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IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF ARIZONA

Technical Witts, Inc., Plaintiff, vs. Skynet Electronic Company, LTD, a foreign corporation, et al., Defendant.	No. CV 04-2025-PCT-MHM **SEALED ORDER**

Currently pending before the Court is Plaintiff Technical Witts, Inc.'s Motion to Amend Complaint, (Dkt.#168.), and Counterdefendant Technical Witts, Inc. and Third Party Defendant Ernest Wittenbreder's Motion for Partial Summary Judgment, (Dkt.#170), as well Defendant Skynet Electronic Company, LTD's Motion for Summary Judgment, (Dkt.#171) and Motion for Summary Judgment on Plaintiff's fraud, fraudulent inducement and negligent misrepresentation claims, (Dkt.# 185). After reviewing the pleadings and conducting oral argument, the Court issues the following Order.

I. PROCEDURAL HISTORY

On July 3, 2007, Plaintiff Technical Witts, Inc. ("TWI") filed a Second Amended Complaint against Defendants Skynet Electronic Co., Ltd., a Taiwanese corporation

("Skynet"), Skynet Electronic Corporation, d/b/a Amtek Electronic Co. ("Amtek"), Jim and Jane Doe Liang,[1] Silicon Valley World Trade Corporation ("American Skynet Electronics"), Advanced Technical Sales, Inc., d/b/a ATS, Inc., a/k/a Tradewise, ("ATS, Inc."). Plaintiff raised claims of patent infringement on U.S. Patent Number 5,402,329 ("the '329 Patent") (Count I), inducement of patent infringement (Count II), contributory patent infringement (Count III), fraud as to Defendant Skynet (Count IV), fraudulent inducement as to Defendant Skynet (Count V), and negligent misrepresentation as to Defendant Skynet (Count VI), and a plea for injunctive relief (Count VII).

All Defendants counterclaimed against TWI for a declaratory judgment based on the alleged invalidity and unenforceability of the '329 Patent, as well as a declaratory judgment of non-infringement of the '329 Patent. In addition, Defendant Skynet counterclaimed against TWI and filed a third-party complaint against Ernest Wittenbreder for tort claims of fraud and injurious falsehood.

On September 7, 2008, the Court appointed The Honorable Sidney Harris as Special Master to provide the Court with a recommended construction of the asserted claims. On January 30, 2008, the Court held a hearing pursuant to Markman v. Westview Instruments, Inc., 52 F.3d 967, 983-84 (Fed. Cir. 1995), aff'd 571 U.S. 370 (1996) to construe the eleven total claims which together make up the '329 Patent. On February 1, 2009, the Court issued an Order adopting in its entirety the Claim Construction Report of the Special Master. After claim construction was completed, the Parties moved for summary judgment as to the patent issues as well as the various state law claims, counterclaims and third party claims. These dispositive motions are now before the Court.

II. PATENT BACKGROUND

This is a dispute between an American company, Plaintiff Technical Witts, and a Taiwanese company, Defendant Skynet, over a specific type of electrical power converter

[1]On March 12, 2007, this Court dismissed Jim and Judia Liang both of whom are Taiwanese citizens, from the litigation for lack of personal jurisdiction.

adapted to provide zero-voltage switching. On March 28, 1995, the United States Patent and Trademark Office ("PTO") issued the '329 Patent to Ernest Wittenbreder, its inventor. The '329 patent is entitled "Zero Voltage Switching Pulse Width Modulated Power Converters." TWI has two employees, Diana Wittenbreder, President, and Ernest Wittenbreder, Vice President. After negotiations between the two companies relating to the '329 Patent broke down in 2001, TWI made allegations that Skynet infringed upon its patent. Skynet claims that no infringement has taken place, and in the alternative, the '329 Patent is invalid.

There is no dispute as to the basic technology behind the '329 Patent. Pulse width modulated ("PWM") power converters comprise one member of a larger family of electrical power converters known broadly as "switched mode power supplies." In turn, PWM power converters are further divided into families of hard-switching power supplies and soft-switching power supplies. The '329 patent relates to zero voltage switching ("ZVS") power supplies, which belongs to the family of soft-switching power supplies. PWM power converters are found in a host of electronic devices such as computers, televisions, motor drives, and other consumer and industrial applications. In the typical switching supply, alternating-current ("AC") power from a "wall plug" is first converted to some unregulated, direct-current ("DC") voltage which serves as the input source to the PWM converter. The converter then transforms the raw, unregulated input source into a precisely controlled source of DC power at a specified voltage for use by an electronic circuit or other load.

