express opportunity to do so (D.I. 245).

of whether PDIC breached the covenant-not-to sue and whether any such breach was in good or bad faith. Mr. O'Kelly also has unique, first-hand knowledge about the cases that PDIC's other witnesses, including Mr. Meagher, do not. (*See* D.I. 256 at 2; D.I. 190 Ex. 2 at 45)[3] With respect to the exceptions set out in Rule 3.7(a), Mr. O'Kelly's testimony does not relate to an uncontested issue or the nature and value of legal services. Nor is the Court persuaded that Mr. O'Kelly's disqualification will work substantial hardship on PDIC. Mr. Pazuniak has been lead (and often seemingly sole) counsel for PDIC since 2015 and can continue to serve in that role. Further, while Mr. O'Kelly will not be permitted to sit at counsel table or have a presence in the courtroom distinct from that of other fact witnesses, the Court's decision today does not preclude him from providing out-of-court assistance to Mr. Pazuniak. Finally, while the Court recognizes that disqualification is not commonly warranted, and that attempts to disqualify trial counsel on the eve of trial may often be reflective of bad faith, here it is plain that Adobe has proceeded in good faith with respect to this sensitive issue and, for the reasons explained above, its motion is meritorious.[4]

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[3]PDIC appears to recognize that Mr. O'Kelly may have unique information, but it contends that such evidence is irrelevant, as the only moment that is relevant to Adobe's breach-of-contract claim is when the suits against Adobe's customers were filed. (*See* D.I. 246 at 2) ("If the covenent not to sue was breached, the breach could only have occurred when the cases were filed. The conduct of the litigation, which is all that Adobe refers to in its motion, cannot constitute a breach of the Agreement as a matter of law . . . .") But the conduct of the litigation – and, more generally, the thought processes and actions (taken and not taken) before and after the filing of the lawsuits – is relevant, as that evidence is probative of whether PDIC committed a breach and whether such breach was in bad faith or obvious. Thus, the Court agrees with Adobe that "this case is about whether PDIC breached the agreement through the filing of lawsuits against Adobe customers, including PDIC's actions (or inactions) both ***before and after*** filing suit." (D.I. 256 at 1)

[4]While Rule 3.7(a) is itself a sufficient and compelling basis for disqualifying Mr. O'Kelly, the Court further agrees with Adobe's explanation of the reasoning for the Rule and

5. PDIC's motion to strike Dr. Becker's supplemental report (D.I. 241) is GRANTED.

6. In determining whether to exclude evidence such as an expert report, the Court may consider: (1) the importance of the information withheld; (2) the prejudice or surprise to the party against whom the evidence is offered; (3) the likelihood of disruption of the trial; (4) the possibility of curing the prejudice; (5) the explanation for the failure to disclose; and (6) the presence of bad faith or willfulness in not disclosing the evidence (the "*Pennypack* factors"). *See Konstantopoulos v. Westvaco Corp.*, 112 F.3d 710, 719 (3d Cir. 1997) (citing *Meyers v. Pennypack Woods Home Ownership Ass'n*, 559 F.2d 894, 904-05 (3d Cir. 1977)). Generally, "exclusion of critical evidence is an extreme sanction, not normally to be imposed absent a showing of willful deception or flagrant disregard of a court order by the proponent of the evidence." *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 791-92 (3d Cir. 1994) (internal quotation marks omitted). The determination of whether to exclude evidence is committed to the discretion of the Court. *See id.* at 749.

7. The Court agrees with PDIC that Dr. Becker's supplemental report is not compliant with the Court's summary judgment opinion (D.I. 220) and the order accompanying it, which directed Adobe to serve a supplemental expert report consistent with the Court's rulings (D.I. 221). In the summary judgment opinion, the Court made clear that "Adobe cannot collect

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why it is important to enforce it here. "Mr. O'Kelly's dual role will only serve to confuse or mislead the jurors who, unlike a judge, may find it difficult to distinguish between the role of a fact witness and the role of counsel. . . . Even if Mr. O'Kelly does not testify, it is too prejudicial for him to serve as an advocate while his name and representations on behalf of PDIC are at the epicenter of the disputes to be tried, replete in the record, and will be assessed by the jury as party admissions." (D.I. 240 at 3)

as damages for the breach of contract any attorney fees Adobe incurred in the affirmative breach-of-contract suit," finding these fees to be "the classic type of attorney fees that Adobe, in attempting to vindicate its contract rights, must bear itself." (D.I. 220 at 13) The Court also held that Adobe may be entitled recover as breach-of-contract damages its "defense fees – that is, those Adobe incurred in defending Defendants from PDIC's infringement suit[s], suits that were brought in alleged violation of the covenant not to sue." (*Id.*) Because Adobe indicated that "Dr. Becker could split out Adobe's damages" (D.I. 198 at 19) – i.e., separate out affirmative fees from defense fees – the Court exercised its discretion to provide Adobe the opportunity to "disaggregate its defense fees from its affirmative fees" (D.I. 220 at 14).

8. Dr. Becker's supplemental report does not separate Adobe's defense fees from its affirmative fees. Instead, Dr. Becker presents a damages theory – for the first time – "that as long as there were cases pending against Adobe customers who formally requested indemnification and/or defense from an infringement suit filed by PDIC, Adobe's legal fees were incurred in furtherance of its ongoing efforts to get PDIC to dismiss the wrongfully filed lawsuits, and are thus 'defense fees' under the Court's recent order." (D.I. 250 Ex. A at ¶ 7) Dr. Becker then concludes that all legal fees incurred by Adobe through December 7, 2016 are defense fees. (*Id.* at ¶¶ 7-8) This analysis does not separate defense fees from affirmative fees but merely claims all fees as defensive so long as they were incurred while at least one Defendant (who requested indemnification) was still involved in litigation with PDIC. The Court, in its summary judgment opinion, rejected Adobe's all-or-nothing approach to damages. But Dr. Becker's supplemental report simply reprises that approach with an earlier cutoff date. Thus, Dr. Becker's report – which does not separate defense and affirmative fees, does not review whether

the fees claimed before December 6, 2016 were incurred in defending against the underlying infringement suits, and merely opines in conclusory fashion that all fees through December 6 should be considered defense fees – does not comply with the Court's order to serve a report identifying only defense fees.

9. Furthermore, the *Pennypack* factors favor excluding Dr. Becker's supplemental report.[5] Dr. Becker's failure to separate defense fees from affirmative fees was willfully noncompliant with the Court's order. Adobe has provided no meritorious, persuasive explanation for its failure. Further, Dr. Becker presents a new theory of what purportedly constitutes defense damages – a theory Adobe did not articulate in its summary judgment papers – which, if presented at trial (scheduled to begin less than four days from now), would unfairly surprise and prejudice PDIC and/or disrupt the long-scheduled trial. While the supplemental report is surely important evidence, the Court does not perceive a way to cure the unfair prejudice to PDIC in any manner other than to preclude Dr. Becker from testifying to the opinions in the supplemental report; nor has Adobe proposed an alternative cure.

10. Adobe's contention that Dr. Becker's report is compliant with the Court's order is predicated, at least in part, on Adobe's view that New Jersey law allows a party to recover affirmative fees as defense fees when the fees are inextricably intertwined. This position is unavailing for numerous reasons. First, Dr. Becker does not actually opine that the defense fees and affirmative fees Adobe incurred are inextricably intertwined, that "any precise allocation of expenses [as between affirmative and defense fees] would be impossible," or anything similar.

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[5]Despite PDIC's contention that the *Pennypack* factors are not relevant (D.I. 257 at 2), the Court explicitly ordered the parties (at the pretrial conference) to address those factors in the motion to strike briefing.

Voorhees v. Preferred Mut. Ins. Co., 588 A.2d 417, 425 (N.J. Super. Ct. App. Div. 1991); *see also Diamond v. John Martin Co.*, 753 F.2d 1465, 1467 (9th Cir. 1985) ("[A]lthough time-keeping and billing procedures may make a requested segregation difficult, they do not, without more, make it impossible."). Thus, Dr. Becker's supplemental report – even if it were not stricken – provides no basis on which a reasonable juror could find that all of Adobe's fees before December 7, 2016 are defense fees.

11. Moreover, the Court does not agree with Adobe's conclusions about New Jersey law. (*See* D.I. 243, 248, 255) The cases on which Adobe relies do not address the pertinent question: does New Jersey law permit a party to recover the attorney fees that party incurs in an affirmative action (by which that party seeks to recover money damages) when those affirmative fees are "inextricably intertwined" with fees that same party incurred in connection with defending (itself or others; a "defense" which may include prosecuting counterclaims in the "defensive" action) in other litigation. Almost all of Adobe's cases arise in the insurance context (which appears to be a relevant distinction) – and, more importantly, they all use the labels "affirmative" and "defensive" in a different manner than is pertinent here. Adobe has shown that in the insurance context, courts (including those applying New Jersey law) have held that an insurance company with a duty to defend an insured in an underlying action involving a third-party may be obligated to pay for the insured's legal fees ***arising from that underlying litigation*** – which includes both "defense fees" (associated with the insured being sued by a third party) and "affirmative fees" (associated with the insured asserting a counterclaim in the underlying litigation against a third party) when those fees are inextricably intertwined with one another. *See, e.g.*, *Voorhees*, 588 A.2d at 419, 425; *Safeguard Scis., Inc. v. Liberty Mut. Ins. Co.*,

766 F. Supp. 324, 333-34 (E.D. Pa. 1991). Here, the Court determined in the summary judgment opinion that Adobe is potentially entitled to all fees arising from the ***underlying*** infringement actions (which the Court calls defense fees) but ***no fees*** arising from Adobe's breach-of-contract claim (which the Court calls affirmative fees). (*See* D.I. 220 at 10-14) That the breach-of-contract fees were incurred in the same lawsuits as the defense fees (due to Adobe being permitted to intervene in the underlying infringement actions and its decision to file a complaint in intervention asserting breach-of-contract) does not change the fundamental fact that New Jersey law does not permit Adobe to recover fees incurred in pursuing its affirmative, breach-of-contract claim. What Adobe is attempting to achieve is analogous to an insured seeking to recover the attorney fees the insured incurs ***in the action the insured files against the insurer*** arising from the insurer's breach of contract in not paying the insured's attorney fees incurred in an underlying action with a third party. Adobe has pointed the Court to no case applying New Jersey law that authorizes such a recovery. (*See* D.I. 257 at 2) (PDIC: "No case cited by Adobe [or] other authority suggests that fees generated to provide a monetary recovery for Adobe can be viewed as defensive, regardless of any potential incidental benefit or relatedness to other issues.") And Adobe's attempt to recover such affirmative fees, even if inextricably intertwined with defense fees, is precluded by the Court's summary judgment opinion.[6]

12. Given that the Court has stricken Dr. Becker's supplemental report, the Court turns to PDIC's latest motion for summary judgment (D.I. 234), which the Court DENIES. PDIC

[6]Adobe also cites cases involving fee-shifting statutes, which are explicit rejections of the American Rule. *See Diamond*, 753 F.2d at 1466; *Norton v. Wilshire Credit Corp*, 36 F. Supp. 2d 216, 218 (D.N.J. 1999); *Arthur D. Little Int'l, Inc. v. Dooyang Corp.*, 995 F. Supp. 217, 221 (D. Mass. 1998). But Adobe does not invoke a fee-shifting statute to support its claimed damages.

contends that "[w]ithout that report, there can be no record to support Adobe's damage claims." (*Id.* at 7) Relatedly, PDIC asserts that Dr. Becker "is the only witness identified in the pretrial order to testify that Adobe's claimed fees were reasonable and appropriate, or on damages generally," and that the "pretrial order [does] not identify any record by which Adobe can now make a damage claims consistent with the Court's Order." (*Id.* at 7-8) The Court disagrees. There is sufficient evidence of record of Adobe's purely defensive fees, including Adobe's billing records, on which a reasonable juror could find that Adobe has proven the damages element of its breach-of-contract claim. Further, Adobe explained at the pretrial conference that Dana Rao, its Rule 30(b)(6) witness, could testify about Adobe's legal fees and identify those that are defense fees. Accordingly, it is appropriate to deny summary judgment.

13. Having stricken Dr. Becker's supplemental report and denied PDIC's motion for summary judgment, the more difficult question becomes how to proceed from here. Although the Court agrees with Adobe that there is sufficient evidence in the record to determine the amount of Adobe's fees that are purely defense fees, the total amount of defense fees that Adobe asserts as damages (i.e., the actual bottom-line total dollar figure) is not in the record, and Adobe has studiously avoided disclosing an amount that is consistent with the Court's rulings. It is also far too late to permit Adobe yet another opportunity to serve an expert report to support such a figure. However, because the Court is persuaded that there is factual evidence in the record (e.g., bills, Rao testimony) from which Adobe could prove it incurred some damages (i.e., defense fees), because PDIC has long had this evidence, and because both parties stated at the pretrial conference they wish to proceed to trial as scheduled (and have not subsequently asked for a continuance), the Court will exercise its discretion to permit Adobe one final opportunity to

supplement its damages disclosures.

14. Accordingly, by no later than noon on August 19, 2017, Adobe shall file a letter with the Court, copying PDIC, (i) disclosing the total amount (in dollars) of defense fees Adobe is seeking as breach-of-contract damages (i.e., only those fees that Adobe incurred in defending its customers in the infringement suits and ***no fees associated with Adobe's breach-of-contract claim***; defense fees that are "inextricably intertwined" with affirmative fees are ***not*** recoverable), and (ii) identifying with particularity the record bases (e.g., the specific legal bills) on which Adobe intends to rely to support its calculation of the amount of damages it is seeking.[7]

15. Provided that Adobe complies with the preceding paragraph of this Order, trial will begin, as scheduled, on Monday, August 21, 2017, with counsel appearing at 8:30 a.m. Each side will be allocated a total of seven (7) hours for its trial presentation, as the Court continues to believe that this amount of time will be more than adequate to permit each side a full and fair opportunity to present its case on the limited material issues in dispute.[8]

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[7]The parties are reminded that any submissions made outside of normal business hours, including on weekends and holidays, must be accompanied by a courtesy copy sent to the following electronic mail address: Judge_Stark_Chambers@ded.uscourts.gov.

