renders the entire patent unenforceable." Id. (citing Kingsdown Med. Consultants, Ltd. v. Hollister Inc., 863 F.2d 867, 877 (Fed. Cir. 1988) (en banc)). "[T]he taint of a finding of inequitable conduct can spread from a single patent to render unenforceable other related patents and applications in the same technology family, . . . endanger[ing] a substantial portion of a company's patent portfolio." Id. at 1288-89 (internal citations omitted). Further, a finding of inequitable conduct may prompt antitrust and unfair competition claims, "prove the crime or fraud exception to the attorney-client privilege," or support a finding that a case is "exceptional," leading to a potential award of attorneys' fees under 35 U.S.C. § 285. Id. at 1289 (internal citations omitted).

"[T]he materiality required to establish inequitable conduct is but-for materiality." Id. at 1291. Regarding the withholding of prior art:

When an applicant fails to disclose prior art to the PTO, that prior art is but-for material if the PTO would not have allowed a claim had it been aware of the undisclosed prior art. Hence, in assessing the materiality of a withheld reference, the court must determine whether the PTO would have allowed the claim if it had been aware of the undisclosed reference. In making this patentability determination, the court should apply the preponderance of the evidence standard and give claims their broadest reasonable construction.

Id. at 1291-92 (citations omitted). Similarly, where a party alleges that a patentee committed inequitable conduct by

misrepresenting information to the PTO, such party must demonstrate that the specific alleged misrepresentation was butfor material. Id. at 1291. That is, the PTO would not have allowed patent claim for the but the patentee's misrepresentation. See, e.g., Apotex Inc. v. UCB, Inc., 763 F.3d 1354, 1361 (Fed. Cir. 2014) (finding patentee's misrepresentations to be "but-for material" because "the PTO would not have allowed the '556 patent but for Dr. Sherman's misconduct"); Ohio Willow Wood Co. v. Alps S., LLC, 735 F.3d 1333, 1345 (Fed. Cir. 2013) [hereinafter "Ohio Willow Wood (2013)"](citing Therasense, 649 F.3d at 1291). In determining whether the PTO would have allowed a claim but for patentee's misrepresentation, a court should apply the preponderance of the evidence standard and give claims their broadest reasonable construction. Ohio Willow Wood (2013), 735 F.3d at 1345; Therasense, 649 F.3d at 1291.

The Federal Circuit has recognized a narrow exception to the requirement to prove but-for materiality in instances where a patent applicant engages in particularly egregious misconduct arising from "'deliberately planned and carefully executed scheme[s]' to defraud the PTO and the courts." Therasense, 649 F.3d at 1292 (quoting Hazel-Atlas Glass Co. v. Hartford-Empire Co., 322 U.S. 238, 245 (1944)). "When the patentee has engaged in affirmative acts of egregious misconduct, such as the filing

of an unmistakably false affidavit, the misconduct is material." Id. (citations omitted). However, "neither mere nondisclosure of prior art references to the PTO nor failure to mention prior art references in an affidavit constitutes affirmative egregious misconduct, claims of inequitable conduct that are based on such omissions require proof of but-for materiality." Id. at 1292-Further, "[t]here is nothing wrong with advocating, in good faith, a reasonable interpretation of the teachings of the prior Apotex Inc., 763 F.3d at 1361-62 (citing Rothman v. art." Target Corp., 556 F.3d 1310, 1328-29 (Fed. Cir. 2009)). "While the law prohibits genuine misrepresentations of material fact, a prosecuting attorney is free to present argument in favor of patentability without fear of committing inequitable conduct." Rothman, 556 F.3d at 1328-29 (citing Young v. Lumenis, Inc., 492 F.3d 1336, 1348 (Fed. Cir. 2007)); accord Innogenetics, N.V. v. Abbott Labs., 512 F.3d 1363, 1379 (Fed. Cir. 2008) (noting that counsel's representation "amounted to mere attorney argument" and explaining that "an applicant is free to advocate its interpretation of its claims and the teachings of prior art" (citing Life Techs., Inc. v. Clontech Labs., Inc., 224 F.3d 1320, 1326 (Fed. Cir. 2000))). Instead, such limited exception to but-for materiality applies only when a patentee's omission or misrepresentation is knowing and deliberate. See Therasense, 649 F.3d at 1292 (citing Hazel-Atlas Glass, 322 U.S. at 245).

The Federal Circuit has emphasized in its opinions the distinction between the materiality and intent elements of an inequitable conduct counterclaim. "Intent and materiality are separate requirements." Id. at 1290 (citing Hoffman-La Roche, Inc. v. Promega Corp., 323 F.3d 1354, 1359 (Fed. Cir. 2003)). "A district court should not use a 'sliding scale,' where a weak showing of intent may be found sufficient based on a strong showing of materiality, and vice versa." Id. Importantly, "a district court may not infer intent solely from materiality." Instead, "a court must weigh the evidence of intent to Id. deceive independent of its analysis of materiality. Proving that the applicant knew of a reference, should have known of its materiality, and decided not to submit it to the PTO does not prove specific intent to deceive." Id. (citing Star Sci., 537 F.3d at 1366).

Under the intent element of inequitable conduct, the party alleging inequitable conduct must demonstrate that the patentee acted with "the specific intent to deceive the PTO." Id. at 1290 (citing Star Sci., 537 F.3d at 1366). "A finding that the misrepresentation or omission amounts to gross negligence or negligence under a 'should have known' standard does not satisfy this intent requirement." Id. (quoting Kingsdown, 863 F.2d at 876). "[T]o meet the clear and convincing evidence standard, the specific intent to deceive must be 'the single most

reasonable inference able to be drawn from the evidence." Id. (quoting Star Sci., 537 F.3d at 1366). Indeed, the evidence "'must be sufficient to require a finding of deceitful intent in the light of all the circumstances.'" Id. (quoting Kingsdown, 863 F.2d at 873). "Hence, when there are multiple reasonable inferences that may be drawn, intent to deceive cannot be found." Id. at 1290-91 (citing Scanner Techs. Corp. v. ICOS Vision Sys. Corp., 528 F.3d 1365, 1376 (Fed. Cir. 2008)). Further, in the case of a nondisclosure of a prior art reference, "the accused infringer must prove by clear and convincing evidence that the applicant knew of the reference, knew that it was material, and made a deliberate decision to Id. at 1290. "Because the party alleging withhold it." inequitable conduct bears the burden of proof, the 'patentee need not offer any good faith explanation unless the accused infringer first . . . prove[s] a threshold level of intent to deceive by clear and convincing evidence." Id. at (quoting Star Sci., 537 F.3d at 1368). "The absence of a good faith explanation for withholding a material reference does not, by itself, prove intent to deceive." Id.

C. Inventorship

"Conception is the touchstone of inventorship, the completion of the mental part of invention." <u>Burroughs Wellcome</u>

Co. v. Barr Labs., Inc., 40 F.3d 1223, 1227-28 (Fed. Cir. 1994)

(citing <u>Sewall v. Walters</u>, 21 F.3d 411, 415 (Fed. Cir. 1994)).

"'Conception is the formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice.'"

<u>Ethicon, Inc. v. U.S. Surgical Corp.</u>, 135 F.3d 1456, 1460 (Fed. Cir. 1998) (quoting <u>Hybritech</u>, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1376 (Fed. Cir. 1986))). An idea is sufficiently "definite and permanent" when "'only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation.'" <u>Id.</u> (quoting <u>Burroughs</u> Wellcome, 40 F.3d at 1228).

"A joint invention is the product of collaboration between two or more persons working together to solve the problem addressed." Univ. of Pittsburgh of Commonwealth Sys. of Higher Educ. v. Hedrick, 573 F.3d 1290, 1297 (Fed. Cir. 2009) (citing 35 U.S.C. § 116). "In a joint invention, each inventor must contribute to the joint arrival at a definite and permanent idea of the invention as it will be used in practice." Id. at 1298 (citing Price v. Symsek, 988 F.2d 1187, 1229 (Fed. Cir. 1993)). Joint inventors "need not work physically together or contemporaneously . . . nor must each inventor contribute equally or to each claim of the patent." Id. (citing 35 U.S.C. § 116).

"All that is required of a joint inventor is that he or she (1) contribute in some significant manner to the conception or reduction to practice of the invention, (2) make a contribution to the claimed invention that is not insignificant in quality, when that contribution is measured against the dimension of the full invention, and (3) do more than merely explain to the real inventors well-known concepts and/or the current state of the art."

Israel Bio-Eng'g Project v. Amgen, Inc., 475 F.3d 1256, 1263-64 (Fed. Cir. 2007) (quoting Pannu v. Iolab Corp., 155 F.3d 1344, 1351 (Fed. Cir. 1998)). However, "one does not qualify as a joint inventor by merely assisting the actual inventor after conception of the claimed invention." Ethicon, Inc., 135 F.3d at 1460 (citing Sewall, 21 F.3d at 416-17; Shatterproof Glass Corp. v. Libbey-Owens Ford Co., 758 F.2d 613, 624 (Fed. Cir. 1985)). Moreover, depending on the scope of the patent claims at issue, "one of ordinary skill in the art who simply reduced the inventor's idea to practice is not necessarily a joint inventor, even if the specification discloses that embodiment to satisfy the best mode requirement." Id. (citing Sewall, 21 F.3d at 416).