Hard-switching power supplies belong to the "switched mode" family of power supplies wherein a transistor (e.g., a MOSFET) is turned on or off to control the transfer of DC power from the input source to the load. The hard-switching family of power supplies was first introduced into the market in the 1970s. In a hard-switching mode, current interruption occurs irrespective of the value of current flowing at the particular time of interruption. Similarly, current initiation occurs irrespective of the voltage across the switch at the time of initiation. This mode of switching is stressful to the components. During hard-switch turn-on and turn-off transitions, the power device has to endure both high

voltage and current during its switching operations, resulting in high switching losses and stress.

Beginning in the 1980s, considerable research efforts were directed to the use of resonant-mode converters that could be run without hard switching. The concept was to incorporate resonant "tank" circuits comprised of inductors and capacitors into the converters so as to create oscillatory (e.g., sinusoidal) voltage and/or current waveforms. So doing enables the designer to invoke a zero-voltage switching (ZVS) or zero-current switching (ZCS) mode for the power switches. ZVS and ZCS modes constitute the so called "soft switching" modes that are used by power supply designers to reduce switching power losses.

In the late 1980's and throughout the 1990's, further advances were made in the improvement of converter technology. New generations of soft-switched converters that combine the advantages of conventional PWM converters and resonant converters were developed. Unlike hard-switched converters, soft-switched, resonant converters utilize the resonance in a controlled manner. Resonance is allowed to occur just before and during the turn-on and turn-off transitions so as to create ZVS and ZCS conditions. In all other respects, such converters behave just like conventional, hard-switched PWM converters. With simple modifications, customized control ICs (integrated circuits) designed for conventional converters can be employed in soft-switched converters. Because switching loss and stress are reduced, soft-switched converters can be operated at very high frequencies that extend into the megahertz range.

ZVS switching can best be defined as a mode of power converter operation in which the turn-on time of a switch is synchronized with the "resonant" behavior of the rest of the circuit so that switching occurs at the precise moment that the oscillating switch voltage reaches zero. Resonance occurs when an inductance, such as a primary winding of a transformer, interacts and exchanges energy with a capacitance. Often, the parasitic (e.g., internal) capacitance of a MOSFET is used as the resonant capacitance, although a separate external capacitor can also be used. Regulation of the output voltage in a ZVS converter is accomplished by adjusting the duty cycle, thus changing the amount of energy fed to the

transformer primary during each cycle, so that it matches the energy needs of the load. During the time that a ZVS circuit is not drawing power from its input source, its inductor and capacitor resonate. This resonance causes the voltage across a given switch to swing from zero, to some peak value, then back again to zero. At this latter point, the switch can be safely closed (made conducting), resulting in near zero switching loss. Because resonance timing is determined by inductor and capacitor values, properly choosing these values is critically important to any ZVS circuit design.

Under the ZVS switching mode utilizing MOSFET switches, most of the energy stored in the parasitic capacitance of a given MOSFET is allowed to flow through the resonant inductor-capacitor circuit, where it is stored in the circuit's inductance. Hence, only a small amount of the energy stored in the parasitic capacitance contributes to power loss in a ZVS converter. For this reason, MOSFET transition losses approach zero, regardless of operating frequency and input voltage. This feature represents a significant savings in power, a substantial improvement in efficiency, and the capability to make the supply more compact. This attribute also makes ZVS a good candidate for high-frequency, high-voltage converter designs. The technique of ZVS is applicable to all switching topologies.

III. CLAIM CONSTRUCTION FINDINGS

The '329 Patent has eleven total claims, of which claim 1 and claim 10 are independent. As the litigation moved forward, the Parties were able to narrow their dispute to focus on several key terms contained in claim 1. Claim 1 of the '329 Patent reads as follows:

> A power converter comprising:
> an input coupleable to a DC load,
> a first coupled inductive element with substantial DC energy storage capability having a primary winding coupled to said input and a secondary winding coupled to said output,
> a second inductive element connected in series with said first coupled inductive element,
> a first capacitor coupled to said input and said primary winding,
> a second capacitor coupled to said secondary winding and said output,
> **first switch means** for coupling said first capacitor to said primary winding for exchanging stored energy between said first capacitor and said first coupled inductive element,