[8]To summarize, the Court's rulings on the pending motions are as follows: (1) Adobe's motion to disqualify Mr. O'Kelly (C.A. No. 13-239-LPS D.I. 240; C.A. No. 13-287-LPS D.I. 240; C.A. No. 13-288-LPS D.I. 240; C.A. No. 13-289-LPS D.I. 243; C.A. No. 13-326-LPS D.I. 241; C.A. No. 13-330-LPS D.I. 237; C.A. No. 13-331-LPS D.I. 239; C.A. No. 13-404-LPS D.I. 242; C.A. No. 13-408-LPS D.I. 255) is GRANTED; (2) PDIC's motion to strike Dr. Becker's supplemental expert report (C.A. No. 13-239-LPS D.I. 241; C.A. No. 13-287-LPS D.I. 242; C.A. No. 13-288-LPS D.I. 242; C.A. No. 13-289-LPS D.I. 240; C.A. No. 13-326-LPS D.I. 238; C.A. No. 13-330-LPS D.I. 240; C.A. No. 13-331-LPS D.I. 242; C.A. No. 13-404-LPS D.I. 240; C.A. No. 13-408-LPS D.I. 258) is GRANTED; and (3) PDIC's motion for summary judgment (C.A. No. 13-239-LPS D.I. 234; C.A. No. 13-287-LPS D.I. 234; C.A. No. 13-288-LPS D.I. 234; C.A. No. 13-289-LPS D.I. 233; C.A. No. 13-326-LPS D.I. 231; C.A. No. 13-330-LPS D.I. 231; C.A. No. 13-331-LPS D.I. 233; C.A. No. 13-404-LPS D.I. 232; C.A. No. 13-408-LPS D.I. 249) is DENIED.

HON. LEONARD P. STARK
UNITED STATES DISTRICT JUDGE

CLOSED,APPEAL,MEDIATION−CJB,PATENT

U.S. District Court
District of Delaware (Wilmington)
CIVIL DOCKET FOR CASE #: 1:13−cv−00239−LPS

Princeton Digital Image Corporation v. Office Depot Inc.
Assigned to: Judge Leonard P. Stark
Related Cases: 1:12−cv−01739−LPS
1:12−cv−01749−LPS
1:12−cv−01770−LPS
1:13−cv−00238−LPS
1:13−cv−00237−LPS
1:13−cv−00288−LPS
1:13−cv−00289−LPS
1:13−cv−00290−RGA
1:13−cv−00325−LPS
1:13−cv−00326−LPS
1:13−cv−00327−LPS
1:13−cv−00328−LPS
1:13−cv−00329−RGA
1:13−cv−00330−LPS
1:13−cv−00331−LPS
1:13−cv−00399−LPS
1:13−cv−00400−LPS
1:13−cv−00401−LPS
1:13−cv−00402−LPS
1:13−cv−00403−LPS
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1:13−cv−00521−LPS
1:13−cv−00522−LPS
1:13−cv−00523−LPS
1:13−cv−00524−LPS

Date Filed: 02/15/2013
Date Terminated: 08/25/2017
Jury Demand: Plaintiff
Nature of Suit: 830 Patent
Jurisdiction: Federal Question

1:13−cv−00525−LPS
1:13−cv−00286−LPS
1:13−cv−00287−LPS
1:13−cv−00240−LPS
1:13−cv−00241−LPS

Case in other court: 17−02597
18−01006

Cause: 35:271 Patent Infringement

Date Filed	#	Docket Text
08/18/2017	265	ORAL ORDER: For the reasons stated in Court during the pretrial conference, IT IS HEREBY ORDERED that Adobe's motion for reconsideration (C.A. No. 13−239−LPS D.I. 238; C.A. No. 13−287−LPS D.I. 238; C.A. No. 13−288−LPS D.I. 238; C.A. No. 13−289−LPS D.I. 237; C.A. No. 13−326−LPS D.I. 235; C.A. No. 13−330−LPS D.I. 235; C.A. No. 13−331−LPS D.I. 237; C.A. No. 13−404−LPS D.I. 236; C.A. No. 13−408−LPS D.I. 253) is GRANTED IN PART and DENIED IN PART without prejudice to renew after trial. ORDERED by Judge Leonard P. Stark on 8/18/17. Associated Cases: 1:13−cv−00239−LPS et al. (ntl) (Entered: 08/18/2017)

IN THE UNITED STATES DISTRICT COURT

IN AND FOR THE DISTRICT OF DELAWARE

PRINCETON DIGITAL IMAGE CORPORATION,	:	CIVIL ACTION
	:	
Plaintiff,	:	NO. 13-239-LPS
	:	NO. 13-287-LPS
v.	:	NO. 13-288-LPS
	:	NO. 13-289-LPS
OFFICE DEPOT INC.,	:	NO. 13-326-LPS
	:	NO. 13-330-LPS
Defendant.	:	NO. 13-331-LPS
----------		NO. 13-404-LPS
(and other captions whose case numbers are listed to the right.)		NO. 13-408-LPS

- - -

Wilmington, Delaware
Thursday, August 10, 2017
Pretrial Conference

- - -

BEFORE: HONORABLE LEONARD P. STARK, Chief Judge

APPEARANCES:

- - -

O'KELLY ERNST & BIELLI, LLC
BY: GEORGE PAZUNIAK, ESQ., and
SEAN O'KELLY, ESQ.

Counsel for Plaintiff

RICHARDS LAYTON & FINGER, P.A.
BY: KELLY E. FARNAN, ESQ.

and

WILMER CUTLER PICKERING HALE and DORR, LLP
BY: TARA D. ELLIOTT, ESQ.,
RACHEL COHEN, ESQ., and
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(Washington, District of Columbia)

Counsel for Adobe Systems Incorporated

pages, three pages, and two pages.

So to be clear, on Monday at noon, we expect a three page letter brief from PDIC on a motion to strike the Becker report, and a three page letter brief from Adobe on why I should find that New Jersey law allows inextricably intertwined dollars to be recoverable as part of a breach of contract.

The next day at noon, a three page response from each of you.

And then the following day, Wednesday at noon, a two page, two page at most on Wednesday by noon as a reply in support of the moving party's papers.

So that is that.

In the meantime, with respect to the privilege disputes, I do hereby order that tomorrow by 5:00 p.m., PDIC produce the materials that Mr. Pazuniak has outlined that he is willing to produce. That includes at a minimum those 18 documents on the privilege log, the supplemental response and interrogatory, and documents responsive to those categories consistent with the approach that Mr. Pazuniak outlined here.

I further order that by no later than next Friday, Mr. Meagher be produced for a deposition of no more than two hours with respect to these issues.

So to that extent and that limited extent, I

will say that the newest motion for reconsideration is granted and in all other respects, it is denied but without prejudice to renew after the trial.

What I mean by that is -- and I recognize I wasn't entirely clear on this yesterday on the privilege issue -- the dispute about privilege really was flagged at least initially in the most recent iteration in the status report. And we read the status report and thought, all right, we better clarify what we meant.

And I think I have full discretion to do that. And I think particularly in the context of where there is a trial just around the corner, it's a good idea to clarify and make clear what needs to be produced and what doesn't need to be produced.

There is only so much that can get done between now and the 21st. So what I'm trying to convey is Mr. Pazuniak only is ordered to do what I just ordered him to do, but understand, Adobe has an argument that even if you do all that, you haven't fully complied either with my orders or with what my order should be or with what a proper legal privilege finding is. And they are going to have a chance, if they think they have a basis to make that argument, to make that further legal argument some day in the future.

I still think I got it right yesterday, and I

got it right the first time. I think what I'm doing today is right. But if they want to push the privilege waiver issue again after this trial, they'll have a chance to persuade me that you should have produced more tomorrow. And if they persuade me of that, they may persuade me that the whole trial that we're doing on the 21st was somehow wrong or unfair and needs to be redone. I can't give you any certainty about that.

But for tomorrow at 5:00, if you do what you told me you would do, we're fine through this trial. What happens after that, I don't know.

Further, I'm granting PDIC's request to depose any of the witnesses that are moved from the may call list of Adobe and actually that Adobe discloses next Wednesday that they're going to call or I suppose if you just keep them at may call, you also have to put them up for deposition. But if you move them into the we are not calling category, you don't have to put them up for a deposition. But if you are reserving the right to call them at trial, I have determined in fairness under the circumstances of this very unusual case, I am not going to require PDIC to examine those witnesses in court without having a chance to depose them, should they wish to do so.

I am not going to order PDIC to fly all around the country or go where those witnesses are. Beyond that,

IN THE UNITED STATES DISTRICT COURT

IN AND FOR THE DISTRICT OF DELAWARE

ADOBE SYSTEMS INCORPORATED,	:	CIVIL ACTION
	:	
Plaintiff,	:	NO. 13-239-LPS
	:	NO. 13-287-LPS
v.	:	NO. 13-288-LPS
	:	NO. 13-289-LPS
PRINCETON DIGITAL IMAGE CORPORATION,	:	NO. 13-326-LPS
	:	NO. 13-330-LPS
Defendant.	:	NO. 13-331-LPS
----------		NO. 13-404-LPS
(and other captions whose case numbers are listed to the right.)		NO. 13-408-LPS

- - -

Wilmington, Delaware
Monday, August 10, 2017
Jury Trial - Volume A

- - -

BEFORE: HONORABLE LEONARD P. STARK, Chief Judge

APPEARANCES:

- - -

O'KELLY ERNST & JOYCE, LLC
BY: GEORGE PAZUNIAK, ESQ.

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(Washington, District of Columbia)

and

MR. KRAMER: I did not, Your Honor.

THE COURT: Thank you. I think it's important that Adobe be aware of this. During the break Adobe should consider whether or not they think they have any concern with Mr. Kramer's presence as part of this trial.

And I will go reflect on the issues that are before me.

Take a recess.

(A brief recess was taken.)

THE COURT: Let's start with I have been thinking about the issues that have been argued, the ones that were briefed over the weekend. I'll give you my rulings on that, see if you have any questions about that, and then we'll talk about any other issues we may need to talk about.

The first question that I have asked is did Adobe comply with the Court's order. This was the Court's order at DI-260 at page ten which required by Saturday that Adobe disclose the total amount in dollars of defense fees Adobe is seeking as breach of contract damages, i.e., only those fees that Adobe incurred in defending its customers in the infringement suits and no fees associated with Adobe's breach of contract claim. Defensive fees that inextricably intertwined which affirmative fees are not recoverable.

And having looked at what Adobe put in the

record and had the discussion at some length this morning with parties, I conclude that Adobe did not comply with this order.

Instead, the damages figure that Adobe served on PDIC on Saturday, approximately $550,000, has included in it some amount of fees associated with what the Court has concluded applying New Jersey law in unique and probably unprecedented circumstances, but what the Court has concluded applying applicable law is affirmative, or at minimum fees that are affirmative and inextricably intertwined with defensive fees and the Court has ruled that not all of that is recoverable as damages on its brief of contract claim at this trial by Adobe.

This is the law as the Court has concluded, whether or not Adobe found itself faced with the difficult business decision, based on PDIC's suits against Adobe's customers and whether or not that business decision was made even more difficult by how PDIC appeared to be treating Adobe's customers and regardless of how Adobe's customers responded to that treatment and those lawsuits and regardless of what Adobe's customers expected from Adobe, none of that changes what the law is that's applicable to the trial here.

It's all also regardless of whether Adobe's decision to pursue affirmative relief through intervention

may have been the most efficient approach to the problems, and may have been the approach that the Court would have most preferred if it were a decision for the Court to make. Again, none of that changes the law.

The law is as the Court has held that Adobe can only recover purely defensive fees, and it has to this moment still not disclosed a purely defensive fee number.

This noncompliance could I think be fairly remedied by granting PDIC's request for summary judgment as it is not the first noncompliance by Adobe and the record including multiple rulings by the Court amply demonstrates how we got to where we are right now.

But that's not the remedy that I am going to adopt. It is undisputed that some amount of Adobe's legal fees are purely defensive in the manner the Court has defined them. From which it follows that a reasonable juror could find that Adobe has proven some damages so the only way to grant summary judgment would be not due to a lack of evidence but due to noncompliance as a sanction to Adobe and I think under the totality of the circumstances that would be too extreme of a sanction.

So where does this leave us? Adobe will be permitted to present a purely defensive number to the jury provided that it discloses that number to PDIC before we get to opening statements, which I still intend to do today.

Further, Adobe will be required to redact any documents it seeks to introduce into evidence or any demonstratives it seeks to show to the jury to comply with these rulings and to insure that the only dollar figure the jury hears as to Adobe's legal fees is the purely defensive dollar figure that Adobe will be disclosing no later than opening statements.

Adobe is further ordered to advise all of its witnesses of these rulings and to insure that they do not disclose to the jury any dollar figure of attorney fees incurred by Adobe other than again that purely defensive fee that Adobe will be disclosing to the PDIC before opening statements.

Again, that is the only dollar figure of attorneys' fees that this jury will hear as being Adobe's attorney fees.

This outcome in the Court's view was compelled by application of Rule 403 to the circumstances here. The context that Adobe seeks to present does not require telling the jury that Adobe incurred one-and-a-half million dollars or two-and-a-half million dollars of legal fees or whatever that number happens to be. To do so would risk -- would create a severe risk of unfair prejudice to PDIC, a risk that greatly outweighs the minimum probative value of these relatively large dollar figures being put in front of the

jury because they will be relatively quite large compared to the purely defensive dollar fees, the dollar figure that the jury will hear as being Adobe's fees.

Further, the Court will update the preliminary jury instructions to adopt PDIC's damages request. It's entirely accurate given the Court's rulings and it will be helpful to the jury to help understand what is set out in the instruction right from the preliminary instructions.

That's the rulings on the issues that we discussed and were argued.

Any questions about that, Ms. Elliott?

MS. ELLIOTT: Yes, Your Honor.

THE COURT: Let me have you come to the podium.

MS. ELLIOTT: Thank you. Sorry.

I want to be careful here. Obviously Your Honor has a view and we respect that view. We would be -- we would appreciate the Court telling us what you're saying is purely defensive, because that's exactly what we submitted, we submitted on Saturday. And we see that the Court has a different view, but unless you tell us what categories you're defining as purely defensive this is almost an endless exercise of just guessing at what your view is when this is not an exact science.