VII. FACTUAL AND LEGAL ANALYSIS OF S&N'S CLAIMS

As noted above, S&N has asserted five grounds for a claim of inequitable conduct against CertusView: (1) Nielson, Chambers, Teja, and Farr (to the extent that he is named as an inventor) failed to disclose as prior art the ESRI ArcPad software during prosecution of the '344 and '204 Patents; (2)

Nielson, Chambers, Teja, and Farr (to the extent that he is named as an inventor) failed to disclose as prior art the TelDig Utility Suite and TelDiq Mobile software during prosecution of the Patents-in-Suit; (3) Nielsen, Chambers, Teja, and Farr wrongfully named Farr as an inventor on the '204 and '341 Patents; (4) Nielsen, Chambers, Teja, and Farr (to the extent that he is named as an inventor) failed to name Block as an inventor of the '359, '344, '204, and '341 Patents; and (5) Nielsen, Chambers, and Teja made material misrepresentations to PTO concerning the Sawyer/Tucker references the prosecution of the '344 Patent. The Court will address each argument in turn.

A. Failure to Disclose Prior Art

1. ESRI ArcPad

S&N asserts that Nielsen, Chambers, Farr, and Teja committed inequitable conduct by failing to disclose as prior art the ESRI ArcPad software during prosecution of the '344 and '204 Patents. 15 S&N asserts that the ESRI ArcPad software is material prior art and Nielsen, Chambers, Farr, and Teja

¹⁵ As noted above, S&N did not identify any specific ESRI prior art reference as material, nor did it enter any ESRI prior art into evidence in this matter. However, as significant testimony regarding the ESRI ArcPad software product, as well as the specific ESRI prior art references CertusView cited during the prosecution of the '001, '341, and '359 Patents, was elicited at trial, the Court will consider S&N's arguments regarding both the ESRI ArcPad software and the specific ESRI prior art references discussing the ESRI ArcPad software.

withheld ESRI ArcPad prior art during prosecution of the '344 and '204 Patents with the specific intent to deceive the PTO. 16 In response, CertusView arques that S&N failed to identify specific ESRI ArcPad prior art that CertusView allegedly withheld from the PTO, and that S&N failed to demonstrate that the ESRI ArcPad prior art discussed at trial is but-for Instead, CertusView argues, the specific ESRI prior material. art references that CertusView learned of during prosecution of unrelated patent, and which CertusView cited an prosecution of the '341, '359, and '001 Patents, were not material because they were cumulative of other prior CertusView had already submitted to the PTO during prosecution of the '344 and '204 Patents. Finally, CertusView argues, S&N has not demonstrated that CertusView withheld ESRI ArcPad prior art with the specific intent of deceiving the PTO regarding ESRI.

The Court finds that S&N has not demonstrated, by clear and convincing evidence, that CertusView withheld material ESRI ArcPad prior art with the specific intent of deceiving the PTO

¹⁶ The Court notes that S&N appears to have abandoned its argument that CertusView intentionally withheld ESRI ArcPad prior art references during prosecution of the '344 Patent, discussing only the '204 Patent in its Post-Trial Brief.

during prosecution of the '204 and '344 Patents.¹⁷ First, S&N has not demonstrated that the ESRI ArcPad software is but-for material.¹⁸ Further, other specific ESRI prior art references that CertusView was aware of, and provided to the PTO during prosecution of the '341, '359, and '001 Patents, are not material, but are cumulative of other references that CertusView provided to the PTO during prosecution of the '204 and '344 Patents. Second, S&N has not demonstrated that CertusView withheld the ESRI ArcPad software, or any specific ESRI prior art references, during prosecution of the '204 and '344 Patents with the specific intent to deceive the PTO.

First, with respect to the materiality of the ESRI ArcPad prior art, "[b] ecause the analysis of this <u>but-for</u> materiality requirement is from the perspective of the PTO, [the Court] appl[ies] the preponderance of the evidence standard in assessing whether the withheld or misrepresented information would have blocked patentability." <u>Ohio Willow Wood</u> (2013), 735 F.3d at 1345 (citing <u>Therasense</u>, 649 F.3d at 1291-92). Specifically, S&N asserts that, had CertusView provided the ESRI ArcPad software to the PTO, the '204 Patent would have been

¹⁷ It is undisputed that CertusView cited at least four specific ESRI prior art references during prosecution of the '001, '341, and '359 Patents. See supra \P 85.

¹⁸ The parties do not appear to dispute that some version of the ESRI ArcPad software is prior art to the Patents-in-Suit.

"blocked" because ESRI ArcPad anticipated or made obvious such patents as it had the capability of marking up a photographic image-the matter at issue in dependent claim 17 of the '204 Patent ("[t]he method of claim 1, wherein the at least one input image comprises at least one photographic image."). 19 Post-Trial Br., 17, ECF No. 517. However, S&N has not proven ESRI ArcPad possessed such functionality. that S&N introduced no evidence that a version of ESRI ArcPad, capable of marking up a photographic image, was prior art to the '204 and Instead, Dr. Dymond testified that ESRI ArcPad '344 Patents. software "out of the box," that is, absent additional personal programming and customization, was unable to store a digital representation of a physical locate mark, or do "ticketing" or "digital representation" of physical locate marks.²⁰ Vol. 5A at 1010:14-1011:2, 1011:15-1012:18.²¹

The Court notes that, while S&N does not address in its Post-Trial Brief whether the ESRI ArcPad software would have blocked issuance of the '344 Patent, claim 1 of the '344 Patent describes an apparatus which can process a searchable electronic record that contains a similarly marked-up digital image. '344 Patent, Col. 17:40-18:14, PX-001.

At trial, S&N cross-examined Dr. Dymond on an image created by ESRI ArcMap software, a desktop application that might be used to mark up an image. Trial Tr. Vol. 5B at 1069:13-1070:13. However, as Dr. Dymond explained, such image was created by a separate ESRI product, and ESRI ArcPad does not possess such functionality absent additional programming and customization.

At trial, S&N's own expert, Ivan Zatkovich, did not provide an opinion regarding the materiality of any specific ESRI reference or publication, determining in his expert report only that TelDig was material in view of the ESRI software products. Trial Tr. Vol. 4B at

Further, with respect to the specific ESRI prior art references that CertusView learned of during prosecution of an unrelated patent application, CertusView did not have a duty to submit such specific prior art references during prosecution of the '204 and '344 Patents. First, the '344 Patent had already issued when Teja, and other CertusView employees, became aware of the specific ESRI prior art references discussed at trial. S&N has not demonstrated that any CertusView employee, or Teja, knew of such references until after the '344 Patent had issued. Thus, CertusView did not have a duty to disclose such specific prior art references with respect to the '344 Patent. See 37 C.F.R. § 1.56(a). Second, CertusView did not have a duty to submit the specific ESRI prior art references during prosecution of the '204 Patent because such references are cumulative of

However, 906:13-15. the Court finds such combination unpersuasive as S&N has not demonstrated that the ESRI ArcPad software, or the TelDig products (as discussed below), had the necessary functionality to record and store a digital representation See Dome Patent L.P. v. Lee, 799 F.3d of a physical locate mark. 1372, 1379 (Fed. Cir. 2015) (explaining that the prior art and the inventions claimed must be, in part, similar enough such that "'the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art'" (quoting 35 U.S.C. § 103 (2006))). Further, even if functionality existed in the prior art, S&N has not demonstrated that there existed the appropriate motivation to combine the teachings in such prior art references and a reasonable expectation of success in making such combination. See Id. at 1380 ("If all elements of a claim are found in the prior art, . . . the factfinder must further consider the factual questions of whether a person of ordinary skill in the art would be motivated to combine those references, and whether in making that combination, a person of ordinary skill would have had a reasonable expectation of success." (citing Medichem, S.A. v. Rolabo, S.L., 437 F.3d 1157, 1164 (Fed. Cir. 2006))).

other references that CertusView provided to the PTO and are not See 37 C.F.R. § 1.56(b). "A reference is cumulative material. when it 'teaches no more than what a reasonable examiner would consider to be taught by the prior art already before the PTO.'" Regeneron Pharm., Inc. v. Merus B.V., 144 F. Supp. 3d 530, 560-61 (S.D.N.Y. 2015) (quoting Regents of the Univ. of Cal. v. Eli Lilly & Co., 119 F.3d 1559, 1575 (Fed. Cir. 1997)). Alternatively, "[w]hen a particular reference discloses a limitation of particular importance not elsewhere disclosed, it is not cumulative." Id. (citing McKesson Info. Sols, Inc. v. Bridge Med., Inc., 487 F.3d 897, 914 (Fed. Cir. 2007)). As Teja testified at trial, the specific ESRI prior art references provide information, regarding the use of GIS software to record data regarding utilities, similar to the information that forms the basis of the Tucker, Sawyer, and Evans references that CertusView provided to the PTO during prosecution of the '204 Thus, the specific ESRI prior art references are cumulative and not material as they "teach[] no more than what a reasonable examiner would consider to be taught by the prior art already before the PTO." Id.