> **second switch means** operable substantially in synchronization with said first switch means and coupled to said secondary winding for applying at least a portion of said exchanged energy to said DC load,
> **third switch means** operable for coupling said primary winding to said source of DC potential alternatively and sequentially with the operation of said first and second switch means, so that said first capacitor exchanges energy with said primary winding when said first switch means is activated, and said second capacitor exchanges energy with said secondary winding when said secondary switch means is activated, and
> **control means** for selectively activating said first, second, and third switch means, such that said switches are operated when the voltage drop therethrough is substantially zero, said third switch means being operable in opposition to said first and second switch means
> **whereby said second inductive element contributes energy to the turn on transition of said third switch means in opposition to the energy stored in said first coupled inductive element accomplishing turn on of said third switch means at substantially zero voltage for the condition in which the peak to peak AC magnetizing current in the primary winding of said first coupled inductive element is less than twice the average magnetizing current in the primary winding of said first coupled inductive element**.

(Dkt.#161, p. 3.) The portion of claim 1 of the '329 Patent that is underlined and highlighted in bold text represent the terms that were construed by the Court in its Markman Order.

In its Markman Order, the term "switch means," as in the "first, second, and third switch means", was construed by the Court to be means-plus-function language of 35 U.S.C. § 112, ¶ 6, which includes "no more than a MOSFET or a diode-switch-capacitor subcircuit." The Court further held that the "switch means" cannot be a diode.

In addition, the Court held that "control means" is also means-plus-function language of 35 U.S.C. § 112, ¶ 6, and was construed to include (1) PWM controller or a (2) a conventional timing circuit. At oral argument, it became clear that the "control means" can be either a PWM controller or a conventional timing circuit.

Finally, the Court held that the "whereby" clause should be construed to mean the following:

> the second inductive element contributes energy to the turn on transition of the third switch means, thereby turning on the third switch means at substantially zero-voltage, where[2] the primary current is negative at the same time as the

[2]The Markman Order construed the "whereby" clause to include the phrase, "where the voltage in the primary current is negative at the same time as the average magnetizing

> average magnetizing current is positive and the peak-to-peak AC magnetizing current in the primary winding of the first coupled inductive element is less than twice the average magnetizing current in the primary winding of the first coupled inductive element.[3]

Accordingly, under the Court's claim construction, scope of the '329 Patent must include the following elements: (1) two MOSFETs, namely the "first switch means" and the "third switch means" in the primary side of an isolated circuit ("the primary circuit"); (2) one MOSFET, namely the "second switch means" in the secondary side of the isolated circuit ("the secondary circuit"), and the MOSFET in the secondary circuit must be operable substantially in synchronization with the "first switch means"; and (3) a PWM controller and a conventional timing circuit that must selectively activate the three MOSFETs.

IV. DEFENDANT SKYNET'S MOTION FOR SUMMARY JUDGMENT

A. Legal Standard

Typically, a motion for summary judgment may be granted only if the evidence shows "that there is no genuine issue of material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c) . To defeat the motion, the non-moving party must show that there are genuine factual issues "that properly can be resolved only by

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current . . .." The Parties are in agreement that including the words "the voltage in" in the claim construction Order was a typographical error. The Court agrees with the Parties that the term "the voltage in" should be omitted from the "whereby clause."

[3] During claim construction, Defendant Skynet argued to the Special Master that the "whereby" clause was not a claim limitation and therefore did not need to be construed, because in light of all of the other claim limitations in the '329 Patent, the "whereby" clause simply restates how the converter functions. At the same time, Defendant argued that if read literally, the "whereby" clause violates the laws of physics. On the other hand, Plaintiff argued to the Special Master that the "whereby" clause is indeed a limitation. The Court's Markman Order found that "there was insufficient evidence to determine whether the "whereby" clause was a claim limitation, and that the proper place for the Parties to address this and other issues was in the upcoming infringement/and or validity analysis." However, it appears that Defendant Skynet has no opposition to the inclusion of the "whereby" clause as a claim limitation, since the issue was not raised in its Motion for Summary Judgment, which tends to treat the construction of the "whereby" clause as settled by the Court's Markman Order. Given Defendant's silence on this issue, the Court will officially adopt the Special Master's proposed construction of the "whereby" clause as Order of the Court.

a finder of fact because they may reasonably be resolved in favor of either party." Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 250 (1986). The Court views the evidence in the light most favorable to the non-moving party and draws any reasonable inferences in the non-moving party's favor. Warren v. City of Carlsbad, 58 F.3d 439, 443 (9th Cir. 1995, cert. denied, 516 U.S. 1171 (1996). The Federal Circuit has noted that summary judgment does not work any differently in the context of patent cases. See C.R. Bard, Inc. v. Advanced Cardiovascular, Inc., 911 F.2d 670, 672 (Fed. Cir. 1990).