I heard Mr. Pazuniak use the word impossibility earlier in his argument. I'm sure he'll differ with me on

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. OFFICE DEPOT INC., Defendant.	:	C.A. No. 13-239-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. J.C. PENNEY COMPANY, INC., Defendant.	:	C.A. No. 13-287-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. QVC INC., Defendant.	:	C.A. No. 13-288-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. SEARS HOLDINGS COMPANY, Defendant.	:	C.A. No. 13-289-LPS

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. LIMITED BRANDS, INC., Defendant.	:	C.A. No. 13-326-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. GAP INC., Defendant.	:	C.A. No. 13-330-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. WILLIAMS-SONOMA INC., Defendant.	:	C.A. No. 13-331-LPS
PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. COSTCO WHOLESALE CORP., Defendant.	:	C.A. No. 13-404-LPS

PRINCETON DIGITAL IMAGE CORPORATION, Plaintiff, v. NORDSTROM.COM LLC, NORDSTROM.COM INC., and NORDSTROM INC. Defendants.	:	C.A. No. 13-408-LPS

MEMORANDUM ORDER

Having reviewed the parties' filings regarding their proposed final judgments (C.A. 13-239-LPS D.I. 275, 276, 277, 278),[1]

IT IS HEREBY ORDERED that:

1. Adobe Systems Incorporated's ("Adobe") motion for entry of final judgment (C.A. 13-239-LPS D.I. 275; C.A. No. 13-287-LPS D.I. 275; C.A. No. 13-288-LPS D.I. 275; C.A. No. 13-289-LPS D.I. 274; C.A. No. 13-326-LPS D.I. 272; C.A. No. 13-330-LPS D.I. 272; C.A. No. 13-331-LPS D.I. 274; C.A. No. 13-404-LPS D.I. 273; C.A. No. 13-408-LPS D.I. 290) is GRANTED IN PART, as the Court will enter an order of final judgment consistent with the Court's rulings and the events during trial. The Court will NOT adopt Adobe's proposed final judgment, as the Court has found and stated that the record demonstrates that Adobe could prove some amount of purely defense fees.

2. The Court will ADOPT the second final judgment proposed by Princeton Digital Image Corporation ("PDIC"). (D.I. 278) The Court sets out the following procedural history to

[1]All references to the Docket Index are to C.A. No. 13-239, unless otherwise noted.

provide accurate context for the final judgment. *See In re Cendant Corp. Sec. Litig.*, 454 F.3d 235, 243 (3d Cir. 2006).

3. On August 1, 2017, the Court granted in part and denied in part PDIC's motion for summary judgment on Adobe's breach of contract claim, concluding in pertinent part as follows:

> [T]he Court agrees with PDIC that Adobe cannot collect as damages for the breach of contract any attorney fees Adobe incurred in the affirmative breach-of-contract suit. . . .
>
> However, the defense fees – that is, those Adobe incurred in defending [third-party] Defendants [i.e., Adobe customers] from PDIC's infringement suit, suits that were brought in alleged violation of the covenant not to sue – are the type of fees that may be awarded as damages. Adobe's legal costs in defending its customers are a proper measure of the harm to Adobe caused by PDIC's alleged breach.
>
> . . .
>
> Nor is the Court persuaded that Adobe cannot disaggregate its defense fees from its affirmative fees. . . . By separate order, the Court will direct Adobe to serve a supplemental expert report relating to the revised amount of damages Adobe is seeking in light of today's rulings.

(D.I. 220 at 13-14)

4. By Order entered the same date, the Court directed that "Adobe shall serve on PDIC a supplemental expert report relating to the amount of damages it is seeking, in light of today's rulings," by no later than August 7. (D.I. 221 at ¶ 4)

5. On August 7, 2017, Adobe served on PDIC a supplemental expert report relating to damages. (D.I. 230)

6. On August 9, 2017, PDIC filed an "Emergency Renewed Motion for Summary

Judgment." (D.I. 234)

7. On August 10, 2017, the Court held a pretrial conference, relating to a jury trial scheduled to begin on August 21, 2017, and directed the parties to (among other things) brief a motion to strike Adobe's new expert report and brief "whether under [governing] New Jersey law attorney fees that are incurred in a way that is inextricably intertwined between affirmative and defense costs are recoverable." (Tr. at 72-73)

8. On August 17, 2017, after receiving the required briefing, the Court struck Adobe's supplemental expert report as non-compliant with the Court's previous Order, as it "does not separate Adobe's defense fees from its affirmative fees" (D.I. 260 at 4-6), and further held that under New Jersey law Adobe could not recover defensive attorney fees that were inextricably intertwined with affirmative fees (*id.* at 7-8).

9. In the same August 17, 2017 Order, the Court nonetheless denied PDIC's motion for summary judgment, as even after striking the supplemental expert report "[t]here is sufficient evidence of record of Adobe's purely defensive fees, including Adobe's billing records, on which a reasonable juror could find that Adobe has proven the damages element of its breach-of-contract claim." (*Id.* at 8-9)

10. In the same August 17, 2017 Order, the Court gave Adobe an additional opportunity to "file a letter with the Court, copying PDIC, (i) disclosing the total amount (in dollars) of defense fees Adobe is seeking as breach-of-contract damages (i.e., only those fees that Adobe incurred in defending its customers in the infringement suits and no fees associated with Adobe's breach-of-contract claim; defense fees that are 'inextricably intertwined' with affirmative fees are not recoverable), and (ii) identifying with particularity the record bases (e.g.,

the specific legal bills) on which Adobe intends to rely to support its calculation of the amount of damages it is seeking." (*Id.* at 9-10)

11. On August 19, 2017, Adobe submitted a letter to the Court disclosing its damages. (D.I. 270)

12. On the morning of August 21, 2017, on the first day of trial, out of the presence of potential jurors but while the jury pool was assembled in the courthouse waiting to be selected, the Court concluded that Adobe's August 19 damages submission did not disclose a purely defensive fee number. (D.I. 276-1 at 46)

13. Despite Adobe's noncompliance, the Court declined to grant summary judgment on damages, for reasons including that, as the Court stated, it was "undisputed that some amount of Adobe's legal fees are purely defensive in the manner the Court has defined them," so "a reasonable juror could find that Adobe has proven some damages." (*Id.*)

14. The Court further ruled that "Adobe will be permitted to present a purely defensive number to the jury provided that it discloses that number to PDIC before we get to opening statements." (*Id.*)

15. After further discussion with counsel and a recess, Adobe – contending that, given the Court's rulings, "Adobe doesn't have damages to present" – requested that, in light of the Court's rulings, the Court not select a jury but, instead, cancel trial and enter judgment in favor of PDIC. (*Id.* at 67)

16. PDIC did not object to Adobe's request but stated it believed Adobe "still could have put on a damage case." (*Id.* at 70)

17. The Court then restated its view "that there are purely defensive damages that can

be proven on this record," but added that it was not "in a position to force Adobe" to go to trial and, therefore, agreed to proceed as Adobe requested. (*Id.* at 70-71)

18. The parties were unable to agree to a form of judgment the Court could enter (*see* D.I. 275, 276, 277, 278), and the Court has concluded that adopting PDIC's second proposed form of order (D.I. 278), in conjunction with the context provided by this memorandum, is appropriate.

IT IS FURTHER ORDERED that, for the reasons stated in Court during trial, Adobe's motion for sanctions (C.A. 13-239-LPS D.I. 261; C.A. No. 13-287-LPS D.I. 261; C.A. No. 13-288-LPS D.I. 261; C.A. No. 13-289-LPS D.I. 260; C.A. No. 13-326-LPS D.I. 258; C.A. No. 13-330-LPS D.I. 258; C.A. No. 13-331-LPS D.I. 260; C.A. No. 13-404-LPS D.I. 259; C.A. No. 13-408-LPS D.I. 276) is DENIED WITHOUT PREJUDICE.

August 25, 2017
Wilmington, DE

HON. LEONARD P. STARK
UNITED STATES DISTRICT JUDGE

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PRINCETON DIGITAL IMAGE CORPORATION v.	**Case No.**
OFFICE DEPOT INC.	**1-13-cv-239-LPS**
J.C. PENNEY COMPANY, INC.	**1-13-cv-287-LPS**
QVC INC	**1-13-cv-288-LPS**
SEARS HOLDINGS COMPANY	**1-13-cv-289-LPS**
LIMITED BRANDS, INC.,	**1-13-cv-326-LPS**
GAP Inc.	**1-13-cv-330-LPS**
WILLIAMS-SONOMA INC.	**1-13-cv-331-LPS**
COSTCO WHOLESALE CORP.	**1-13-cv-404-LPS**
NORDSTROM.COM LLC ET AL.	**1-13-cv-408-LPS**

~~[ALTERNBATIVE PROPOSED]~~ FINAL JUDGMENT

Adobe having advised the Court that judgment is in order from which Adobe can take appeal,

Adobe's request for entry of final judgment is GRANTED, without prejudice to Adobe's ability to appeal. Accordingly, IT IS HEREBY ORDERED, ADJUDGED, AND DECREED THAT:

1. Final judgment is entered for PDIC and against Adobe.

2. Adobe and PDIC expressly reserve the right to appeal from this judgment, including any interlocutory orders of the Court.

Chief United States District Judge

United States Patent [19]
Fedele

[11] **Patent Number: 4,813,056**
[45] **Date of Patent: Mar. 14, 1989**

[54] **MODIFIED STATISTICAL CODING OF DIGITAL SIGNALS**

[75] Inventor: **Nicola J. Fedele**, Kingston, N.J.

[73] Assignee: **General Electric Company**, Schenectady, N.Y.

[21] Appl. No.: **130,379**

[22] Filed: **Dec. 8, 1987**

[51] **Int. Cl.**[4] **H04N 7/12**
[52] **U.S. Cl.** **375/27**; 375/122; 341/107
[58] **Field of Search** ..... 375/27, 30, 122, 25; 358/133, 135, 261; 382/56; 340/347 DD

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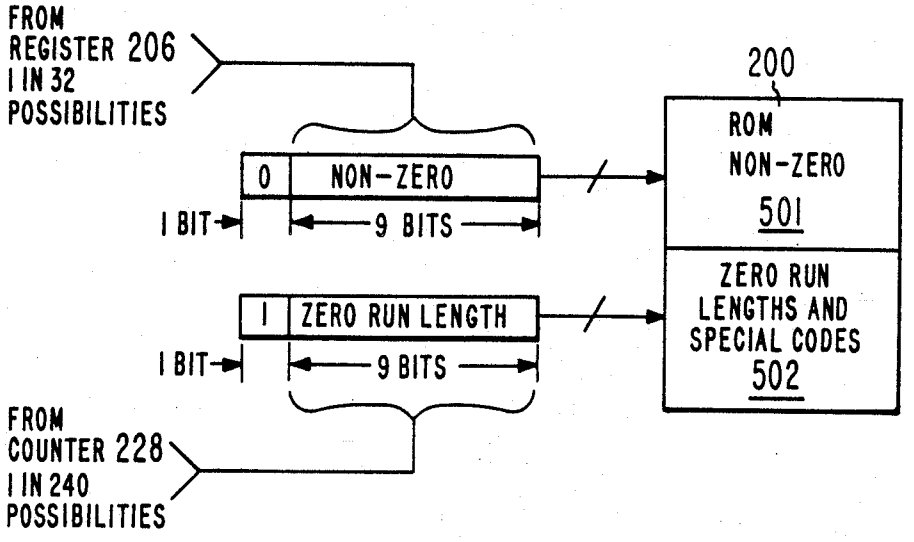
"Adaptive Intra-Interframe DPCM Coder" by P. Pirsch, published in May-Jun. 1982 issue of Bell System Technical Journal, pp. 747-764.

Primary Examiner—Benedict V. Safourek
Assistant Examiner—Stephen Chin
Attorney, Agent, or Firm—William Squire; James C. Davis, Jr.; Paul R. Webb, II

[57] **ABSTRACT**

A ROM includes a single dictionary of variable length codewords wherein Huffman codewords are assigned all members of the dictionary set, including one key codeword being assigned as a prefix codeword segment for a relatively large subgroup of the set, based on the combined probability of occurrence of the subgroup as compared to the individual probabilities of occurrences of the remaining members of the dictionary set. The key codeword is an indication of a departure from straightforward Huffman coding, to prepare an alternative coding scheme for developing a longer codeword which uses the key codeword as a prefix portion of that longer codeword. A unique suffix codeword segment follows the key codeword prefix for particularly identifying each member of the subgroup. The combined probability of occurrence of a member of the subgroup is higher than the probability of occurrence of codewords of shorter length, but the individual probabilities are significantly lower. The subgroup members can be assigned codeword lengths significantly shorter than codewords that would be assigned in straightforward Huffman coding.