Additionally, the fact that the '359, '341, and '001 Patents issued over specific ESRI prior art references indicates that such references are not but-for material with respect to the '204 Patent. Having reviewed the specific ESRI prior art

references, which S&N argues should have been submitted during prosecution of the '204 Patent, the examiner determined that such references did not "block" issuance of the '359, '341, and '001 Patents. Therefore, S&N has not demonstrated that either the ESRI ArcPad product, of which CertusView was aware from the MIR and its own interactions with ESRI, or the specific cited ESRI prior art references, that CertusView learned of during prosecution of an unrelated patent, are but-for material to the issuance of the '204 and '344 Patents.

Second, even if ESRI prior art were but-for material, S&N has not demonstrated that CertusView withheld the ESRI ArcPad software, or any specific ESRI prior art references, during prosecution of the '204 and '344 Patents with the specific intent to deceive the PTO. As noted above, a finding of intent must be "'the single most reasonable inference able to be drawn from the evidence.'" Therasense, 649 F.3d at 1290 (quoting Star Sci., 537 F.3d at 1366). The single most reasonable inference to be drawn from the evidence in this matter is that the reason CertusView did not submit ESRI ArcPad prior art to the PTO, or to Teja, during prosecution of the '204 and '344 Patents was because it believed the ESRI ArcPad software to be incompatible with its e-Sketch inventions. CertusView reviewed the ESRI software and determined that it was "too big and too expensive" to use with e-Sketch, which led it to conclude that ESRI was not

material or relevant to its e-Sketch inventions. However, upon learning of specific ESRI prior art references, CertusView and Teja submitted those references to the PTO, "in an abundance of caution," during prosecution of the '359, '341, and '001 Patents, further belying any suggestion that CertusView intended to deceive the PTO. Each Patent issued over the ESRI references, lending credence to CertusView's belief that such references, and the ESRI ArcPad software, were not material. Thus, S&N has not demonstrated that CertusView withheld material ESRI prior art during prosecution of the '204 and '344 Patents with the specific intent to deceive the PTO.

S&N has attempted to prove CertusView's intent to deceive the PTO by arguing that CertusView's misconduct during discovery regarding the MIR (which includes descriptions of both ESRI and TelDig products) supports a "strong inference" of deceptive intent, because there is an "unmistakable" connection between the litigation misconduct regarding the MIR and the alleged withholding of material prior art, described in the MIR, from the PTO. Defs.' Post-Trial Br. at 14. In support of its argument, S&N relies on a recent decision from the Federal Circuit in the Ohio Willow Wood case, 813 F.3d 1350 (Fed. Cir. 2016) [hereinafter "Ohio Willow Wood (2016)"], affirming the district court's finding that a patent applicant committed inequitable conduct. However, the Ohio Willow Wood applicant's

conduct differs from the conduct at issue in this case, because such applicant had a duty to submit specific documents, which discussed prior art, to the PTO during patent reexamination as such documents could correct his counsel's misrepresentation on a key point of contention during such reexamination, because the applicant withheld such documents, and because the applicant "had no explanation for his failure to present [such documents]" to the PTO. Id. at 1359-60. CertusView, however, did not have a duty to submit the MIR to the PTO²² and did not withhold the information contained in the MIR from the PTO with knowledge of its materiality. Instead, the evidence reflects that CertusView culled through the approximately fifty companies, and their products, identified in the MIR and provided to its patent counsel and the PTO information regarding such companies and products that it believed to be relevant and material to the e-Sketch inventions. CertusView disregarded the ESRI and TelDiq information in the MIR because it believed, based on interactions with ESRI and TelDig, that such information was incorrect. Thus, while CertusView's misconduct during discovery

CertusView did not have a duty to submit the MIR to the PTO because it is not material prior art. Instead, the MIR was a confidential "draft" document, created after the priority dates of the Patents-in-Suit, including market research on approximately fifty companies and their products, both material and non-material to the e-Sketch inventions. See infra Sect. VII.A.2.a. Further, S&N concedes that the MIR was not prior art, Trial Tr. Vol. 5B at 1158:9-11, instead referring to such document as a "compendium of prior art," Defs.' Post-Trial Rebuttal Br. at 11.

is worthy of condemnation and sanction, 23 such misconduct does not evidence the specific intent to deceive the PTO.

For these reasons, S&N has not demonstrated that the ESRI ArcPad software is but-for material to the '204 and '344 Patents, or that such software was withheld during prosecution of the '204 and '344 Patents with the specific intent to deceive the PTO. Therefore, the Court concludes that S&N has not demonstrated that CertusView committed inequitable conduct related to the ESRI ArcPad software.

2. TelDig Utility Suite and TelDig Mobile

S&N asserts that Nielson, Chambers, Teja, and Farr committed inequitable conduct by failing to disclose as prior art the TelDig Mobile software during prosecution of the Patents-in-Suit. 24 S&N asserts that the TelDig Mobile software is material prior art because such product predated the priority dates of the Patents-in-Suit and is capable of meeting an "essential" and "salient" claim limitations of the e-Sketch

²³ Indeed, sanctions were already imposed on CertusView for its litigation misconduct on September 1, 2015. ECF No. 364.

The Court notes that S&N appears to have abandoned its argument that CertusView intentionally withheld the TelDig Utility Suite product during prosecution of the Patents-in-Suit. At trial, S&N failed to introduce evidence of the TelDig Utility Suite product's capabilities or use, much less any documentary evidence regarding such product. Further, S&N's Post-Trial brief does not address the TelDig Utility Suite product, discussing only the TelDig Mobile product. Therefore, as it has no evidence regarding the TelDig Utility Suite product to consider, the Court cannot find that CertusView committed inequitable conduct by intentionally withholding the TelDig Utility Suite product from the PTO during prosecution of the Patents-in-Suit.

patents, namely, the ability to electronically record physical locate marks on a digital image. Defs. Post-Trial Br. at 6-9. Further, S&N asserts that Nielsen, Chambers, Farr, and Teja withheld such product during prosecution of the Patents-in-Suit with the specific intent to deceive the PTO. In response, CertusView argues that S&N failed to demonstrate that the TelDig Mobile product is prior art or that such product was but-for material. Finally, CertusView argues, S&N has not demonstrated that CertusView withheld TelDig Mobile prior art with the specific intent of deceiving the PTO regarding TelDig.

The Court finds that S&N has not demonstrated, by clear and convincing evidence, that CertusView withheld material TelDig Mobile prior art with the specific intent of deceiving the PTO during prosecution of the Patents-in-Suit. First, while some version of the TelDig Mobile product appears to be prior art, and within CertusView's knowledge, S&N has not demonstrated that such product was but-for material. And, second, S&N has not demonstrated that CertusView withheld such TelDig Mobile product, or any specific TelDig prior art reference, during prosecution of the Patents-in-Suit with the specific intent to deceive the PTO.

At trial, the element of "marking up a digital image" was described as "essential," by Chambers, Trial Tr. Vol. 2A at 291:3-11, and Teja described the element of making a "digital representation of at least one physical locate mark" as "one of the salient considerations of the claims," Trial Tr. Vol. 2B at 379:21-380:3.

a. Materiality

At least some version of the TelDig Mobile product is prior art to the Patents-in-Suit because such product was "known or used by others in this country" before the filing dates of the Patents-in-Suit, 35 U.S.C. § 102(a) (2006) (current version at 35 U.S.C. § 102(a) (Mar. 16, 2013)), or such product was "in public use or on sale in this country" more than one year before the Patents-in-Suit were filed, id. § 102(b). 26 Further, the TelDig Mobile product falls within the scope of prior art because it is "'reasonably pertinent to the particular problem with which the [e-Sketch] invention was involved.'" Ruiz v. A.B. Chance Co., 234 F.3d 654, 664 (Fed. Cir. 2000) (quoting Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1535 (Fed. Cir. 1983)). The '359, '344, '341, and '204 Patents claim priority to a parent application filed on February 12, 2008, and the '001 Patent claims priority to a parent application filed on March 13, 2007. Prior to those dates, TelDig was involved in developing products for infrastructure intervention and damage prevention, including products that aided in and contributed to the locate operation field. Chambers participated demonstration of TelDig products, including TelDig Utility Suite

The Court cites to a version of 35 U.S.C. § 102 that predates the America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2013), because each of the Patents-in-Suit claim priority to applications filed before the effective date of the America Invents Act, March 16, 2013, making the prior version of § 102 applicable to the Patents-in-Suit.

and TelDig Mobile, in 2007. Additionally, the MIR sourced its information on relevant market players and products, including TelDig Utility Suite and TelDig Mobile, between May and June indicating that information regarding the products discussed in the MIR was publicly available prior to May 2008. Further, the TelDig Mobile brochure indicates that the TelDig Mobile product, among others, was being marketed before the priority dates of the Patents-in-Suit. While the date of the TelDia Mobile brochure's creation is unknown. Zatkovich testified that he observed such document recorded, on March 12, 2006, on the Internet Archive. Trial Tr. Vol 4B at 848:11-849:12; see also Trial Tr. Vol 5A at 1054:13-23 (explaining Dr. Dymond's agreement that the TelDig Mobile brochure was created in the 2004 timeframe).²⁷

While a description of the full capabilities of the TelDig Mobile prior art product was not introduced at trial, the evidence at trial indicates that such product includes some type of "drawing editor" or drawing tool. The MIR stated that TelDig Mobile had a "[u]nique, easy-to-use drag-and-drop drawing module

While the TelDig Mobile brochure demonstrates that some version of the TelDig Utility Suite and TelDig Mobile products, and some version of TelDig Mobile's drawing module, are prior art to the Patents-in-Suit, S&N has not demonstrated that either CertusView or its patent counsel received or reviewed such document prior to August 2, 2012. Further, the Court need not address whether the TelDig Mobile brochure is prior art because, as discussed below, even if such document is prior art, it is not material.

with pre-formatted icons to send a layout of the dig and locate site." MIR at 77. Additionally, by spring 2008, Chambers knew that TelDig had a drawing tool that would allow a product user to mark up a digital image to show a notification perimeter or shape. Trial Tr. Vol 2A at 283:19-24, 287:7-12. Further, the TelDig Mobile brochure demonstrates that the TelDig Mobile product included a "drawing editor," as evidenced by a small partial picture of such tool in the lower right-hand corner of the document. TelDig Mobile Product Brochure, DX-294.