B. Analysis

Skynet makes four arguments in its Motion for Summary Judgment. Skynet first argues that after the Court issued its Markman Order, there is no genuine issue of material fact as to literal infringement of the '329 Patent. See General Mills, Inc. v. Hunt-Wesson, Inc., 103 F.3d 978, 983 (Fed. Cir. 1997) ("Summary judgment of non-infringement is appropriate where there is no genuine dispute as to the nature of the accused product, and the question of literal infringement collapses into one of claim interpretation."). Second, Skynet argues that TWI cannot rely on the doctrine of equivalents to prove non-literal infringement. See Honywell Int'l Inc. v. Hamilton Sundstrand Corp., 370 F.3d 1131, 1139 (Fed. Cir. 2004). Next, Skynet contends that there is no genuine issue of material fact as to the '329 Patent's invalidity due to inherent anticipation by United States Patent No. 5,057,986 ("the '986 Patent"). See Advanced Display Sys., Inc. v. Kent State Univ., 212 F.3d 1272, 1282 (Fed. Cir. 2000), cert. denied, 532 U.S. 904 (2001) (a claim is anticipated when "the four corners of a single, prior art document describe[s] every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation"). Skynet's final contention is that there is no genuine issue of material fact as to the '329 Patent's invalidity due to obviousness in light of the combined teachings of the '986 Patent and United States Patent No. 5,066,900 ("the '900 Patent"). See generally KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398 (2007); Model Patent Jury Instruction for the Northern District of California § 4.3b ("A patent claim is

invalid if the invention recited in the claim would have been obvious to a person of ordinary skill in the filed of the invention at the time it was made.").

1. Infringement

"The determination of whether an accused product or process infringes a claim of a patent is universally understood to involve two steps." Desper Prod., Inc. v. Qsound Labs, Inc.,157 F.3d 1325, 1332 (Fed. Cir. 1998) (internal citations omitted). The court must first construe the asserted claims to determine the meaning and scope by conducting a Markman hearing and issuing a claim construction order. See id. In the second step, the court must compare the accused product to the properly construed claim. Id. Even if an accused product does not literally infringe the asserted claims of a patent, the product may infringe under the doctrine of equivalents if the differences between the element of the accused product at issue in the product and the claim limitation at issue are insubstantial. See Dawn Equip. Co. v. Kentucky Farms, Inc., 140 F.3d 1009, 1015-16 (Fed. Cir. 1998). Claim construction is a question of law, while infringement is a question of fact. Kemo Sales, Inc. v. Control Papers Co., Inc., 208 F.3d 1352, 1359-60 (Fed. Cir. 2000) (internal citations omitted).

The Patent Act provides that a claim may be written as a means for performing a function, without any recitation of structure. See 35 U.S.C. § 112, ¶ 6. "[S]uch [a] claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." See e.g., Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1307-08 (Fed. Cir. 1998). A means-plus-function element is literally infringed under § 112, ¶ 6 if "the accused structure [is] the same as the disclosed structure or [is] a section 112, paragraph 6 'equivalent,' i.e., (1) [it] perform[s] the identical function and (2) [is] otherwise insubstantially different with respect to structure." Kemco Sales, Inc. v. Control Papers Co., Inc., 208 F.3d 1352, 1364 (Fed. Cir. 2000).

Defendant has broken down its accused power supply products sold within the United States into three different sub-groups: (1) One-MOSFET Models, which according to Skynet

include all of its hard-switching models sold in the United States from 1998 to present; (2) Two-MOSFET Models, which according to Skynet include all of its soft-switching models with two MOSFETs in the primary circuit, and no MOSFET in the secondary circuit—sold in the United States from 1998 to present; and (3) Three-MOSFET Models, most of which include a SmartRectifier IR 1167 IC ("IR 1167 IC") in the second circuit.

Before turning to analyze TWI's claims of infringement with respect to Skynet's proposed three product models, there is one issue that the Court must first address. In its response brief, TWI alleged that it has been unable to fully examine all of the relevant facts to determine which of Skynet's specific power supplies infringe claim 1 of the '329 Patent. The reason for this, according to TWI, is that Skynet failed to respond to TWI's reasonable discovery requests. Specifically, TWI claims that Skynet has not produced schematics, specifications, or samples for dozens of the power supply model numbers listed in TWI's Statement of Facts. TWI claims that this has left it unable to adequately access the nature and scope of Skynet's alleged infringement. In its reply, Skynet argues that all of the models listed by TWI in its Statement of Facts represent hard-switching models, and that most of the models TWI listed have never been sold within the United States and are therefore not at issue in this lawsuit. In addition, Skynet claims that while it produced thousands of various products, all of those products fit within its three sub-groups: one-MOSFET models, two-MOSFET models and three-MOSFET with an IR 1167 IC. According to Skynet, even if TWI was provided with a complete list of every model that had been produced, the analysis regarding infringement would not change.