23 Claims, 4 Drawing Sheets



Case: 17-2597 Document: 38 Page: 188 Filed: 01/29/2018

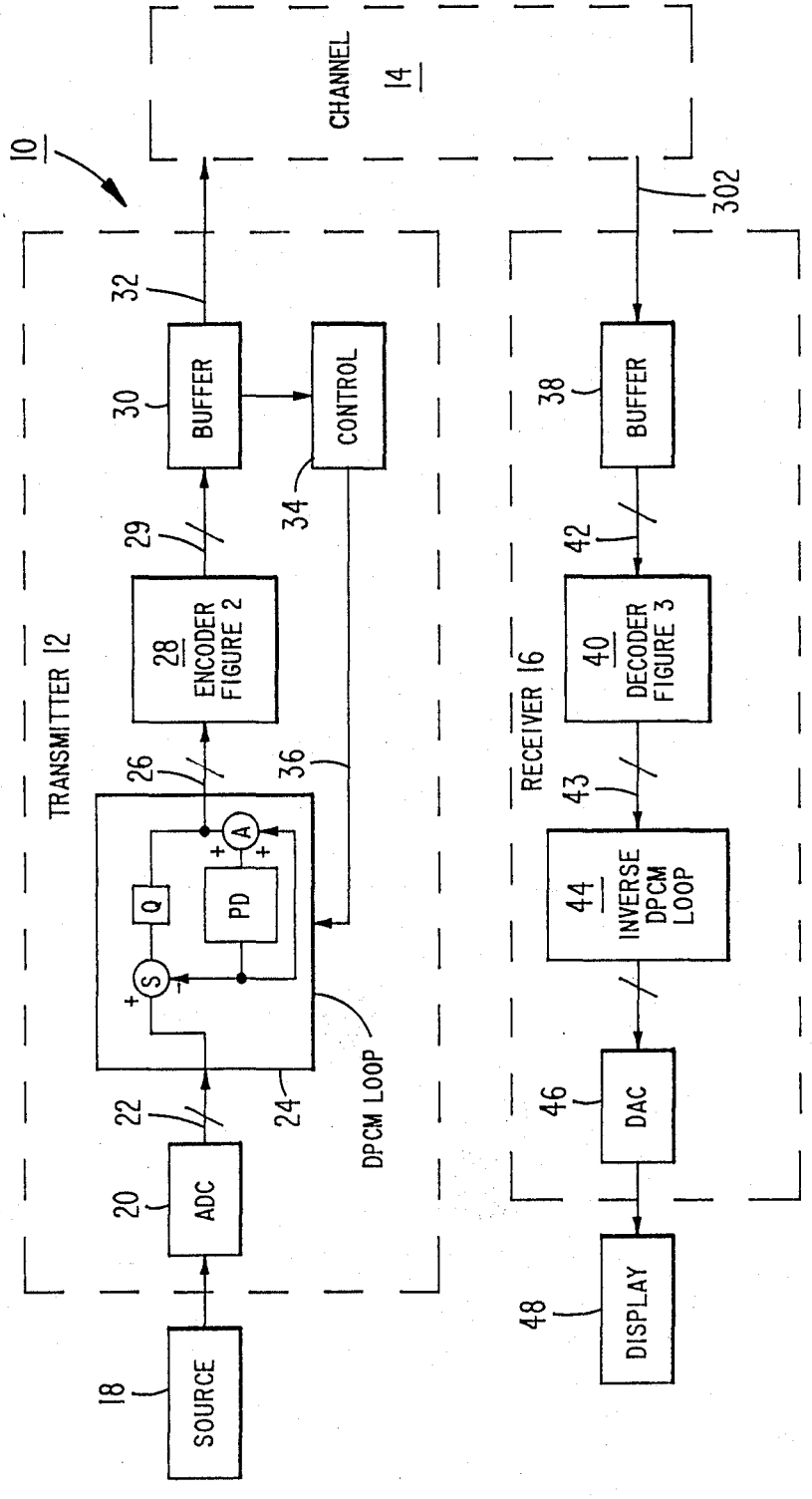


Fig. 1

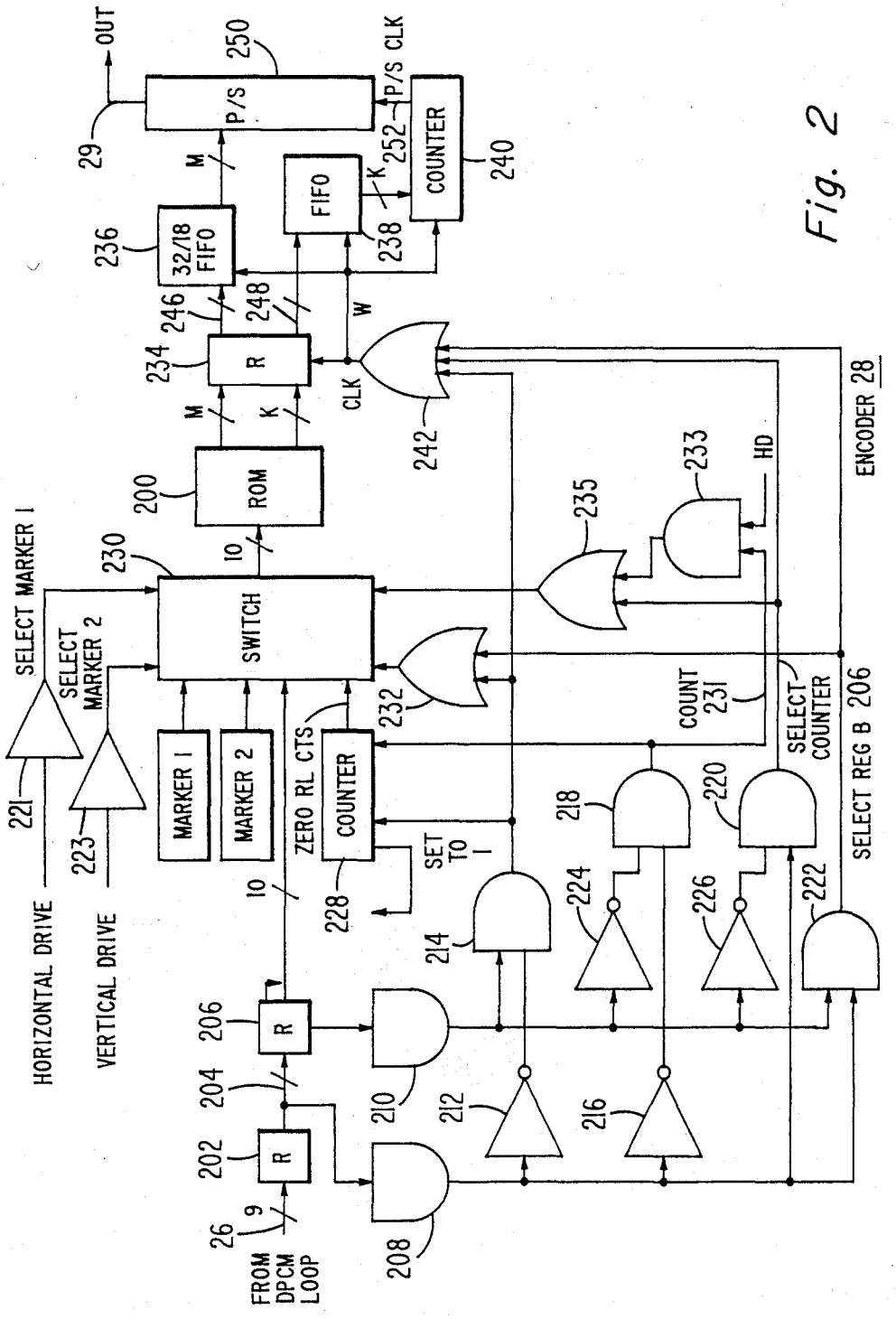


Fig. 2

Case: 17-2597 Document: 38 Page: 189 Filed: 01/29/2018

Case: 17-2597 Document: 38 Page: 190 Filed: 01/29/2018

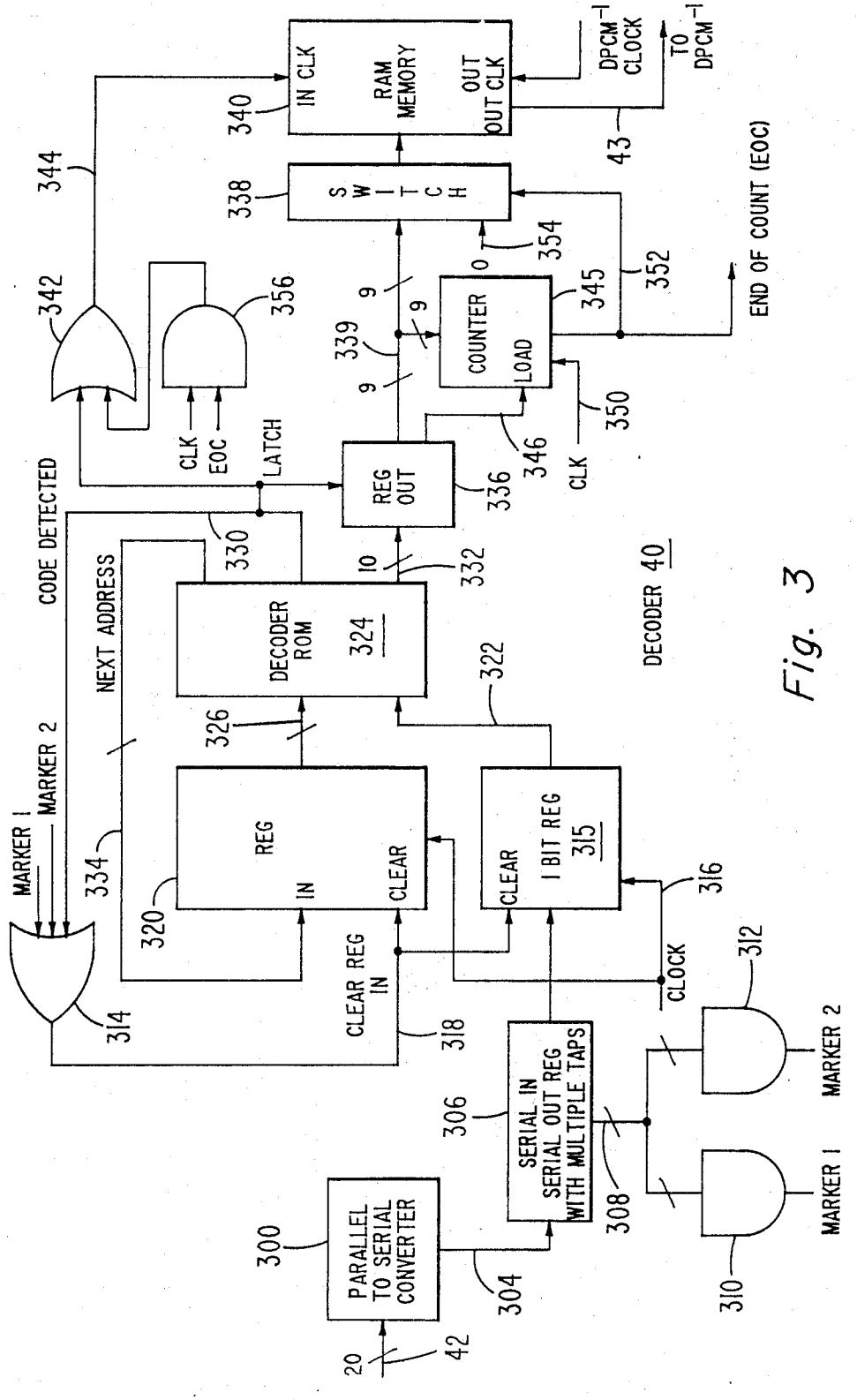


Fig. 3

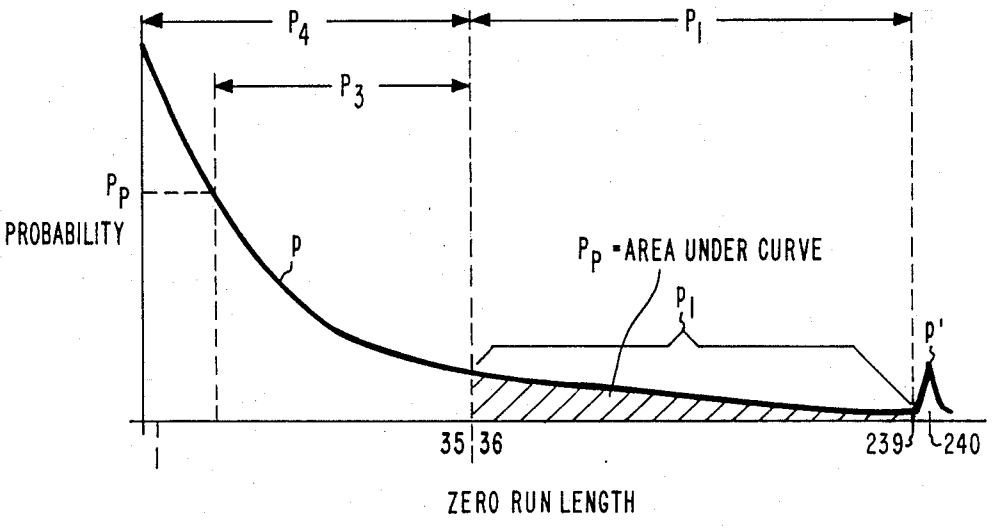

P_4
P_1
P_3
P_P
PROBABILITY
P
P_P = AREA UNDER CURVE
P_1
P'
1
35
36
239
240
ZERO RUN LENGTH

Fig. 4

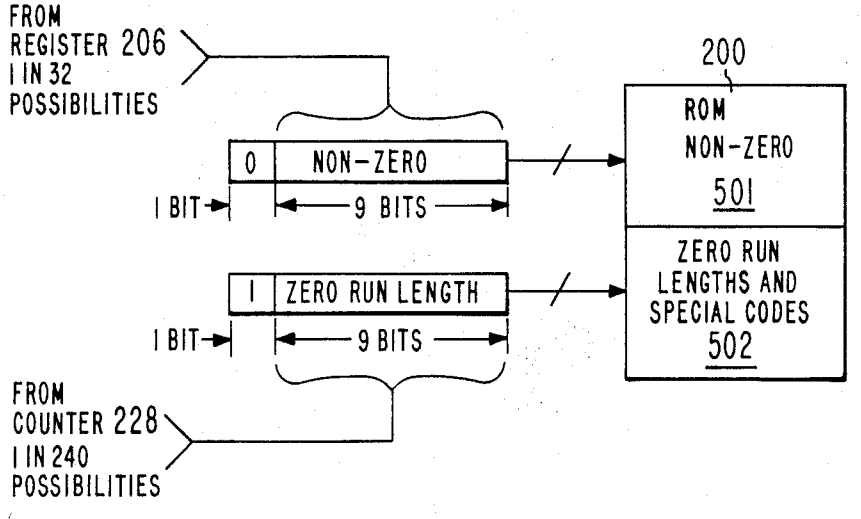

FROM
REGISTER 206
1 IN 32
POSSIBILITIES
200
ROM
NON-ZERO
501
0
NON-ZERO
1 BIT
9 BITS
1
ZERO RUN LENGTH
1 BIT
9 BITS
ZERO RUN
LENGTHS AND
SPECIAL CODES
502
FROM
COUNTER 228
1 IN 240
POSSIBILITIES

Fig. 5

MODIFIED STATISTICAL CODING OF DIGITAL SIGNALS

This invention relates to encoders for encoding digital signals wherein certain values of signals have a higher frequency of occurrence than other values. Transmission systems for digital signals include a number of signal processing functions which may include quantizers, predictive schemes, encoders for encoding digitized signals, buffers and control circuitry among others. Sometimes the term "encoder" as used in this art refers to the entire transmission system and at other times the term "encoder" refers merely to the encoding function of a coder circuit within the transmission system. The present invention relates to the latter.

Of interest are copending applications Ser. No. 158,171 filed Feb. 19, 1988 entitled "DECODER FOR DIGITAL SIGNAL CODES" in the name of R. Hingorani and N. J. Fedele, Ser. No. 63,044 filed June 17, 1987 entitled "Parameterized Variable-length Coding" in the name of B. Astle and S. J. Golin and Ser. No. 127,335 filed Dec. 1, 1987 entitled "DPCM System with Adaptive Quantizer Having Unchanging Bin Number Ensemble" in the name of A. A. Acampora and U.S. Pat. No. 4,706,260 all assigned to the assignee of the present invention.