S&N, however, has not demonstrated that any version of the TelDig Mobile product is but-for material because S&N has not demonstrated that issuance of the Patents-in-Suit would have been "blocked" if such product had been provided to the PTO.

See Ohio Willow Wood (2013), 735 F.3d at 1345 (citing Therasense, 649 F.3d at 1291-92). Even if the claims of the Patents-in-Suit were reduced to the "essential" or "salient" feature of electronically recording physical locate marks on a

The record is unclear regarding how Chambers learned this information. The Court notes that Chambers did not observe a demonstration of TelDig's drawing tool during the presentation he participated in with TelDig in 2007. Trial Tr. Vol. 1B at 215:1-216:10. However, Chambers received additional information regarding TelDig through CertusView's 2008 NDA and 2009 integration agreement with TelDig.

digital image, 29 S&N has not demonstrated that the TelDig Mobile product was capable of making such electronic record.

Looking specifically to S&N's anticipation evidence, S&N has not proven that the TelDig Mobile product anticipated every element and limitation of any claim in the Patents-in-Suit.³⁰ "Invalidation on [grounds of anticipation] requires that every element and limitation of the claim was previously described in

²⁹ The Court notes that a prior art reference disclosing an essential limitation of an invention may be material, even if a patent is not found to be invalid based on such reference or no element-by-element invalidity analysis is performed with respect to other limitations of the asserted claims. See Am. Calcar, Inc. v. Am. Honda Motor Co., 768 F.3d 1185, 1189 (Fed. Cir. 2014) (explaining that the PTO and courts employ different evidentiary standards for claim construction, thus "'even if a district court does not invalidate a claim based on a deliberately withheld reference, the reference may be material if it would have blocked patent issuance under the PTO's different evidentiary standards.'" (quoting <u>Therasense</u>, 649 F.3d at 1291-92)); cf. Ohio Willow Wood (2016), 813 F.3d at 1359 (affirming district court's finding that non-disclosure of letters discussing prior art material because they spoke to "the dispositive issue," corroboration).

At trial, S&N appeared to be prepared to present evidence, via Zatkovich's expert testimony, that certain TelDig products were material because, if such products had been provided to the PTO during prosecution of the Patents-in-Suit, the Patents-in-Suit would not have issued on grounds of both anticipation and obviousness. Vol. 4B at 846:20-847:4, 887:9-14 (discussing Zatkovich's obviousness conclusion in his expert report). However, Zatkovich only briefly discussed obviousness, testifying almost entirely regarding the TelDig Mobile product's anticipation of the e-Sketch product, or the TelDig Mobile product's ability to perform the "essential" features of the e-Sketch invention, and did not introduce any additional evidence regarding the obviousness conclusion that he disclosed in his expert report. Further, S&N's Post-Trial Brief does not argue that TelDig rendered e-Sketch obvious. Thus, S&N has not demonstrated that the TelDig products would have blocked issuance of the Patents-in-Suit on the basis of obviousness. See Dome Patent L.P., 799 F.3d at 1379-80 (Fed. Cir. 2015) (discussing the legal standard for demonstrating the obviousness of a claim for the purpose of invalidating such claim); supra n.21. As such, the Court cannot find that the TelDig products are material on such a basis.

a single prior art reference, either expressly or inherently, so as to place a person of ordinary skill in possession of the invention." Sanofi-Synthelabo v. Apotex, Inc., 550 F.3d 1075, (Fed. Cir. 2008) (citations omitted). S&N presented 1082 evidence via Zatkovich, its expert witness, 31 that the TelDig Mobile product anticipated claim 1 of the '204 Patent. 32 Tr. Vol. 4B at 850:16-851:25. However, Zatkovich's opinion is insufficient to demonstrate that the TelDig Mobile product anticipated claim 1 of the '204 Patent, much less any claim of the Patents-in-Suit, because Zatkovich could not identify a version or model of the TelDig Mobile prior art, or a singular TelDig reference, evidencing that the TelDig Mobile product could meet every element or limitation of a claim in the Patents-in-Suit. Instead, Zatkovich based his anticipation opinion upon multiple TelDig press releases, which CertusView did not receive and were not entered into evidence, and the TelDig Mobile brochure, which CertusView did not receive or

The Court notes that it has only considered Zatkovich's testimony for the purpose of determining whether the TelDig Mobile product anticipates the Patents-in-Suit, as Zatkovich did not apply the proper test for determining but-for materiality and is not qualified to determine whether the TelDig Mobile product was but-for material to issuance of the Patents-in-Suit. Trial Tr. Vol. 4B at 880:14-883:18 (discussing Zatkovich's application of the "reasonable examiner" test for materiality—a standard that predates the Therasense decision).

³² Zatkovich did not discuss at trial any specific claims within the '359, '341, '344, or '001 Patents which he argues are anticipated by the TelDig Mobile product, although certain portions of Zatkovich's expert report regarding these patents was discussed during cross-examination.

review until 2012. Trial Tr. Vol. 4B at 853:13-855:18, 875:11-877:4. For example, Zatkovich relied on a TelDig press release that stated "TelDig Mobile has the unique feature of being able to create and handle dig site sketches which become precious information coming back from the field with the completed ticket, useful when damages occurs," in combination with the TelDig Mobile brochure, to opine that TelDig Mobile's drawing editor was able to record locate marks on the ground. Trial Tr. Vol. 4B at 895:12-23.

[W]e know that TelDig Mobile has the ability to complete locator reports which include marked up sketches. We know that. It says that specifically in the brochure. We know that—and from that, I used this information to say it necessarily has to contain locate marks, otherwise the [re] will not be precious information when damages occur.

Trial Tr. Vol 4B at 896:2-8.³³ However, Zatkovich could not point to a specific version of TelDig Mobile prior art, or singular TelDig prior art reference, in which each of the elements and limitations of a single e-Sketch patent claim is described and compare such reference against any claim in the

The Court notes that it is skeptical of Zatkovich's interpretation of the prior art references he relied on for his anticipation opinion, particularly in light of Zatkovich's testimony that he did not possess personal knowledge of how the TelDig products operate. Trial Tr. Vol. 4B at 876:24-877:16, 879:8-880:6. However, as Zatkovich was not able to compare all elements and limitations of a single claim of the Patents-in-Suit against a singular TelDig prior art reference, the Court need not consider the efficacy of Zatkovich's partial comparison at trial.

Patents-in-Suit.³⁴ Trial Tr. Vol. 4B at 897:4-901:24. Thus, S&N did not demonstrate that the TelDig Mobile product anticipated any of the claims of the Patents-in-Suit.

Further, even if the Court limited its consideration of anticipation to the "essential" and "salient" claim limitations included in claim 1 of the Patents-in-Suit, that is, the ability to electronically record physical locate marks on a digital image, S&N has not demonstrated that the TelDig Mobile product possessed such functionality. At trial, S&N failed to demonstrate that: (1) the TelDig Mobile drawing tool had the resolution necessary to record locate marks on an image; (2) the TelDig Mobile product had the ability to track and record specific geographical location data associated with a locate mark; and (3) the TelDig Mobile product was capable of producing the necessary locate data in a searchable electronic record.

First, S&N has not demonstrated that the TelDig Mobile drawing tool had the resolution capabilities necessary to allow a locate technician to make a digital representation of a physical locate mark. The goal of e-Sketch was to

³⁴ Zatkovich testified that, while he could not point to a singular TelDig reference that discussed all the elements and limitations of a claim, he mapped at least one documentary reference, that he believed described some aspect of TelDig Mobile, against each limitation of a claim. Trial Tr. Vol. 4B at 888:4-22. However, as noted above, the only TelDig document in evidence, or that CertusView was aware of and reviewed, and that Zatkovich relied upon for his opinions, is the TelDig Mobile brochure.

electronically document locate operations "[w]ith a high level of specificity," Trial Tr. Vol. 2A at 289:25-290:4, and e-Sketch can display an image "at six inches per pixel," Trial Tr. Vol. 4B at 783:11-18. While e-Sketch's resolution capability is not detailed in the claims of the Patents-in-Suit, each of the Patents-in-Suit inherently require a digital image to be displayed with "sufficient resolution" such that a locate mark, that is, a small paint mark or flag, can be recorded on such See '204 Patent, Col. 19:48-50, PX-002 ("Generally, image. [input images] may be of sufficient resolution at an optimal elevation to be useful as a record of the locate operation."); '344 Patent, Col. 7:55-58, PX-001 (same); '341 Patent, Col. 19:58-61, PX-005 (same); '359 Patent, Col. 7:54-56 (same); cf. '001 Patent, PX-004 (describing inventions to both mark the ground and record such locate marks for display on a separate device). Additionally, S&N's expert agreed, in response to the Court's question, that a record of a locate mark must be able to provide specific information, and a locate mark cannot be recorded on a "one mile by one mile square" basis or on a "one block by one block square" basis. Trial Tr. Vol. 4B at 856:24-857:18; see Trial Tr. Vol. 5A at 926:14-927:11 (explaining that "in order to be reasonably useful," the accuracy of a sketch tool would need to be within "two to four feet").

Evidence at trial, however, indicates only that TelDig Mobile's drawing tool has resolution sufficient to display a large geographic area, several blocks or more in size. TelDig Mobile Product Brochure, DX-294 (displaying what appears to be several square miles at "1X Zoom" in a partial photo of the TelDig Mobile "drawing editor"). Further, both Chambers and Farr testified that TelDig's One Call drawing representative of the sketching capabilities across TelDig's products, did not have the capability for a user to input specific utilities, tie-downs, or landmarks on a highly specific geographic area, because the drawing tool was used to show a perimeter or shape on a large geographic area. Trial Tr. Vol. 2A at 221:12-227:13; Trial Tr. Vol. 4A at 774:1-777:4; Email Re: TelDig Systems - TelDig Web Drawing Tool Integration-vl 10.doc, PX-057 (displaying an image of a three-block area in a drawing tool used for TelDig's One Call product).35

³⁵ In determining whether the TelDig drawing tool possessed sufficient resolution capabilities, the Court does not consider the TelDig sketch tool screen shots provided to CertusView with the Simone Affidavit in October 2012, DX-286. First, the screen shots are undated and the tool is part of a "highly customized version of Tel[D]iq that offer[ed] special features to exceed [] contract requirements " Trial Tr. Vol. 2B at 365:7-366:18; Affidavit of Louis A. Simone, DX-Further, upon viewing such screen shots, CertusView determined that it had never seen such information, or drawings of "this ilk," Trial Tr. Vol. 2B at 366:5-369:21. Thus, based on the evidence at trial, it appears that such screen shots do not accurately represent the capabilities of the TelDig drawing tool prior art, much less that CertusView was aware of such capabilities and withheld such information from the PTO.

At trial, Zatkovich provided the only testimony that the TelDig Mobile product could display an image with sufficient resolution to allow a user to record a locate mark. However. the Court is unpersuaded by Zatkovich's testimony because such conclusion is uncorroborated, and Zatkovich came to such opinion by inference based on a combination of multiple non-technical press releases and the TelDiq Mobile brochure. Trial Tr. Vol. 4B at 853:13-855:18, 875:11-877:4. Further, Zatkovich did not participate in any demonstration of TelDig Mobile product, Trial Tr. Vol. 4B at 876:24-877:8, did not speak to or contact anyone at TelDig for information, Trial Tr. Vol. 4B at 879:8-880:6, or purchase or use TelDig Mobile software, Trial Tr. Vol. 4B at 889:2-17. Thus, S&N has not demonstrated that the TelDig Mobile drawing tool could display an image with sufficient resolution to allow for a digital representation of a physical locate mark.

Second, S&N has not demonstrated that the TelDig Mobile product had the ability to track and record specific geographical location data, as required by certain of the Patents-in-Suit. Claim 1 of both the '359 and '001 Patents requires that "geographic coordinates" or "location data" be associated with the individual locate marks. '359 Patent, Col. 18:4-12, PX-003 (requiring that the "data set comprise[, in part,] a set of geographic points along a marking path of the at least one underground facility, the set of geographic points

including geographical coordinates corresponding to the at least one physical locate mark . . ."); '001 Patent, Col. 8:19-28, PX-004 (requiring the system for electronically displaying locate information to comprise "a processor to receive location data relating to the use of the marking system or the marking Zatkovich testified that, in contrast to such tool . . ."). requirements, the specific geographical information available with the TelDig Mobile product is associated with the locate ticket, not with the individual locate marks made and recorded the locate technician, unless the locate technician by personally added additional notes or location data to electronic record. Trial Tr. Vol. 4B at 854:9-855:17. Further, as Chambers explained, the TelDig One Call drawing tool uses geographic coordinates (latitude and longitude) provided on the locate ticket to pull up a map-not to record locate marks, much less to record the geographic coordinates associated with a Trial Tr. Vol. 2A at 221:5-20; Email Re: TelDig locate mark. Systems - TelDig Web Drawing Tool Integration-v1 10.doc, PX-057. Finally, both Chambers and Farr testified that the TelDig One Call drawing tool was not able to track and record specific geographic location data for each locate mark because sketches completed with such drawing tool were saved in PNG format, which has "no way to store GPS coordinates for each of the lines represented." Trial Tr. Vol. 2A at 221:21-222:10; Trial Tr.

Vol. 4A at 776:7-777:4. Thus, S&N has not demonstrated that the TelDig Mobile product had the ability to track and record specific geographical location data, as required in the '359 and '001 Patents.

Third, S&N has not demonstrated that the TelDig Mobile product had the ability to create a searchable electronic record capable of recording the necessary locate operation data. inventions detailed in claim 1 of the '359, '344, and '204 Patents each require that certain locate data be recorded in a searchable electronic manifest or a "searchable electronic record of a locate operation." `204 Patent, Col. 34:52-35:9, PX-002 (requiring the "searchable electronic record" to include a "digital representation of at least one locate mark"); '359 Patent, Col. 17:53-18:21, PX-003 (requiring the "searchable electronic record" to include a set of geographic points along a marking path, property address, timestamp, name of the locate technician, name of company responsible for performing locate operation, and ticket number); '344 Patent, Col. 17:40-18:19 (requiring the "searchable electronic record" to include an image, geographic location of the dig area, timestamp, and digital representation of at least one physical locate mark). Evidence at trial demonstrated that the TelDig Mobile product does not possess the capability to store such locate data in a single "searchable electronic record." Instead, the evidence at

trial indicates that the TelDiq Mobile product, like the TelDig One Call product, saved any marked up images in PNG format, which is an image or graphics file format. 36 As Farr testified, PNG format is an image file, unable to store "individual elements within it, [or] layer artifacts within [the] image" and then retrieve such data in a search. Trial Tr. Vol. 4A at 776:7-25. Instead, "the only underlying data you can include in images like a PNG [is] information called EXIF data, which is a high level GPS location for the picture itself " As such, Chambers testified, PNG format is unable, among other things, to "store GPS coordinates for each of the recorded." Trial Tr. Vol. 2A at 222:2-7. Further, PNG format is unable to "measure in pixel," making it impractical to verify the geographic or locational accuracy of digitally recorded locate marks included in a PNG file. Thus, S&N has not demonstrated that the TelDig Mobile product had the ability to create a searchable electronic record meeting the limitations of claim 1 of the '359, '344, and '204 Patents.

³⁶ Zatkovich presented the only evidence at trial disputing the TelDig Mobile product's use of PNG format. Zatkovich testified that TelDig One Call used PNG format, but TelDig Mobile did not. Trial Tr. Vol. 4B at 872:20-873:9. Zatkovich, however, did not discuss the file mechanism by which TelDig Mobile saves marked up images, and he provided no documentary support for his assertion. Additionally, Zatkovich's reliability on this point is further undercut by his failure to use, test, or investigate the TelDig Mobile product.

Additionally, the fact that Teja submitted TelDig documents, and Zatkovich's expert report, to the PTO during prosecution of other e-Sketch patent applications, and such patents issued over the TelDig references and Zatkovich's report, suggests that TelDig's products are not but-for material with respect to the Patents-in-Suit. Having reviewed such TelDig information, the examiner determined that such references did not prevent issuance of other e-Sketch Patents. Therefore, S&N has not demonstrated that the TelDig Mobile product, of which CertusView was aware from the MIR and its own interactions with TelDig, is but-for material to the Patents-in-Suit.

b. Intent

Finally, even if the TelDig Mobile product was but-for material to the Patents-in-Suit, S&N has not demonstrated that the "'single most reasonable inference able to be drawn from the evidence,'" see Therasense, 649 F.3d at 1290 (quoting Star Sci., 537 F.3d at 1366), is that CertusView withheld such product during prosecution of the Patents-in-Suit with the specific intent to deceive the PTO. There is scant evidence in the record that CertusView knew that the TelDig Mobile product was material and that CertusView deliberately withheld such information from the PTO. Rather, the evidence at trial demonstrates that CertusView did not submit TelDig prior art to the PTO, or pass on TelDig information to Teja, because it

believed TelDig to be inventing products in, and concerned with, a completely different portion of the locate operation field: ticket management and One Call center software.

In particular, when Chambers was questioned by the Court, as to why he did not believe that the use of TelDig's products transferred to CertusView's e-Sketch invention, he explained that he, and others at CertusView, thought TelDig products and e-Sketch were "totally different." Trial Tr. Vol. 2A at 288:2-8.

THE COURT: And so what was the distinction, the difference or the lack of transferability that caused you to believe [TelDig] was not something about which the Patent Office should be made known?