Where the bandwidth available in the transmission channel is limited, it is desirable to compress to as large extent as possible video data to be transmitted. Numerous schemes have evolved for increasing the efficiency of such compression during transmission while not introducing too intrusive reduction in image quality. For example, one kind of system known as differential pulse code modulation (DPCM) employs a predictive scheme for predicting pixel values of a video picture. The predicted information is compared to the actual information based on spatial or temporal relationships, and an error signal is generated representing the differences between the two information signals. The error signals are further reduced in information content by more coarsely quantizing them—that is, by classifying them into range bins. The coarser quantization is done so as to tend to make the range bin in which the lowest output value digital signals fall the one most frequently selected in the classification procedure and the range bins of successively higher output value digital signal ones less frequently selected than the ranges of lower values. The more coarsely quantized information is then encoded using codewords of variable bit length, which are chosen so their length is inversely related to the frequency that the bins they describe tend to be selected during the classification into range bins. This procedure is known as statistical coding.

Huffman has described procedures for describing variable length codes optimally. Further improvements in coding efficiency can be obtained by treating certain runs of successive bin values that are all alike differently from other bin values. Runs of certain length and value that are likely to occur can be classified as special cases and included in the statistical coding procedure, to be accorded short bit length codewords reflective of their tendency to frequently occur. This implies that signals having large run lengths may be converted to relatively short codewords which drastically increase the efficiency of the transmission system.

In information signals wherein a relatively large proportion of the information being transmitted is redundant and exhibits relatively little error from one block of information to a second block, the error signals tend to exhibit relatively long zero run lengths. By way of example, in a video signal transmitting picture information, a given 2.2 MHz image scan line has 240 active pixels. The resultant error signal in a predictive system thus can have zero run lengths of up to 240 zeros in a given scan line representing a still picture for that scan line and n non-zero levels outputted by the quantizer representing different degrees of motion. The result is a potential of over 240 different codewords being required to accurately represent the information signal. The problem is how to effectively deal with such numerous codes.

One solution to this problem is presented in U.S. Pat. No. 4,420,771 in which multiple tables are provided by run length encoding the information signal employing multiple dictionaries. The multiple tables, however, use identical codewords representing different information signals. The use of the same codewords to represent different information signals requires additional overhead to indicate to the receiver which table is employed. The addition of even one bit of additional information as overhead in the transmission system can have significant effects in reducing the efficiency of transmission.

For example, if the most frequently occurring information sample (pixel) is encoded with a 2-bit codeword, the addition of a single bit for that most frequently occurring codeword decreases the transmission efficiency of that codeword by 50%, and defeats the purpose of making the most frequently occurring codewords as short as possible. Other schemes employ different versions of variable length and run length encoding in an attempt to increase the efficiency of data transmission. However, certain of these suffer similar drawbacks in also requiring additional overhead between the transmitter and receiver, detracting from the system efficiency or generating codewords that may be excessively long. Hardware employed in the latter kinds of systems tend to increase in cost as the number of bits in a codeword increase, thus making the hardware at the transmitter and receiver more complex and more costly.

One approach to increasing system efficiency is to adaptively quantize the information prior to the coding process. However, the coarse quantizing process has a tendency, by definition, to reduce the information quality as compared to the original information signal. While the quantizer does increase efficiency, it tends to permanently eliminate information bits from the data signal which is generally to be avoided, if possible. A need is seen, therefore, for a solution to the problem of increasing transmission efficiency, i.e., provide increased compression, without detracting from the information signal quality and without employing excessively long codewords. To this extent, the present invention is directed to a more efficient coder which can provide relatively high compression using codewords of minimum length as compared to the total number of different codewords employed.

According to the present invention, a plurality of different codewords of different code lengths are grouped into first and second groups wherein each codeword represents a different signal condition in an information signal. These signal conditions may, for example, be descriptive of (a) non-zero values of the information signal after coarse quantization, and (b) of more frequently encountered run lengths of zero values

of the information signal after coarse quantization. The first group of the codewords are organized in a first given order in which, at least generally, the shortest codeword length manifests that signal condition having the greatest probability of occurrence and the greatest codeword length manifests that signal condition having the lowest probability of occurrence. The first group of codewords, for example, may include a key codeword that signals a change in the coding procedure from statistical coding using the first group of codewords to the use of a different coding scheme using a codeword drawn from the second group of codewords. Each codeword in the second group, in this example, may include the key codeword as a prefix codeword segment followed by a suffix codeword segment. The second group of different codewords individually have respective low probabilities of occurrence, and it is the combined probability of their occurrences that determines the position of the key codeword in the first given order. Members of the second group of codewords on an average have a bit length which is significantly shorter than would otherwise occur for codewords assigned codeword lengths according to simple statistical coding. The second group of codewords may be of uniform bit length and by way of example describe less commonly encountered run length of non-zero values of the information signal after coarse quantization.

In the drawing:

FIG. 1 is a block diagram of a transmission system employing an encoder according to one embodiment of the present invention;

FIG. 2 is a block diagram of the encoder employed in the embodiment of FIG. 1;

FIG. 3 is a block diagram of the decoder employed in the embodiment of FIG. 1;

FIG. 4 is a graph useful in explaining some of the principles of the present invention; and

FIG. 5 is a block diagram useful in explaining a portion of the logic of FIG. 2.

In FIG. 1, system 10 comprises a transmitter 12, a channel 14 over which the transmitter 12 transmits and a receiver 16. By way of example, the transmitter 12 and receiver 16 are described as a predictive picture encoder employing differential pulse code modulation (DPCM). However, the signals encoded by the coder of the present invention may be derived from sources other than error signals in a predictive system.

In FIG. 1, a source 18 of information signals, for example video, applies the information to an analog-to-digital converter (ADC) 20 which finely quantizes the information signal in a known way to produce a multilevel digital signal. The output of the analog-to-digital converter (ADC) is applied on conductor 22 as an 8-bit pixel signal to a differential pulse code modulator (DPCM) loop 24. The DPCM loop 24 is one that is generally available and well known. It includes, for example, subtractor S for subtracting predicted information signals produced by a predictor and delay loop PD from the finely quanitzed information signal on conductor 22 to produce an error signal. That error signal is applied to a quantizer Q which assigns different values of the input error signal to a reduced number of output values or bins representing zero and non-zero values of the error signal. By way of example, the quantizer Q may have 32 bin values and a zero value, i.e., 32 non-zero values, for a total of 33 different values. The quantizer output values are applied to conductor 26 and adder A. Adder A adds the quantizer Q output signals to the predictor and delay loop PD output and applies the added signals to the predictor and delay loop PD.

Such a DPCM loop may be, for example, as described in U.S. Pat. No. 4,706,260 and in the aforementioned copending application entitled "DPCM System with Adaptive Quantizer Having Unchanging Bin Number Ensemble" in the name of A. A. Acampora, both of which describe prior art DPCM loops in greater detail.

It should be understood that wires representing conductors herein represent either single conductors or multiple conductors for transmitting data signals in parallel as known. The input information signal on conductor 22 to DPCM loop 24 may comprise, for example, an 8 conductor cable for carrying an 8-bit signal.

The output of the DPCM loop 24 is applied to conductor 26 and is an 8-bit signal which represents any of the 33 quantized zero and non-zero values of the information signal. The output of the DPCM loop 24 on conductor 26 is applied to encoder 28 of the present invention which is described in more detail in FIG. 2.

The encoder 28 encodes the output values of loop 24 to generate variable length codewords on conductor 29. The codewords are applied to a buffer 30 sometimes referred to as a rate buffer. The buffer 30 stores the codes for transmission over channel 14 via conductor 32. As known, the buffer 30 tends to overfill and underfill in response to the variable length codewords applied as an input thereto on conductor 29 and has a fixed output rate on conductor 32.

A control 34 senses the fill level of the buffer 30 and applies a control signal on conductor 36 to the DPCM loop 24 for controlling the coarseness of the quantizer Q of the loop 24. As described in the aforementioned U.S. Pat. No. 4,706,260 the quantizer Q may increase the number of zeros produced on conductor 26 i.e., widen the coring region, to reduce the data rate applied to buffer 30 in case of overfill. The case of underfill of the buffer, the control 34 applies a signal on conductor 36 to loop 24 to adaptively change the quantizer so as to increase the data rate to the buffer 30. As is known, the output of the buffer 30 on conductor 32 is at a constant data rate and information must be maintained on conductor 32 at that constant rate regardless of the rate at which buffer 30 fills. All of this information is generally known in the art and is described in more detail, by way of example, in the aforementioned U.S. Pat. No. 4,706,260 and copending application.

The information on conductor 32 is transmitted via channel 14 to receiver 16 where the information signal is received by buffer 38. A decoder 40, described in more detail in FIG. 3, receives the output of buffer 38 on conductor 42 to decode the received information signal. The decoded signal is applied via conductor 43 to inverse DPCM loop 44. The output of loop 44 is applied via digital-to-analog converter (DAC) 46 to a display monitor 48 which displays the information represented by the decoded information signal.

As mentioned above, a coarse quantizer, such as quantizer Q in a DPCM loop such as loop 24 is often inserted in the output of the loop subtractors. The quantizer coarsely quantizes the digitized error signal on conductor 22. Necessarily the error signal is finely quantized prior to the quantizing action of ADC 20. That finely quantized signal may have a relatively large number of different levels in accordance with the information represented by the signal from source 18.

In a video image, there may be as many as 256 different luminance levels at the output of ADC 20. The

coarse quantizer Q, reduces the 256 levels of the digitized signal to a significantly smaller number; e.g. 33 as mentioned above. While in the present embodiment, a coarsely quantized signal, having representative few quantized levels, is applied to the encoder **28**, the present invention is not so limited and may be applied to any kind of digitized signal.

In processing video signals, it is characteristic of a system employing an interframe DPCM loop that the most frequently occurring quantized values represent unchanged or zero values. It is statistically known that for certain video frames, as for example, in teleconferencing systems, the majority of the frame information does not change from one frame to the next. Thus, in interframe DPCM, where the predictor delays samples from the previous frame for a frame time are used to predict corresponding samples in the current frame, the resulting error signal tends to contain relatively long zero run lengths. Statistically, it can be shown that runs of zeros of different lengths have different frequencies of occurrence. Considering run length of zeros shorter than a full line, the greater run lengths (for example, run lengths of say 239 pixels representing zero values in a given scan scan line) have relatively low frequency of occurrence. A run length of a single zero pixel value in which the adjacent pixels exhibit non-zero values has a much higher probability of occurrence. These relationships are shown in FIG. **4**, for example, where curve p represents the probability of occurrence of zero run lengths ranging from one zero to 240 zeros in a given scan line of a given video frame in a teleconferencing system. The probability of a single zero occurring between two non-zero values has the highest value, whereas the probability of 239 zeros between non-zero values has the lowest value.

The probability, frequency of occurrence, of a scan line having all zeros, that is, having a run length of 240 zeros is higher than the probability of occurrence of a run of 239 zeros. This produces a peak p' in curve p. The peak p' represents an increased probability for the occurrence of run lengths of 240 zeros. This means that scan lines which represent an unchanged picture occur more frequently than scan lines in which a small number of samples, for example, one or two pixels, have changed value while the remaining pixels remain unchanged. Thus, in a typical video signal, the frequency of occurrence of zero run lengths changes significantly from one pixel which remains unchanged between non-zero pixel values to a given 240 pixel scan line which remains unchanged in successive frames.

Normally, to transmit this information over a channel, that is, to transmit the values of the zero run lengths for every possible run length that occurs, becomes a relatively difficult task using conventional hardware systems. Conventional Huffman coding, for example, may result in codewords which have 20 or more bits. Such long codewords tend to cause complexity in the hardware for coding at the transmitter and for decoding at the receiver and cause larger components to be utilized making the system more costly and inefficient. For example, if a system operates most of the time with codewords in the 2 to 7-bit range but nevertheless occasionally operates with 15 or 20-bit codewords, then the hardware for the transmitter and for the receiver must necessarily include a capability to process the 20-bit codeword or the maximum length codeword in the system. This problem is compounded by the fact that predictive systems, by nature, tend to produce a large number of error values which have values at or near zero.

In FIG. **2**, ROM **200** contains an encoder look up table which is established in accordance with the principles of the present invention. The table stored in ROM **200** is a single table for transmission purposes but is presented below for purposes of description as Tables I, II, III and IV. A single table implies that any portion of the table can be transmitted to the receiver without additional overhead to decipher the table. That is, every member of the table is part of a given encoding scheme in which the rule of encoding, and thus decoding, is transparent to the receiver without using additional overhead. The present encoding arrangement employs a Huffman-like coding rule, for example, but differs from a conventional Huffman code in that significantly shorter codewords are used for a relatively larger number of different codewords of relatively low probability of occurrence.

Table I is a listing of the non-zero values produced by the DPCM loop **24**, FIG. **1**. There are 32 non-zero values representing 32 output bin values of the quantizer Q of the DPCM loop **24**. The non-zero value of −7 represents non-zero values of the quantized error signal of the DPCM loop which lie, for example, in a range of input values of −6 to −10, with a zero value occurring for input signal values in the range of ±5. The code for the non-zero −7 value is labeled code 1. The next most frequenctly occurring non-zero value has a value of +7 and its code is labeled code 1'. Code 1 has a code length of 2-bits whereas code 1' has a code length of 3-bits. Examination of Table I shows that non-zero values which tend to occur less frequently also tend to increase in magnitude and are assigned greater code lengths. The exception is codeword 16' which has a higher probability of occurrence than longer codewords 11–16 and 13'–15'. Therefore the code length for code 16' is shorter than these last mentioned codes.