THE WITNESS [Chambers]: The use case is totally different. From our perspective you've got a locator in the field who is marking not only the facility marks, they're documenting all the facility marks, but they're also documenting the type of facility. Is it an electric line? Is it a gas line? So generating the APWA color codes are the standard across the country for that. None of these tools, TelDig in particular, had any way to convey color or utility type about the facilities. And that's a major part, because there's a lot of times where, if you're digging and there's a water line or a sewer line, you can probably, if you're not doing a deep hole, you can probably work on top of that. So not having the ability to capture that information, because it was for a totally different use case, we thought made it irrelevant.

THE COURT: So what was being done with the TelDig Utility Suite in its most generic and basic form was allowing somebody to indicate on a diagram or map of some sort where the dig was going to take place?

THE WITNESS [Chambers]: That's correct.

THE COURT: And what you hoped to do with e-Sketch was to place marks showing what was going on at the site with associated information?

THE WITNESS [Chambers]: That's correct. With a high level of specificity.

THE COURT: And so you felt it was different because you didn't feel that what was in the TelDig Utility Suite was a subset of what you planned to do with e-Sketch?

THE WITNESS [Chambers]: Correct.

Trial Tr. Vol. 2A at 289:2-290:8. Further belying any suggestion that CertusView possessed the specific intent to deceive the PTO, upon being asked similar questions by the Court, Dr. Dymond also explained that TelDig had created a "redlining process" which differentiated its product from what the e-Sketch inventions were designed to do. Trial Tr. Vol. 5A at 1058:2-1059:15.

THE COURT: When you say that these sketches, that editing the sketches refers to a redlining process whereby the locator may use the proposed software to edit the utility maps so that the maps more accurately reflect the actual location of the underground utilities, and here now you're suggesting that you can't -- if I understand correctly, you can't use that, or it's not intended to be used for placing locate marks, the next question that comes to mind is, well, why not? Why isn't [th]is analogous? If you can't [sic] use it for redlining for utilities, why can't you use it for -- why shouldn't somebody have known that you could also use it for placing locate marks? Are you saying that the specificity is different with respect to the placing of locate marks

than with respect to correcting location of utilities on the map?[37]

THE WITNESS [Dr. Dymond]: I think there's two issues, if I can answer you. I think one is, yes, I don't think that the accuracy of the data and the software are sufficient for doing two-inch paint marks. . . .

I think two, what the testimony is that we heard before in that it was a .PNG file format, meaning it's a picture format, is that we can't do lines with coordinates. I think that's No. 2. So what we can do, though, is we can redline. We can put a circle around this area on the map, we can put an approximation of the line which is basically Windows Paint, if you will. It's pixelated. We can put a little line with an arrow to it and say you've got a line here we didn't know about. So it's a redline, and it says we've got a problem here and we send it back to the City of Norfolk that says there is now a sewer line here that we didn't know about, update your maps to make them more accurate.

Trial Tr. Vol. 5A at 1060:12-1061:20.

CertusView employees received multiple demonstrations of TelDig software and confidential information, pursuant to two separate agreements with TelDig, which led them to conclude that TelDig was not relevant or material to its e-Sketch inventions. The evidence at trial indicates a similar conclusion: that TelDig's products are concerned with a different portion of the locate operation field. It is on this basis that CertusView withheld the MIR, the discussion of TelDig within the MIR, and the TelDig Mobile product from Teja and the PTO. Thus, based

The Court notes that the quoted portion of the trial transcript accurately reproduces the Court's exchange with Dr. Dymond. However, the Court misspoke on the record. Therefore, the Court has here placed a sic after "can't" because the Court should have said "can."

upon the evidence presented at trial, and discussed above, S&N has not demonstrated that CertusView withheld TelDig information from the PTO with the specific intent to deceive the PTO.

For the reasons stated above, the Court concludes that, while some version of the TelDig Mobile product is prior art to the Patents-in-Suit, S&N has not demonstrated that such product is but-for material to the Patents-in-Suit or that such product was withheld during prosecution of the Patents-in-Suit with the specific intent to deceive the PTO. As such, S&N has not demonstrated that CertusView committed inequitable conduct related to the TelDig Mobile product.

B. Misrepresentation of Inventorship

1. Farr

S&N asserts that Nielsen, Chambers, Teja, and committed inequitable conduct by submitting to the PTO false Inventor Declarations for the '204 and '341 Patents naming Farr as an inventor on the '204 and '341 Patents. S&N asserts that such Inventor Declarations are false because no witness "could point with conviction to any contributions that would justify naming [Farr] as an inventor" on the '204 and '341 Patents. Post-Trial Brief at 25. S&N further asserts that submitting such false Inventor Declarations was necessarily butfor material and such submission was done with intent to deceive the PTO. In response, CertusView argues, first, Farr is an inventor of the '204 and '341 Patents, and that S&N has failed to prove that the Inventor Declarations are false. Second, CertusView argues, even if the Inventor Declarations were false, S&N has not demonstrated that such Declarations were submitted with the specific intent to deceive the PTO regarding Farr's inventorship.³⁸ The Court will address each argument in turn.

For the following reasons, the Court finds that S&N has not demonstrated that Nielsen, Chambers, Teja, or Farr submitted false Inventor Declarations for the '204 and '341 Patents. is a joint inventor, with Nielsen and Chambers, of the '204 and '341 Patents because he helped conceptualize and invent two of e-Sketch's predecessor components, CertusView's electronic marking wand and Virtual WhiteLine products, and he helped conceptualize and execute the "marriage" between the Virtual WhiteLine and e-Sketch products. The electronic marking wand product is used by locate operators to capture the color of the paint sprayed on the ground during a locate operation and the precise location of such paint on the ground. As noted above, Farr is an undisputed inventor of the '001 Patent, which relates to the electronic marking wand, and the original GPS enabled marking wand patent, the '105 Patent. The Virtual WhiteLine

³⁸ CertusView does not appear to dispute that submission of a false Inventor Declaration satisfies the but-for materiality standard necessary for proof of an inequitable conduct claim. As such, the Court does not address the materiality of the Inventor Declarations for the '204 and '341 Patents.

product is used by excavators to show, with a high level of precision, the area where they intend to dig by marking up a high resolution aerial image of a ticket location. As noted above, Farr is the undisputed inventor of the '117 Patent, related to CertusView's Virtual WhiteLine technology, a priority patent claimed by both the '204 and '341 Patents.

The '204 Patent is a continuation-in-part of the '117 Patent, and the '341 Patent is a continuation-in-part of the '204 Patent. The '204 Patent borrowed figures, descriptions of those figures, and certain claims from the '117 Patent-all of helped to create-demonstrating the conceptual relationship between the '117 Patent and the '204 Patent. In particular, (1) figures 9-16 of the '204 Patent came from the '117 Patent, (2) columns 18-34 of the '204 Patent, describing the figures, were drawn from the '117 Patent, and (3) certain claims from the '117 Patent, regarding different options of possible base images, were reused in the 1204 Patent. Similarly, the '341 Patent, as a continuation-in-part of the '204 Patent, included figures 9-16 from the '117 Patent, columns 18-34 from the '204 Patent, and certain claims from both the '117 and '204 Patents.

Farr also helped conceptualize and implement the "marriage" of the Virtual WhiteLine and e-Sketch inventions. Farr and others recognized the direct relationship between documentation

created by an excavator in the Virtual WhiteLine product and its communication to a locator via the e-Sketch product and saw similarities between the two products and their "use[] cases." Trial Tr. Vol. 4A at 760:10-18. In particular, Farr contributed to the integration of the Virtual WhiteLine invention and e-Sketch by recognizing that the ability to vary the base image, on which an excavator might draw using the Virtual WhiteLine product, could be transferred to e-Sketch, allowing a locator to draw on a series of images and save such altered images as a searchable electronic record. See Trial Tr. Vol. 3A at 470:18-473:10 (explaining Teja's view of Farr's contributions to the '204 and '341 Patents). Additionally, Farr contributed to both Virtual WhiteLine and e-Sketch inventions regarding the ability to import data from the electronic marking wand. Further, the integration of the Virtual WhiteLine product and e-Sketch was largely coordinated by "Project Trinity," of which Farr was the "team lead." In November 2008, the Project Trinity team implemented e-Sketch in Lawrenceville, Georgia, rolling out the e-Sketch product for use. In December 2008, the Project Trinity team implemented e-Sketch in Marietta, Georgia, and, in February 2009, the Project Trinity team implemented e-Sketch in Forest Park, Georgia.

Finally, the evidence at trial demonstrated that Farr contributed to the specific limitations and claims of the `204

and '341 Patents. With respect to the '204 Patent, the inventive process was a "collaborative effort," and Farr's contributions may appear in every claim of the '204 Patent. Specifically, Farr explained that he contributed the "at least one input image" limitation, which appears in each independent claim of the '204 Patent and is, therefore, a limitation on every claim in the '204 Patent. Farr also explained that he made specific inventive contributions, regarding the specific input images, to claims 6, 7, 8, 10, 12, and 14 of the '204 Patent:

In claim 8, my contribution is to the different types of maps generally, but a topographical map in specific, which stemmed from our work that we had done with Virtual WhiteLine and with another product of mine called the OmniLoom which dealt with facility records. We saw a need to have different types of maps, and so I individually contributed the topographical map to claim 8.

In claim 10, the facility map came directly from that work with a product called OmniLoom which dealt with facility records where we saw a benefit in adding sketching on top of the facility records themselves as a point of reference. So I contributed to claim 10.