TABLE I

NON-ZERO VALUES				
CODE NUMBER	CODE LENGTH	CODE MSB	CODE LSB	VALUE
1'	3	11 1		7
2'	4	10 00		12
3'	5	10 100		17
4'	6	11 0101		22
5'	6	01 0101		27
6'	7	11 0010	1	32
7'	7	11 0011	0	37
8'	7	01 1101	1	45
9'	7	01 0011	1	55
10'	8	01 1110	00	64
11'	8	01 0000	00	74
12'	8	01 1111	00	87
13'	9	01 1110	010	108
14'	9	01 0000	111	130
15'	9	01 1111	101	150
16'	8	01 0000	01	170
1	2	00		−7
2	4	10 01		−12
3	5	10 101		−17
4	6	11 0100		−22
5	6	01 0100		−27
6	7	11 0010	0	−32
7	7	11 0000	1	−37
8	7	01 1100	1	−45
9	7	01 0010	0	−55
10	8	01 1100	01	−64
11	9	01 1111	100	−74
12	9	01 1000	000	−87
13	10	01 1100	0001	−108
14	10	01 1100	0000	−130
15	10	01 1100	0011	−150

TABLE I-continued

CODE NUMBER	NON-ZERO VALUES CODE LENGTH	CODE MSB	CODE LSB	VALUE
16	10	01 1100	0010	−170

TABLE II

LENGTH OF ZEROS	ZERO RUN LENGTH VALUES CODE LENGTH	CODE MSB	CODE LSB
1	4	10 11	
2	5	11 011	
3	5	01 101	
4	6	11 0001	
5	6	01 1001	
6	6	01 0001	
7	7	11 0000	0
8	9	01 0010	110
9	7	01 0011	0
10	8	11 0011	11
11	8	01 1111	01
12	8	01 1101	01
13	8	01 1000	01
14	8	01 0010	10
15	8	01 0000	10
16	9	01 1111	111
17	9	01 1110	111
18	9	01 1101	001
19	9	01 1000	001
20	9	01 0010	111
21	9	01 0000	110
22	10	11 0011	1011
23	10	01 1111	1101
24	10	01 1110	1101
25	10	01 1110	1000
26	10	01 1110	1001
27	10	11 0011	1000
28	10	11 0011	1010
29	10	01 1111	1100
30	10	01 1110	0110
31	10	11 0011	1001
32	10	01 1110	1011
33	10	01 1101	0001
34	10	01 1110	1100
35	10	01 1101	0000

TABLE III

CODE LENGTH	RESERVED AND SPECIAL CODES CODE MSB	CODE LSB	ASSIGNED SIGNAL
10	01 1110	1010	MARKER 1
10	01 1110	0111	MARKER 2
5	01 011		KEYWORD
7	01 1000	1	240 CODE

TABLE VI

208	210	214	218	220	222
0	0		1		
0	1	1			
1	0			1	
1	1				1

TABLE IV

Length of Zeros	ZERO-RUN LENGTH VALUES Keyword Codes Code Length	CODE MSB Keyword	LSB
36	13	01 011000000	00
37	13	01 011100000	00
38	13	01 011010000	00

TABLE IV-continued

Length of Zeros	ZERO-RUN LENGTH VALUES Keyword Codes Code Length	CODE MSB Keyword	LSB
.	.	.	.
.	.	.	.
.	.	.	.
236	13	01 011000100	11
237	13	01 011100100	11
238	13	01 011010100	11
239	13	01 011110100	11

TABLE V

NON-ZERO AND ZERO RUN LENGTHS IN ORDER OF PROBABILITY OF OCCURRENCE

Probability Order of Occurrence	Non-zero Value (Quantizer Output)	Run Length Value	Code Length	Code
1	−7		2	00
2	7		3	111
3	−12		4	1001
4		1	4	1011
5	12		4	1000
6	−17		5	10101
7	17		5	10100
8		2	5	11011
9		3	5	01101
10	keyword		5	$01011x_1 \ldots x_n$
11	−22		6	110100
12	−27		6	010100
13	22		6	110101
14	27		6	010101
15		4	6	110001
16		5	6	011001
17		6	6	010001
18	−32		7	1100100
19	32		7	1100101
20	−37		7	1100001
21	37		7	1100110
22	−45		7	0111001
23	45		7	0111011
24	−55		7	0100100
25	55		7	0100111
26		7	7	1100000
27		9	7	0100110
28		240	7	0110001
29	−64		8	01110001
30	64		8	01111000
31	74		8	01000000
32	87		8	01111100
33		10	8	11001111
34		11	8	01111101
35		12	8	01110101
36		13	8	01100001
37		14	8	01001010
38		15	8	01000010
39	170		8	01000001
40	−74		9	011111100
41	−87		9	011000000
42	180		9	011110010
43	130		9	010000111
44	150		9	011111101
45		8	9	010010110
46		16	9	011111111
47		17	9	011110111
48		18	9	011101001
49		19	9	011000001
50		20	9	010010111
51		21	9	010000110
52	Marker 1		10	0111101010
53	Marker 2		10	0111100111
54	−108		10	0111000001
55	−130		10	0111000000
56	−150		10	0111000011
57	−170		10	0111000010
58		22	10	1100111011
59		23	10	0111111101

TABLE V-continued

NON-ZERO AND ZERO RUN LENGTHS IN ORDER OF PROBABILITY OF OCCURRENCE

Probability Order of Occurrence	Non-zero Value (Quantizer Output)	Run Length Value	Code Length	Code
60		24	10	0111101101
61		25	10	0111101000
62		26	10	0111101001
63		27	10	1100111000
64		28	10	1100111010
65		29	10	0111111100
66		30	10	0111100110
67		31	10	1100111001
68		32	10	0111101011
69		33	10	0111010001
70		34	10	0111101100
71		35	10	0111010000

In FIG. 4, curve p represents the probability of occurrence of zero run lengths. Zero run lengths having values in the range from 1–35, curve p portion p_4, for example, have relatively higher probability of occurrence as compared to run lengths of 36–239, curve p portion p_1. The run lengths of 1–35 have an area under the curve p, portion p_4 which is about 85% of the area under the entire curve p. The probability of occurrence of zero run lengths between 36 and 239 zeros decreases gradually as shown by curve p portion p_1. The combined probability of occurrence p_p of all run lengths corresponds to the area under curve portion p_1 is a fraction of the area under curve p. Probability p_p represents a relatively small portion of the area under the entire probability curve p excluding zero run length 240. The area under curve portion p_1 represents about 15% of the area under all of curve p, by way of example.

The zero run lengths in portion p_4 are illustrated in Table II and the run lengths of portion p_1 are illustrated in Table IV. Zero run lengths having a probability of occurrence lower than the combined probability p_p occur in curve portion p_3. The probability of occurrence p_p of any member of the group in portion p_1 of the curve p is higher than the probability of occurrence of any one of the zero run lengths in portion p_3 of the curve p. The probability of occurrence of zero run length values in portion p_4 are listed in Table V based upon order of probability of occurrence for non-zero values and for zero run lengths having values of 1–35, in this example. The zero run length values and non-zero values are combined in a single table organized according to probability of occurrence. The ordinal position (tenth) of the group probability p_p of run lengths in portion p_1 is listed in Table V based on ordinal position of the value p_p relative to the probability of occurrences of all other zero run lengths, portion p_4. The value p_2 represents, however, all run lengths in portion p_1.

A Huffman codeword, which is a statistical coding scheme, is assigned to each member of the group of zero run length values and non-zero values having a code length corresponding to their oridinal position in Table V based on the probability of occurrence of each value. In Table V, zero run lengths of portions p_1 and p_4 are listed in order of probability of occurrence. The probability of occurrence p_p of any member of the run length group under portion p_1 of the curve p is approximately tenth in ordinal position, for this example.

The group probability p_p is indicated in Table V by the word "keyword". The term keyword as used herein implies that a special code is employed for each zero run length value for all members of the group in portion p_1 of the curve p. In Huffman encoding, the beginning portion of any code cannot represent a complete code of any other codeword. Since the group of zero run lengths under portion p_1 has a group probability of occurrence which is about tenth in the list of probability of occurrence for all non-zero and zero run lengths, then a Huffman code comprising an n-bit codeword segment, in this example 5-bits, is assigned as the initial or prefix portion of all members of the group under segment curve portion p_1, which n-bit codeword corresponds to the tenth position of Table V.

In Table V, for example, the n-bit word for the keyword group of zero run lengths is assigned a prefix code 01011. This n-bit code is termed keyword and is based on the Huffman encoding rule. Since the members of the group under portion p_1 of the curve p have a relatively high probability of occurrence based on the combined group probability, then a relatively shorter codeword is assigned that group than otherwise would be assigned according to Huffman encoding of the individual run lengths based on individual probabilities. This ensures that the codeword prefix portion (the Keyword) for each member of the group meets the Huffman encoding rule. Since the first five digits of the codeword of each member of this relatively large group of codewords is the same Huffman codeword, then no other complete five digit code of any of the other codewords is included in the initial portion of the codeword comprising the keyword.

However, the problem remains as to assigning a different codeword for each member of the relatively large group of run lengths in the portion p_1 of curve p. The way this is done is to assign an additional code to be used as a suffix after the n-bit keyword. Since 35 run lengths in this example are represented by specific individual codewords, there remains 204 codewords to be assigned each of the zero run lengths in portion p_1. It is known that assigning a different binary number to each member of a 204 member group will result in an 8-bit code. This 8-bit code is created by ordinally counting the number of zero run length members in the portion p' and assigning each member a binary coded number corresponding to the zero count of that member. Thus, a separate, different, unique 8-bit code can be assigned each member of the zero run length group under portion p_1 of the probability curve p. That 8-bit code is added as a suffix to the n-bit keyword described above producing an m-bit codeword, e.g., a 13-bit codeword. A different 13-bit codeword is assigned each of the 204 members and is represented by the codeword $01011x_1 \ldots x_n$ in Table V. Any randomly occurring member of the keyword code group has a probability of occurrence which is tenth in ordinal position in Table V as compared to the codewords of all of the non-zero values and remaining run length values of portion p_4.

Additional reserved and special codes are illustrated in Table III. A codeword having a length 10 is assigned a marker 1 signal to indicate the beginning of a horizontal line in a video signal. A second marker signal marker 2 is assigned a code having a code length of 10-bits for indicating the initialization of a frame. A third code is assigned a code length of 7-bits which represents the 240 zero run length of FIG. 4 at peak p'. Because the probability of the 240 zero run length is relatively high in the order of occurrence of probabilities, it is assigned

a unique code in the Huffman encoding rule based on ordinal position of probabilities in Table V.

Returning to FIG. 2, a horizontal drive signal is applied through a buffer 221 to switch 230 to select a marker 1 codeword which is applied to ROM 200 through switch 230. The marker may be generated for each line or a set of lines. A vertical drive signal is applied via buffer 223 to switch 230 for selecting marker 2. Marker 2 indicates the start of a frame. When the marker 2 address (codeword) of Table III is selected, that address is applied through switch 230 to the ROM 200. The marker address indicates to the receiver synchronization information at the beginning of a frame and at the beginning of certain lines to resynchronize the receiver with the transmittor should data be occasionally lost during transmission as might occur during certain atmospheric conditions or the like.

In FIG. 2, ROM 200 thus includes one dictionary table comprising the information of Tables I, II and III. In FIG. 5, one example of ROM 200 is shown in which the table of non-zero values are assigned a first section 501 of ROM 200 and the zero run lengths and special codes are assigned a second section 502 of ROM 200. The non-zero table in section 501 is addressed by a 10-bit code comprising a 9-bit non-zero code representing the 9-bit non-zero value of the information signal with a one bit address code, for example, binary zero for addressing the ROM section 501. The zero run length section 502 is addressed by a 9-bit code representing the 9-bit zero run length count with a one bit address binary one added. The 9-bit zero run length address for section 502 comprises the keyword code as a prefix to the actual binary count of zeros in a given run length. The way these addresses are generated is shown in FIG. 2.

In FIG. 2, a 9-bit information signal representing a non-zero or zero value of a given pixel is applied to register 202. The output of register 202 appears on conductor 204 and is applied to register 206 and to an AND gate 208. The output of register 206 is applied to a second AND gate 210. The outputs of gates 208 and 210 are binary 0 and 1 values in accordance with the pixel information signal value applied to registers 202 and 206. If a given pixel on line 26 applied to register 202 has a zero value, then the output of gate 208 will be a zero. If the pixel value on conductor 26 applied to register 202 is non-zero value, then the output of gate 208 will be a logical 1. That is, gate 208 tests the input signal to register 202 as being a zero or non-zero value and the gate 208 output signal has a logical value representing either the zero or non-zero level. When the pixel information signal in register 202 is applied to gate 208, it is also applied to register 206 and a new pixel information signal is applied on conductor 26 to register 202, at the next clock edge. The information signal in register 206 is applied to gate 210, which like gate 208, has an output logical level of zero or one, depending upon whether the information signal in register 206 represents a respective pixel value of zero or non-zero. Thus, the outputs of gates 208 and 210 represent the zero and non-zero values of successive pixels applied from conductor 26 to register 202. The output of gate 208 is applied through inverter 212 to AND gate 214, through inverter 216 to AND gate 218 and as inputs to AND gate 220 and AND gate 222. The output of AND gate 210 is applied as an input to AND gate 214, as an input to AND gate 218 through inverter 224, as an input to AND gate 220 through inverter 226 and as in input to AND gate 222.

The output of AND gate 214 is applied to the reset input of counter 228 and as an input to switch 230 through OR gate 232. The output of gate 214 is also applied as clock inputs to register 234 and to first in first out (FIFO) registers 236 and 238 and counter 240 through OR gate 242. The output of AND gate 218 is applied to the count input of counter 228 and as an input to AND gate 233 via conductor 231. AND gate 233 has a second input from the horizontal drive (HD) sync signal. The output of gate 233 is applied to switch 230 via OR gate 235. The output of AND gate 220 is applied as an input to switch 230 via OR gate 232 and as a clock input via OR gate 242 to registers 234, 236 and 238 and counter 240. The output of AND gate 222 is applied as an input to switch 230 through OR gate 232 and as a clock input via OR gate 242 to registers 234, 236 and 238 and counter 240. Switch 230 is representative of more complex eletronic devices such as mixers which perform the actual switching which may use tri-state elements to perform the actual switching. Such more complex switches are well known.

Gates 208, 210, 214, 218, 220, 222 and inverters 212, 216, 224 and 226 provide a logical control function based on the logical values of the output signals on gates 208 and 210 in accordance with the truth table of Table VI. In Table VI the AND gates listed on top of the table have the logical values listed therebeneath. Thus, when gates 208 and 210 outputs are zero, gate 218 output is a logical 1. Similarly when gate 208 output is zero and gate 210 is a logical 1, gate 214 output is a logical 1, and so forth.

From Table VI, observe that two successive pixels each having a zero value produces ouptuts on gates 208 and 210 of zero. These outputs produce a logical 1 output on gate 218 which cause counter 228 to count zeros. Thus, as long as zeros are produced by incoming pixels at register 202, the gate 208 output will remain zero and the counter 228 will continue to count such zeros.

Should a pixel have a non-zero value, and that non-zero value is received in register 206, gate 210 will have a logical 1 output. Assuming that the next succeeding pixel received by register 202 has a zero value, the output of gate 208 is a zero causing gate 214 to output a logical 1. This logical 1 is applied to counter 228 and sets the counter to 1 to count the zeros. The initial count of counter 228 is 1. If the next succeeding pixel has a non-zero value, then the outputs of gates 208 and 210 will appear as shown in Table VI wherein gate 220 will have a logical 1 output. A logical 1 in the output of gate 220 is applied to the switch 230 which outputs the count in counter 228 as a 10-bit code to ROM 200. That 10-bit code is as described above in connection with FIG. 5. Recall that one bit of the 10 bit code addresses the zero section 502 of ROM 200 and that the remaining 9 bits of the address represents the 9-bit count value of the zero run information signal. This 10-bit address is applied to ROM 200. That address selects the corresponding codeword in ROM section 502, FIG. 5, as set forth in the zero run length table, Table II, or a keyword run length as set forth in Table IV. Thus, the corresponding codeword of Tables II and IV are selected in accordance with the address applied to ROM 200 through switch 230.

Assuming the next successive pixel information signal also is a non-zero value, the outputs of gates 208 and 210, Table VI are both logical 1's. This causes gate 222 to output a logical 1. This signal is applied through gate

232 to switch 230 to select the output of register 206 as an address to be applied to ROM 200. At this time, the tenth bit of the address selects section 501 of ROM 200 which is the non-zero table, Table I. At this time, recall that the pixel information in register 206 was formerly in register 202 when switch 230 was activated by the output of gate 220. When a signal from gate 222 activates switch 230, the information signal in register 206 now represents a new 10-bit code which is applied as an address to ROM 200 through switch 230. Register 206 output is selected by switch 230 when the output of gate 232 is high. That address applied from register 206 corresponds to the codeword in the table of ROM 200 represented by the non-zero pixel information signal value in register 206. Should the next pixel signal information have a zero value, then the information signals in registers 202 and 206 will appear as shown in Table VI wherein the output of gate 214 is a logical 1. This sets counter 228 in position to count zeros. However, gate 232 output is also high, causing the binary signal in register 206 to be applied as the address to ROM 200.

Assuming the following pixels are all zero values, counter 228 counts such zeros. In the case of run lengths of 240 zeros or more, the switch 230 needs to be switched to indicate the end of a count since the counter 228 automatically resets at the end of a 240 zero count. However, if the following line continues with zeros, the output of gate 218 will remain high and the switch 230 needs to switch that count information into the ROM 200 before the counter resets. To do this, the count signal is applied on conductor 231 through AND gate 233 to OR gate 235 to switch 230. A horizontal drive signal is applied as a second input to gate 233. The horizontal drive signal occurs at the beginning of each scan line or the beginning of each 240 zero run length if a scan line comprises all zeros. When the horizontal drive signal is applied to gate 233, gate 218 is outputting a high indicating zeros are being counted, a signal is generated which causes switch 230 to switch the count out of counter 228 into the ROM 200. The horizontal drive signal at gate 233 is applied once each line and thereafter the counter will start the recount when its 240 count is loaded in ROM 200.

The counter 228 at the end of 240 counts, automatically resets to counting zeros again for the next scan line and continues to count zeros until a non-zero value is generated. Such a non-zero value when generated will produce logical 1 on the output of gate 220. This level causes the switch 230 to output the count in counter 228 to the ROM 200 and address the table in the ROM 200 to select the code corresponding to that zero run length count.

The output of ROM 200 through register 234 is applied on conductors 246 and 248. Conductor 246 can receive a maximum of M bits in parallel to carry at least the 13 bit codeword of the keyword zero run length codes. Conductor 248, which represents a K conductor cable for carrying a K bit code, carries the code length information indicating the code length of the code appearing on conductor 246. Thus, ROM 200 stores two sets of information in its table, the codewords and the length of those codewords. The information representing a codeword and its length is applied to register 234 upon receipt of a clock signal through gate 242, recalling that the clock signal is applied in response to a logical 1 at any of gates 214, 220 and 222. A codeword is latched into register 234 whenever a non-zero value occurs at the outputs of either of gates 208 and 210.

A clock signal applied to register 234 is also applied to FIFO registers 236, 238 and counter 240. The output of FIFO register 236 is applied to parallel-to-serial converter 250. The clock signal applied to FIFO registers 236 and 238 clock the code words therefrom into the parallel-to-serial converter 250 and counter 240, respectively. FIFO 238 receives codeword length whereas FIFO 236 receives the codeword corresponding to that length. The output of FIFO 238 is applied to counter 240 to create a parallel-to-serial clock signal on conductor 252 to indicate to the parallel-to-serial converter 250 the code length of the codeword outputted on conductor 29. That codeword on conductor 29 is applied to the buffer 30, FIG. 1. The output of counter 240 on conductor 252 represents the code length information in register 234. The counter 240 output clocks the parallel-to-serial converter 250 so that the proper code length of the given codeword is outputted to conductor 29.

While the keyword codes of the special case zero run lengths may be selected as a group at a higher frequency than normally selected if assigned a Huffman code in accordance with their individual frequency of occurrence along the probability curve p FIG. 4, this is acceptable. If the run lengths in portion p_1 were normally assigned Huffman codewords of lengths based on individual probability, then some of these run lengths would have Huffman codewords shorter than the fixed lengths assigned to the entire group, the remaining Huffman codewords would have lengths greater than the fixed length of the group. In the worst case conditions, if the run lengths having frequency of occurrence of the keyword codes for those shorter length Huffman codewords of the group occur more frequently, then it is estimated that there is a 2–4% decrease in transmission efficiency as compared to assigning such keywords code lengths in normal Huffman code order.

In FIG. 1, decoder 40 decodes the encoded signal received from buffer 38 via conductor 42. In FIG. 3, the approach of the decoder 40 is to employ a ROM 324 in which codewords and non-codewords are stored in successively addressed memory locations. Each memory location includes a portion of the address of a successive memory location, the remaining portion comprising one bit from the received encoded signal. Successive bits of the received signal are combined with corresponding successive address portions in memory to form a search address to a new memory location. A different codeword is stored in memory at different given locations. Each location corresponds to a given sequence of binary values of the received encoded signal which in combination with that address portion relating to a given member of successive addresses in memory form a search address for a codeword. When a complete codeword is received, the ROM 324 ouptuts that codeword stored at that corresponding address and the address to the ROM is reset to start a new codeword search with the next received encoded received bit.

In particular, in FIG. 3, decoder 40 includes a parallel-to-serial converter 300 which can receive a 20-bit wide signal from buffer 38 on conductor 42. The parallel-to-serial converter 300 converts the parallel bits on conductor 42 to a serial stream on conductor 304 and applies the serial stream to a serial in/serial out register 306. Register 306 has multiple taps represented by a single conductor 308. The signal on conductor 308 is applied to AND gates 310 and 312 which detect the presence of marker 1 and marker 2. The marker 1 and marker 2 signals are applied to OR gate 314. The output

of serial in/serial out register **306** is applied to register **315** which is a 1-bit register sometimes referred to as a flip-flop. Register **315** receives a clock signal from a clock source on conductor **316** and a clear signal on conductor **318**. The clear signal on conductor **318**, received from OR gate **314**, is also applied to register **320**. The output of register **315** is applied via conductor **322** to the decoder ROM **324**. The output of register **320** is applied on conductor **326** to decoder ROM **324**. The outputs of registers **315** and **320** together form an address to ROM **324**.

Register **320** is an n bit register which in this example may be 9 bits which combines with the 1 bit from register **315** to form a 10-bit address to the ROM **324**. Each address in the decoder ROM **324** contains three pieces of information. One piece of information represents the data or the actual code if a code is found as represented by the information from registers **315** and **320**. A second piece of information coupled with the code data is a next address code which contains the bits forming a part of the address for the next segment of the ROM to be addressed. For example, if the first memory location in ROM **324** has an address of 000, the next memory location in ROM **324** may have an address of 001 and the following memory location have an address 010, and so forth. These next addresses are binary incremented for each of the memory locations of the ROM. A third piece of information located at each ROM **324** memory location contains a binary value representing the presence or absence or a code at that address. If the data represented by the first piece of information described above represents an actual codeword, then the binary level of the third piece of information in each ROM location will be a binary value representing the existence of a codeword, for example, a binary 1. If the data portion of the ROM location does not contain an actual code, then the third piece of information assigned to that ROM location will be a binary 0 value. The ROM **324** at each memory location contains a sufficient number of bits to represent each of three pieces of information described.

Output bus conductor **334** of ROM **324** receives the next address information from the ROM memory. The conductor **330** receives a binary 1 code detection information bit (and binary 0 no code detected bit). Output bus conductor **332** receives the data portion, i.e., the codeword, in the ROM memory at a given address. The conductor **330** receives a single bit code and conductor **332** receives an n-bit preferably 10 representing the code information. The next address code applied to conductor **334** contains the address of the memory locations sequentially following the initial memory location address, which may be, for example, all zeros. The address to the ROM on conductor **334** is completed by the single bit outputted by register **315** on conductor **322**. That is, the address in each memory location of ROM **324** is completed by a bit appearing on conductor **322**. That one bit is formed by the sequentially occurring bits of a given received codeword processed by registers **306** and **315**.

The data portion of the ROM **324** contains one of two kinds of information. The first kind of information is a code which represents all non zero code values. The second kind of information are the codewords representing binary counts of zeros in a zero run length. Not all ROM memory addresses contain true codewords in the data portion of a given memory location. The codes stored in the data portion are the codewords for the non zero values of Table I, the zero run length codewords of Table II and the codewords for the marker 1, marker 2 and 240 codes of Table III.

In operation of the decoder described so far, an encoded signal is converted to a serial stream of bits by converter **300** and is applied to serial in/serial out register **306** which applies the bits one bit at a time to 1 bit register **315**. A clock signal on conductor **316** clocks the contents of register **315** via conductor **322** to ROM **324** in conjunction with clocking the contents of register **320** to form the n-bit ROM address. A signal on conductor **330** is the code detected signal which represents whether or not a code has been detected. When any of the marker 1, marker 2 or code detected signals is high, a clear signal on conductor **318** is applied to register **320** which provides a zero address to ROM **324** to address the first memory location. The marker 1 and marker 2 signals are high when the code in register **306** represents one of the marker codes. Gates **310** and **312** test the outputs of register **306** for such marker codes.

If the register **315** has a zero output on conductor **322**, then the initial zero address of ROM **324** is addressed. Since the register **320** has been cleared and the register **315** has supplied only 1 bit from a codeword to the ROM **324** and since the minimum code length of Tables I, II and III is 2 for code number 1, i.e., a negative non-zero value (Table I), no codeword will have been detected by this address and ROM **324** will output a zero on the code detected conductor **330** and will output on bus conductor **334** the address of the next sequentially stored memory location in ROM **324**. This next address will be clocked into register **320**. In conjunction with the output of register **315**, that address forms a complete address to ROM **324** at the next clock on conductor **316**.

If the address comprising the bits on conductors **326** and **322** do not represent a codeword, then the next additional memory location in ROM **324** will output a lack of a code detection signal on conductor **330**, that is a binary zero value, and also a next address on bus conductor **334**. Whether or not a code is detected is known a priori by the combination of a given address and the output of register **315**. Each given memory address in combination with the known code bit output of register **315** can be determined to constitute a codeword. If that combination is known to form a codeword, then that complete address will address that memory location containing that codeword. Thus, a given number of circular cycles of next address in combination with a given output level from register **315** represents a codeword. At the next clock signal on conductor **316**, the next address on conductor **334** and the next bit in the encoded signal from register **306** are clocked to address ROM **324**. If these combination of bits on conductors **326** and **322** represent a codeword, for example a zero or non-zero value, then the ROM **324** will output a code detected signal, a binary 1 value on conductor **330**, which clears register **320** and will output on bus conductor **332** the n-bit codeword representing that detected code value corresponding to that address.

That n-bit codeword on conductor **332** is applied to register **336** and assuming a code was detected, the binary 1 code detected signal on conductor **330** is applied to register **336** to latch a code on conductor **332** from register **336** to output conductor **339** or **346**, depending on whether a non-zero or zero run length value was detected. The n-bit codeword on conductor **332**

includes a bit indicating whether a non-zero value or a zero run length value has been detected in a manner similar to that discussed above in connection with ROM **200**, FIG. **5**. Assuming a non-zero value is detected then the latch signal representing the code detected binary 1 value on conductor **330** latches the code on conductor **332** into register **336** and applies that code to switch **338** via conductor **339**. The code is latched into memory **340** by the code detected signal on conductor **330** and applied to the clock input of memory **340** via OR gate **342** and conductor **344**. The code is clocked out of the memory **340** (FIG. **1**) and applied via conductor **43** to loop **44** upon receipt of a DPCM loop clock from DPCM loop **44**.

If the most significant bit of the detected code on conductor **332** is a zero, a zero run length value has been detected and if a one, a non-zero value has been detected. The data in ROM **324** represents, for zero run length codewords, the binary representation of the number of zeros in that run length. If a zero run length is detected, then register **336** will be latched by the code detected signal on conductor **330** to load the binary representation of the number of zeros in a given run length into the counter **345**. The clock signal on conductor **350** causes counter **345** to countdown and apply the countdown signal on conductor **352** to switch **338**. Switch **338** is then caused to select zeros on conductor **354** and apply those zeros to memory **340**. While the counter **345** is counting down the number of zeros in a given run length, each count of counter **340** causes a zero to be loaded into memory **340**. When the counter **345** reaches the end of the count, the end of the count (EOC) signal is applied on conductor **352** to switch off zeros from conductor **354**. The end of count (EOC) signal is also applied to AND gate **356**.

AND gate **356** has a second input comprising a clock signal and upon receipt of the end of count (EOC) signal from counter **345** applies a clock signal to OR gate **342** whose output causes memory **340** to output the zeros stored in memory **340**. The number of zeros in any of the ranges of Tables II and IV is applied to the inverse DPCM loop via conductor **43** upon receipt of a DPCM clock signal.

Whenever the next address on conductor **334** represents a lack of code being detected in ROM **324**, the code detected signal on conductor **330** is a low and no latch signal is applied to register **336** or memory **340**. In this way, register **336** is not latched and any information on conductor **332** is not applied to switch **338** or counter **345**. If the next address location in ROM **324** also does not contain a code, the next bit in the serial input signal applied to 1 bit register **315** is added to the next address from ROM **324** to provide a new address to the next ROM location.