In claim 12, where you see the at least one input image that I mentioned earlier, I contributed to the architectural construction and engineering drawings that stemmed from work with Virtual WhiteLine where we worked with excavators who worked off of those types of maps, and so I have individual contribution there.

And in claim 14, I have individual contribution in creating a grid system where you don't have a base map yet the grid system can have a foundation to the world, to the real world location by having a geographic representation of that grid. . . .

[I]n claim 6 it says, "The method of claim 1 wherein the at least one input image comprised of a scan or converted manual freehand sketch of the geographic area." I contributed to the at least one input as I had mentioned across other claims, as well as I had collaborative contribution to the converted manual freehand sketch.

And in claim 7 it's carrying from claim 1, says, "One map of the geographic area, which is generally the map of the area." I had collaborative contribution to that, as well.

Trial Tr. Vol. 3B at 675:14-677:11.

With respect to the '341 Patent, which is a continuationin-part of the '204 Patent, Farr explained that he specifically contributed the "at least one digital image" limitation, which is included in all of the claims of the '341 Patent and is, therefore, a contribution to each claim of the '341 Patent. Farr explained that he also made specific inventive contributions to claims 8, 13, and 21 of the '341 Patent, related to his work with the electronic marking wand. Regarding claim 8, Farr contributed to "using the location identification unit which includes that alternative location capability, the triangulation . . . to select at least one digital image for display." Trial Tr. Vol 4A at 767:16-21. Regarding claim 13, Farr explained that his contribution was based on his work developing the electronic marking wand, the "GPS-enabled marking device" mentioned in claim 13. Trial Tr. Vol. 4A at 767:22-Finally, claim 21 is the apparatus designed to perform the inventive method discussed in claim 8. Regarding claim 21, Farr contributed to using the "location identification unit," discussed in claim 8, and to the apparatus used to select the one digital image specifically discussed in claim 21. Trial Tr. Vol 4A at 768:7-13.

Thus, considering Farr's work with the electronic marking wand and Virtual WhiteLine products, his inventorship of the '117 Patent, Farr's work conceptualizing and integrating the Virtual WhiteLine and e-Sketch products, and Farr's specific contributions to the '204 and '341 Patents, the Declarations for the '204 and '341 Patents did not falsely name Farr as an inventor. Farr made a sufficiently significant contribution to the '204 and '341 Patents. Further, Farr's contributions were significant when measured against dimensions of the full invention, and such contributions improved on and added to well-known concepts and the current state of the art.

S&N argues that the Court should not credit Farr's testimony regarding his contributions to the '204 and '341 Patents because Farr's testimony was contradictory and, at times, incomplete. Defs.' Post-Trial Br. at 25-26. While Farr appeared confused and uncertain at times during trial, ultimately the Court found his testimony, uncontradicted by any other witness, regarding his contributions to the '204 and '341

Patents to be consistent and sufficiently credible. Additionally, the Court notes, the apparent miscommunication between CertusView's counsel and Farr regarding Farr's inventive contributions to the '204 and '341 Patents, rather than an intent to mislead the Court, appears to be the cause of Farr's initial confusing testimony regarding the specific claims to which he contributed.

Second, even if Farr was misnamed as an inventor on the '204 and '341 Patents, S&N has not demonstrated that misnaming Farr as an inventor was done with the specific intent to deceive The evidence at trial demonstrated that CertusView, through Nielsen, Chambers, Crawford, and Teja, had a process for determining inventorship for the Patents-in-Suit, including tracking idea submissions and software development and a claimby-claim determination of who should be named as an inventor on a patent. Trial Tr. Vol. 3A at 459:16-460:22; Trial Tr. Vol. 610:17-611:6. CertusView was also advised by patent counsel inventorship, and Inventorship Declarations regarding the reflect the advice of counsel. Further, it does not appear that Farr, or CertusView, had a motive for deceiving the PTO because Farr did not financially benefit from being named as an inventor of the '204 and '341 Patents.

S&N argues that misnaming Farr as an inventor of the '204 and '341 Patents is analogous to the case of Advanced Magnetic

Closures, Inc. v. Rome Fastener Corp., 607 F.3d 817 (Fed. Cir. 2010), in which the Federal Circuit held that a patent applicant committed inequitable conduct when he falsely claimed that he invented a device. As the Advanced Magnetic Closures case predates the Therasense decision, and, thus, relies on a lower standard for evaluating materiality and intent, the opinion is of limited applicability in the instant case, which leads the Court to disagree with S&N's assessment. See id. at 829-30 pre-Therasense materiality (describing the and Following the Therasense decision, it is unclear standards). whether the applicant's conduct in Advanced Magnetic Closures would satisfy the heightened standard for materiality and intent necessary to prove a claim of inequitable conduct.

Further, even if the <u>Advanced Magnetic Closures</u> decision were applicable, the applicant's actions in that case are distinguishable from the present facts. For example, the Federal Circuit affirmed the district court's determination that the applicant, the only inventor named in the patent, evidenced deceptive intent because

Mr. Bauer was either 'unable or unwilling to [his] claimed invention' during his deposition, directing opposing counsel to read the patent; (2) [] Mr. Bauer offered difficult-to-follow explanations of the magnetic strength experiments he performed when he claimed to have conceived of the invention; (3) [] Mr. Bauer submitted sketches of his invention that he was forced to later admit were 'reconstructed' after [the defendant]

challenged their authenticity; (4) [] Mr. Bauer could not offer any 'scientific or technical explanation' of his own patent, even though the 'only allegedly patentable' claim is based on scientific principles of magnetism; and (5) [] Mr. Bauer offered an evasive, argumentative, and at times contradictory testimony on his status as inventor.

Id. at 830 (quoting Advanced Magnetic Closures, Inc. v. Rome Fastener Corp., No. 98cv7766, 2008 WL 2787981, *7-9 (S.D.N.Y. By contrast, Farr ultimately July 17, 2008) (unpublished)). explained, and demonstrated, his contributions to CertusView's wand, Virtual WhiteLine, and e-Sketch electronic marking technologies and the relationship between such technologies and the patents claiming such inventions, including the Patents-in-Suit. Further, the Court notes that Farr's inventorship was not at issue at the time of his deposition in August 2014, as S&N had not yet alleged that Farr was improperly named as inventor of the '204 and '341 Patents. Thus, the Court does not credit Farr's inability to list specific claims to which he contributed during his deposition as an inability orunwillingness "to articulate [his] claimed invention." See Trial Tr. Vol 3B at 667:17-668:8 (detailing Farr's explanation as to the difference between his deposition testimony and his trial testimony).

The Court finds that S&N has not demonstrated that CertusView submitted false Inventor Declarations for the '204 and '341 Patents. Further, S&N has not demonstrated that, even

if CertusView had submitted false Inventor Declarations, such Declarations were submitted with the specific intent to deceive the PTO. Therefore, S&N has not demonstrated that CertusView committed inequitable conduct regarding Farr's inventorship of the '204 and '341 Patents.³⁹

2. Block

S&N that Nielsen, Chambers, Teja, and asserts committed inequitable conduct by submitting to the PTO false Inventor Declarations for the '359, '344, '204, and '341 Patents, omitting Block as an inventor of such patents. S&N asserts that Block was an inventor of the '359, '344, '204, and '341 Patents because he wrote the majority of the source code for the software product known as e-Sketch, including key features of the e-Sketch invention. Defs.' Post-Trial Brief at S&N further asserts that submitting such false Inventor 24. Declarations was necessarily but-for material and submission was done with intent to deceive the PTO. In response, CertusView argues, first, that S&N failed to prove that Block was an inventor of the '359, '344, '204, and '341 Patents and that the Inventor Declarations submitted with the

³⁹ CertusView further asserts that, even if inventorship was incorrect, the proper remedy is correction of such error pursuant to 35 U.S.C. § 256—not a finding of inequitable conduct. However, as the Court has determined that Farr was not incorrectly named as an inventor of the '204 and '341 Patents, the Court need not address CertusView's argument on this point.

'359, '344, '204, and '341 Patents were false. Second, CertusView argues, even if the Inventor Declarations were false, S&N has not demonstrated that such Declarations were submitted with the specific intent to deceive the PTO regarding Block's inventorship.⁴⁰

First, the Court finds that S&N has not demonstrated that Nielsen, Chambers, Teja, or Farr submitted false Inventor Declarations for the '359, '344, '204, and '341 Patents, omitting Block as an inventor. S&N has not demonstrated that Block is an inventor of the '359, '344, '204, and '341 Patents. While Block developed portions of e-Sketch software, such development does not, in this matter, constitute conception or invention. Instead, the evidence at trial demonstrates that conception of the e-Sketch invention took place before Block began work at Dycom and CertusView.

As noted above, conception of the e-Sketch product began in 2006, during the work of Nielsen and Chambers on the Virtual Locator 2007 program. The Virtual Locator 2007 project participants met for the first time, and Nielsen and Chambers presented their research to the group, in October 2006. During that meeting, Chambers recorded ideas related to the original e-

⁴⁰ As discussed above, CertusView does not appear to dispute that submission of a false Inventor Declaration satisfies the but-for materiality standard, and the Court does not address the materiality of the Inventor Declarations for the '359, '344, '204, and '341 Patents.

Sketch inventions by taking notes of the proceedings photographing a white-board session. As Chambers described at trial, the notes and records of that October 2006 meeting correspond to the elements of claim 1 of the '359 and '344 Patents and describe the concept of a "searchable electronic Conception of the e-Sketch invention continued manifest." through a series of meetings regarding the Virtual Locator 2007 project, discussions with an attorney regarding patenting the electronic marking wand and e-Sketch inventions, and testing of the e-Sketch concept through pilot programs in Florida and Nielsen and Chambers explained that they completed conception of the e-Sketch product in April 2007, when they discovered a means by which they could display paint on the ground with specificity and accuracy using a Garmin running watch and Google Earth map.

Block began work as a contract employee with Dycom and CertusView in September 2007, almost a year after conception of the e-Sketch invention began. S&N presented no evidence that Block added to, or modified, the concepts detailed by Nielsen and Chambers between October 2006 and April 2007. Instead, Block was asked, by Chambers and Nielsen, to implement the e-Sketch product during his employment. In particular, Chambers prepared a set of requirements and specifications for implementation of the e-Sketch invention, see Dycom Industries,

Inc. System Requirements Specification for Locating eSketch, DX-041, and Block followed those requirements. During beginning of his work with Dycom, Block explained that he had to overcome his lack of familiarity with the locate industry in order to perform the tasks assigned to him. Block Depo. Tr. at 48:25-49:16. Block further explained that the concepts of an electronic manifest, incorporating a satellite image into the manifest, and drawing on such an image in the field, were presented to him by Nielsen. Block Depo. Tr. at 46:12-48:2, 107:17-109:19. Finally, Block does not claim to be an inventor any of the Patents-in-Suit, and no witness presented testimony that Block was an inventor on any claim of the '359, '344, '204, or '341 Patents. Block, however, did provide inventive contributions on other CertusView e-Sketch patents and he is named as an inventor on such patents, namely the '980 Patent which claims inventions related to revision layers.

Second, the Court finds that even if Block should have been named as an inventor of the '359, '344, '204, or '341 Patents, S&N has not demonstrated that Block was omitted as an inventor with the specific intent of deceiving the PTO. S&N has provided no evidence that CertusView intentionally omitted Block as an inventor. To the contrary, as explained above, CertusView and Teja had a well-established process for accurately determining and representing patent inventorship. Additionally, CertusView

did not have a motive to misrepresent Block's inventorship in this matter. Neither Block nor CertusView benefitted from omitting Block as an inventor, and Block, when he was later named as an inventor in other patents, did not receive any financial benefit from his status as an inventor.

Therefore, S&N has not demonstrated that CertusView submitted false Inventor Declarations for the '359, '344, '204, or '341 Patents. Further, S&N has not demonstrated that, even if CertusView had submitted false Inventor Declarations, such Declarations were submitted with the specific intent to deceive the PTO. As such, S&N has not demonstrated that CertusView committed inequitable conduct regarding Block's inventorship of the '359, '344, '204, or '341 Patents.⁴¹

C. Material Misrepresentation of Prior Art

Finally, S&N asserts that Nielsen, Chambers, and Teja made material misrepresentations to the PTO concerning the Sawyer and Tucker references during prosecution of the '344 Patent. Specifically, S&N argues that Teja made a material factual misrepresentation to the PTO in the February 13, 2012 Amendment and Reply by stating that the concepts of a "locate operation"

⁴¹ CertusView also asserts that, even if inventorship was incorrect, the proper remedy is correction of such error pursuant to 35 U.S.C. § 256—not a finding of inequitable conduct. However, as the Court has determined that Block was not incorrectly omitted as an inventor of the '359, '344, '204, or '341 Patents, the Court need not address CertusView's argument on this point.

and "locate ticket" were "completely absent from the cited prior art references." In response, CertusView raises three defenses. argues that failed to prove First, CertusView S&N inequitable conduct allegations on this issue because "Teja's argument[s] that the amended claims were patentable over the teachings of Tucker and Sawyer were not misrepresentations of fact, but rather good-faith arguments for patentability distinguishing the amended claims over the teaching of the prior art." CertusView's Post-Trial Br., 107, ECF No. 516. Second, CertusView argues that S&N has not demonstrated that the alleged misstatements regarding Tucker and Sawyer were but-for material. Finally, CertusView argues that S&N has not demonstrated that such statements were made with the specific intent to deceive the PTO. The Court will address each of CertusView's three defenses in turn.

First, the Court finds that S&N has not demonstrated that Teja's statements in the February 13, 2012 Amendment and Reply are factual misrepresentations. Instead, Teja's statements, that the concepts of a "locate operation" and "locate ticket" are "completely absent from the cited prior art references," are a reasonable, albeit somewhat inartful, attempt to distinguish the teachings of Tucker and Sawyer from the claims of the '344 Patent. As explained above, "[t]here is nothing wrong with advocating, in good faith, a reasonable interpretation of the

teachings of the prior art." Apotex Inc., 763 F.3d at 1361-62 (citing Rothman, 556 F.3d at 1328-29). Teja's statements, particularly in light of the examiner interview conducted by Nielsen and Teja on December 6, 2011, discussing the same information presented in the February 13, 2012 Amendment and Reply, are examples of "attorney argument." Teja is "free to present [such] argument[s] in favor of patentability without fear of committing inequitable conduct." Rothman, 556 F.3d at 1329 (citing Young, 492 F.3d at 1348).

Second, the Court finds that even if Teja's statements were S&N has not demonstrated that misrepresentations, statements were but-for material to the issuance of the '344 Instead, the Examiner's Notice of Allowability for the '344 Patent indicates that the '344 Patent issued for reasons distinct from the alleged misrepresentations. Specifically, the Notice of Allowability stated that none of the prior art taught (1) the conventional locate operation; and (2) "at least one digital representation of at least one physical locate mark applied to the ground" by the locate technician during the and the communication operation, interface locate to "electronically transmit and/or electronically store the searchable electronic record of the locate operation so that performance of the locate operation is verifiable." '344 Patent File History, 29, PX-234. The Notice of Allowability demonstrates that it is the '344 Patent's additions to the prior art locate operation that caused the '344 Patent to be allowed. Further, the Examiner had access to, and considered, a full record of prior art, including the Tucker, Sawyer, and Evans references, which repeatedly discussed conventional prior art locate operations. The patent prosecution file indicates that Examiner Bitar thoroughly reviewed the Tucker and references and relied on such references, in addition to others, to issue two separate rejections of the claims in the '344 As such, the Examiner was capable of determining Patent. whether the concepts of "locate operation" or "locate ticket" were "completely absent" from the prior art and according the alleged misstatements their proper weight. See WesternGeco L.L.C. v. ION Geophysical Corp., No. 4:09cv1827, 2012 WL 567430, at *20 (S.D. Tex. Feb. 21, 2012) (explaining that "[t]he Examiner's independent reliance on the prior art in this case makes clear that any alleged misrepresentation by Roebuck cannot have been the but-for cause of the patent's issuance").

Third, the Court finds that even if Teja's statements were material misrepresentations, S&N has not demonstrated that such statements were made with the specific intent to deceive the PTO. As noted above, "[t]o meet the clear and convincing evidence standard, the specific intent to deceive must be 'the single most reasonable inference able to be drawn from the

evidence.'" Therasense, 649 F.3d at 1290 (quoting Star Sci., 537 F.3d at 1366). S&N has not demonstrated that the single most reasonable inference to be drawn in this matter is that Teja made the alleged misstatements to mislead and deceive the PTO. Instead, the Court finds it to be more likely that Teja made the alleged misstatements for the purpose of making a reasonable attorney argument, distinguishing the Tucker and Sawyer references from the claims of the '344 Patent.

Therefore, the Court finds that Teja's statements regarding the Tucker and Sawyer references in the February 13, 2012 Amendment and Reply during prosecution of the '344 Patent, are not misrepresentations, but are attorney argument, advocating a "reasonable interpretation of the teachings of the prior art."

Apotex Inc., 763 F.3d at 1361-62 (citing Rothman, 556 F.3d at 1328-29). Further, such statements are not but-for material to the issuance of the '344 Patent and they were not made with the specific intent to deceive the PTO. As such, S&N has not demonstrated that CertusView committed inequitable conduct related to Teja's statements regarding Tucker and Sawyer.

VIII. CONCLUSION

For the reasons discussed above, Plaintiff/Counter-Defendant's Rule 52(c) Motion is **DENIED**, and Plaintiff/Counter-Defendant's remaining Motion in Limine, ECF No. 436, is **DENIED**. Further, Plaintiff/Counter-Defendant's Motion to Enforce the

Court's Memorandum Order, ECF No. 494, is GRANTED and Plaintiff/Counter-Defendant's Objections to Defendants/Counter-Plaintiffs' Post-Trial Brief, ECF No. 529, are OVERRULED.

With respect to Defendants/Counter-Plaintiffs' declaratory judgment counterclaim for inequitable conduct, asserted in its Second Amended Answer and Counterclaim, ECF No. 336, for the reasons discussed above, such counterclaim is DENIED on each of the five grounds alleged. It is therefore ORDERED that judgment be entered in favor of Plaintiff/Counter-Defendant as to Defendants/Counter-Plaintiffs' declaratory judgment counterclaim for inequitable conduct.

The Clerk is **REQUESTED** to send a copy of this Opinion and Order to all counsel of record.

IT IS SO ORDERED.

Mark S. Davis

UNITED STATES DISTRICT JUDGE

Norfolk, Virginia August 2, 2016