For example, if two zeros in a row are received from register **315** that indicates a non zero value codeword has been received from Table I. Those two zeros in combination with the sequence of next addresses appearing on conductor **334** cause the ROM memory location to output value −7 represented by the codeword 00 and indicate on conductor **330** a code has been detected. When the code is detected, a 10 bit value on conductor **332** is outputted from ROM **324** representing the value of that detected codeword, that is the actual non-zero value of Table I. Register **336** contains two groups of information: run length and non-zero values. Depending on the code applied to conductor **332** by ROM **324**, a bit in register **336** represents whether or not a run length or non-zero value has been detected and that bit is supplied on conductor **346**. That bit on conductor **346** determines whether the counter **345** should receive the encoded run length information from conductor **336** or not. If not, the switch **338** applies the latched code from register **336** directly to memory **340**. The end of count (EOC) signal on conductor **352** is a binary 1 when the counter **340** counts and has a zero value when the counter is not counting. When the counter is not counting, this implies a non-zero value exists in register **336** and the signal on conductor **352** causes register **336** to output its contents via switch **338** into ROM **340**.

In the claims, the term "value" and "condition" are intended to represent different conditions or states of the signal. For example, "value" or "condition" can represent zero or non-zero values, or run length magnitudes or, for example, different zero or non-zero run lengths or other conditions manifested by a given signal.

What is claimed is:

1. A statistical encoder for encoding a digitized signal for transmission over a channel, said signal comprising a plurality of different conditions, each condition having a different frequency of occurrence in said signal, said encoder comprising:

first means responsive to said signal for generating a first set of codewords, each representing a different signal condition lying in a range of frequencies of occurrences, the codewords having lengths such that the less frequently occurring words generally are longest and the most frequently occurring words generally are shortest;

second means responsive to said signal for generating a second set of codewords, each word of said second set of words representing a signal condition whose frequency of occurrence is less than the frequency of occurrence of said less frequently occurring words, said second set comprising a number of members whose combined frequency of occurrence is statistically organized in a certain order with said range of frequencies of occurrences, each codeword of said second set including a common codeword portion of a length which is statistically based on said combined frequency of occurrence relative to said range of frequencies of occurrences; and

third means for causing said codewords of said first and second sets to be generated in accordance to the frequency of occurrence of the corresponding conditions of said signal.

2. The encoder of claim **1** wherein said digitized signal is a difference signal produced by a predictive system.

3. The encoder of claim **1** wherein said first and second means include means for generating said first and second sets of codewords from one table wherein said second set comprises codewords having a prefix code assigned according to said statistical certain order and a suffix code assigned according to a non-statistical order.

4. The encoder of claim **3** wherein said statistical order is based on the ordinal position of the combined frequency of occurrence of the second group as compared to the frequency of occurrence of the codewords of the first group.

5. The encoder of claim **4** wherein the members of the second group have fixed length codewords.

6. The encoder of claim **1** wherein said first set of codewords represent non-zero values and more likely to

occur zero run lengths of said digitized signal and said second set of codewords represent less likely to occur run lengths of zero value of said signal.

7. Apparatus for encoding a digitized signal for transmission over a channel, said signal comprising a plurality of different values, each value having a given probability of occurrence in said signal, said apparatus comprising:

memory means for grouping a plurality of different codewords of different codelengths into first and second groups, each codeword representing a different signal value, said first group of said codewords being organized in a first given order in which at least generally the shortest codeword length manifests that signal value having the greatest probability of occurrence and the greatest codeword length at least generally manifests that signal value having the lowest probability of occurrence, said second group of different codewords comprising a prefix keyword and a suffix code, each codeword being of a given codelength, said prefix keyword of said second group having a length such that the combined probability of occurrence value of all of the signal values represented by the second group is organized with said first given order generally according to said combined probability value regardless the relative codeword length of said second group including the prefix and suffix codes as compared to the codeword length of the next adjacent codes of the first group; and

first means responsive to successive values of said digitized signal applied as an input thereto for selecting from said memory means to output respective codewords descriptive of said digitized signal.

8. The apparatus of claim 7 wherein said memory means includes means for organizing the first and second groups so that said combined probability value is significantly smaller than the combined probability of occurrence of all of the signal values represented by the first group, and is higher than the probability of occurrence of each codeword of a certain portion of the first group.

9. The apparatus of claim 7 wherein said memory means includes means arranged so that said first group is organized in a given assigned statistical code order and said second group is organized in codewords of certain lengths, the initial n bit keyword length portion of each codeword of the second group comprising an assigned codeword of the given statistical code order generally according to the combined probability of occurrence of the signal values of said second group in said given statistical order.

10. The apparatus of claim 7 wherein said first means includes second means for generating an n-bit code representing the detection of a member of said first and second groups of signal values, third means responsive to the detection of a member of the first group for applying said digitized signal representing said first group member as an address to said memory means, fourth means in response to the detection of a member of the second group for determining the run length value of said detected member of the second group and using the determined run length as an address to said memory means.

11. The apparatus of claim 7 wherein said first means includes first logic means for detecting a non-zero level in said digitized signal and a second logic means for detecting a zero level in said digitized signal, and means responsive to said first and second logic means for causing the non-zero level to access the memory means and for counting the zero levels and causing the zero count to access the memory means to generate said output codeword.

12. The apparatus of claim 7 wherein said memory means includes means arranged so that said first group represents non-zero values and more likely to occur run lengths of zero values for said signal and said second group represents less likely to occur run lengths of zero values for said signal.

13. A statistical encoder for encoding a digitized signal for transmission over a channel, said signal comprising a plurality of different conditions, each condition having a different frequency of occurrence in said signal, said encoder comprising:

first means responsive to said signal for generating a first set of codewords, each representing more commonly occurring zero run length values and non-zero values; the codewords having lengths according to a statistical rule such that the at least generally less commonly occurring words are longest and the at least generally most commonly occurring words are shortest; and

second means responsive to said signal for generating a second set of codewords, each word of said second set of words representing less commonly occurring zero run length values, the codewords of the second set each comprising the same prefix keyword code having a length assigned according to the statistical rule with said first set of codewords and a suffix of such length that the prefix and suffix together have length outside said statistical rule

14. Apparatus for encoding a digitized signal for transmission over a channel, said signal comprising a plurality of different conditions, each condition having a given frequency of occurrence in said signal, said apparatus comprising:

first means for grouping, for a first given number of members, a first plurality of codewords representing a first plurality of signal conditions, each codeword representing a different condition, according to a first range of frequencies of occurrence of the condition of said signal, said first plurality comprising codewords of differing lengths, the shortest codeword occurring most frequently, the largest codeword occurring least frequently; and

second means for grouping, for a second given number of members, a second plurality of codewords representing a second plurality of signal conditions, each second plurality of codeword representing a different condition according to a second range of frequencies of occurrence of the conditions of said signal, the second range of frequency of occurrence having a combined frequency of occurrence lying in the first range, all said codewords of said first and second pluralities being different,

each codeword of the second plurality having a common codeword portion length which is statistically based on said combined frequency of occurrence relative to said first range.

15. The apparatus of claim 14 wherein said signal conditions represents run length values zero and non-zero values, said apparatus including means for generating an n-bit code signal representing non-zero values and zero run length values and means responsive to said n-bit code signal to cause said first and second means to

generate a codeword corresponding to the non-zero value and zero run length value.

16. The apparatus of claim **14** wherein each signal condition represents zero and non-zero values, said apparatus further including address means for accessing said first and second means with an address code comprising the digital values of said signal.

17. The apparatus of claim **14** including switch means for applying an address signal to said first and second means to output a codeword corresponding to the condition of said signal and n-bit code means responsive to said digitized signal for counting run lengths representing one condition in said digitized signal and for determining the conditions of said signal other than the one condition for generating a switch signal for operating said switch means.

18. A method for encoding a digitized signal for transmission over a channel, said signal comprising a plurality of different conditions, each condition having a given probability of occurrence in said signal, said method comprising:

grouping a plurality of different codewords of different codelengths into first and second groups, each codeword representing a different signal value, a first group of said codewords being organized statistically in a first given order in which at least generally the shortest codeword length manifests that signal condition having the greatest probability of occurrence and at least generally the greatest codeword length manifests that signal condition having the lowest probability of occurrence;

a second group of different codewords having a codeword portion length such that the combined probability of occurrence value of all of the signal conditions represented by the second group is organized statistically with said first given order codeword length based on said combined probability value regardless the relative codeword lengths of said second group codewords as compared to the codeword length of the next adjacent codewords of the first group; and

causing a memory means in response to the conditions of said digitized signal applied as an input thereto to output that codeword corresponding to the input digitized signal condition.

19. The method of claim **18** wherein said grouping includes organizing the first and second groups so that the combined probability value of the second group is significantly smaller than the combined probability of occurrence of all of the signal values represented by the first group and is higher than the probability of occurrence of each codeword of a certain portion of the first group.

20. The method of claim **18** wherein said grouping includes grouping the first group into a plurality of codewords representing more likely to occur run lengths of zero values and non-zero values and grouping the second group into a plurality of codewords representing less likely to occur zero run length values.

21. A method for encoding a digitized signal for transmission over a channel, said signal comprising a plurality of different values, each value having a given frequency of occurrence in said signal, said method comprising:

grouping a first plurality of codewords representing a first plurality of signal values, each codeword representing a different value, according to a first range of frequencies of occurrence of the values of said signal, said first plurality comprising codewords of differing lengths according to a statistical rule, wherein the shorter codewords generally occur more frequently and the longer codewords generally occur less frequently; and

grouping a second plurality of codewords representing a second plurality of signal values, each second plurality of codewords representing a different value, according to a second range of frequencies of occurrence of the values of said signal, the second range of frequency of occurrence having a combined frequency of occurrence statistically lying in the first range, the codewords of the second group each having the same codeword portion of a length according to said statistical rule and a total length differing from said statistical rule.

22. The method of claim **21** wherein said grouping of the second plurality of codewords values includes assigning codewords of m-bits to the second plurality of codewords codes whose prefix n-bit portion falls within the statistical rule and whose remaining suffix m-n bit portion falls outside said statistical rule.

23. The method of claim **21** wherein the first plurality grouping step includes grouping the most likely to occur zero run length values and non-zero values into said first plurality of codewords and said second plurality grouping step includes grouping the less likely to occur zero run length values.

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(54) **MODIFIED STATISTICAL CODING**

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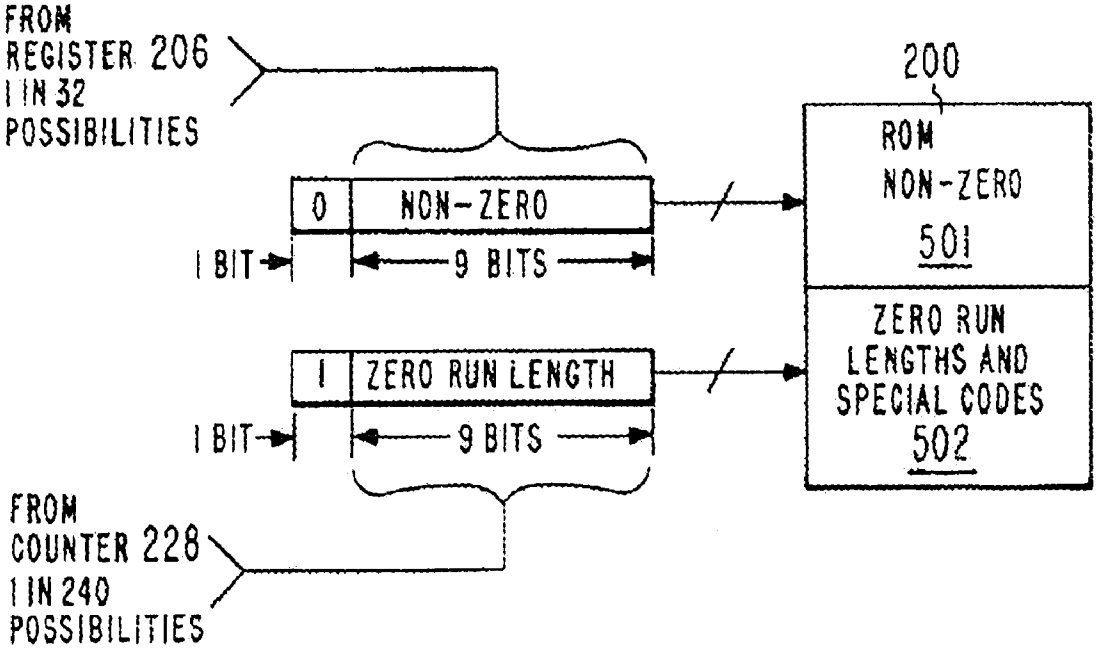
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To view the complete listing of prior art documents cited during the proceeding for Reexamination Control Number 90/011,856, please refer to the USPTO's public Patent Application Information Retrieval (PAIR) system under the Display References tab.

Primary Examiner—Salman Ahmed

(57) **ABSTRACT**

A ROM includes a single dictionary of variable length codewords wherein Huffman codewords are assigned all members of the dictionary set, including one key codeword being assigned as a prefix codeword segment for a relatively large subgroup of the set, based on the combined probability of occurrence of the subgroup as compared to the individual probabilities of occurrences of the remaining members of the dictionary set. The key codeword is an indication of a departure from straight-forward Huffman coding, to prepare an alternative coding scheme for developing a longer codeword which uses the key codeword as a prefix portion of that longer codeword. A unique suffix codeword segment follows the key codeword prefix for particularly identifying each member of the subgroup. The combined probability of occurrence of a member of the subgroup is higher than the probability of occurrence of codewords of shorter length, but the individual probabilities are significantly lower. The subgroup members can be assigned codeword lengths significantly shorter than codewords that would be assigned in straightforward Huffman coding.



EX PARTE REEXAMINATION CERTIFICATE ISSUED UNDER 35 U.S.C. 307

NO AMENDMENTS HAVE BEEN MADE TO THE PATENT

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

The patentability of claims **13**, **14**, **18**, **20**, **21** and **23** is confirmed.

Claims **1-12**, **15-17**, **19** and **22** were not reexamined.

* * * * *

CERTIFICATE OF SERVICE

I hereby certify that, on this 29th day of January, 2018, I filed the foregoing Corrected Brief for Appellant Adobe Systems Incorporated with the Clerk of the United States Court of Appeals for the Federal Circuit via the CM/ECF system, which will send notice of such filing to all registered CM/ECF users.

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CERTIFICATE OF COMPLIANCE

Pursuant to Fed. R. App. P. 32(g), the undersigned hereby certifies that this brief complies with the type-volume limitation of Circuit Rule 32(a).

1. Exclusive of the exempted portions of the brief, as provided in Fed. R. App. P. 32(f), the brief contains 13,985 words.

2. The brief has been prepared in proportionally spaced typeface using Microsoft Word 2010 in 14 point Times New Roman font. As permitted by Fed. R. App. P. 32(g), the undersigned has relied upon the word count feature of this word processing system in preparing this certificate.

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