The Court is unpersuaded by TWI's assertions of discovery misconduct or inadequate disclosures on the part of Skynet. Discovery in this case closed on June 2, 2009, which was 100 days after entry of the Markman Order. (See Dkt.#143). and the Court will not refrain from ruling on Defendant's fully briefed summary judgment motion in order to accommodate TWI's attempt to track down information relating to missing product models. If TWI was dissatisfied with the scope of Skynet's responses to its discovery requests, TWI should have

presented that issue to the Court at the appropriate time and through the appropriate channels, i.e., using the procedures set forth in the Court's Rules of Practice in Civil Cases.

a. Skynet's One-MOSFET Models

Skynet contends that there is no genuine issue of material fact as to infringement on its one-MOSFET models, since Skynet's one-MOSFET models are all hard-switching power supplies rather than soft-switching power supplies, and, as their name indicates, the one-MOSFET models contain only one MOSFET in the primary circuit. Because the '329 Patent requires the "first switch means" and "third switch means" (which have been construed as a MOSFET or a diode-switch-capacitor subcircuit) to be located in the primary circuit, Skynet's one-MOSFET models are incapable of infringement. Beyond that, Skynet claims that its one-MOSFET models are not capable of achieving ZVS, which is required under the '329 Patent.

TWI responds by arguing that the record shows that some of the one-MOFSET models in Skynet's catalogue list are referred to as soft-switching, rather than hard-switching. TWI implies that this discrepancy in the evidence creates a genuine issue of material fact that must be resolved by the jury at trial. TWI also contends that even if Skynet's one-MOSFET models do not literally infringe the '329 Patent, these products infringe under the doctrine of equivalents. Dawn Equip. Co., 140 F.3d at 1015-16.

On the issue of literal infringement, the Court agrees with Defendant and notes that Skynet's one-MOSFET models in no sense embody each and every limitation of claim 1 of the '329 Patent. There are obvious differences in function and structure, like the absence of a second MOSFET in the primary circuit and the inability of achieving ZVS. Furthermore, TWI's argument concerning soft-switching references in Skynet's catalogue is not enough to create a genuine issue of material fact, such that a reasonable jury would be able to rule in its favor on the issue of literal infringement on Skynet's one-MOSFET models.

To determine equivalent infringement under the doctrine of equivalents, courts generally apply both the "insubstantial differences" test as well as the "function-way-result" test. See Schoell v. Regal Marine Indzls., Inc., 247 F.3d 1202, 1209-10 (Fed. Cir. 2001).

Under the function-way-result test, the court determines whether the element of the accused product at issue performs substantially the same function, in substantially the same way, to achieve substantially the same result, as the limitation at issue in the claim. See id. Both the "insubstantial differences" test and the "function-way-result" test require that "infringement be established on a limitation-by-limitation basis," such that the accused product "must be shown to include an equivalent for each literally absent claim limitation." Dawn Equip. Co., 140 F.3d at 1015 (citing Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17 (1997)).

As Defendant notes, there are significant problems with TWI's reliance on the doctrine of equivalence to support its claim that Skynet's one-MOFSET models infringe claim 1 of the '329 Patent. It does not appear that TWI raised infringement under the doctrine of equivalents prior to TWI responding to Skynet's summary judgement motion. As such, TWI's expert report, issued by Mr. Walker, did not discuss equivalent infringement at all. In fact, the only evidence that TWI has offered with respect to equivalence is a conclusory statement by its expert, Mr. Walker, in an affidavit claiming that Skynet's "one-MOSFET models substitute diodes for MOSFETs to accomplish the same function in substantially the same way to achieve the same result as claim 1 of the '329 Patent." (See TWI SOF, Dkt.# 223, ¶175.) An unsupported statement such as this is simply not sufficient to withstand summary judgment. Dynacore Holdings Corp. v. U.S. Philips Corp., 363 F.3d 1263,1278 (Fed. Cir. 2004) ("It is well settled that an expert's unsupported conclusion on the ultimate issue of infringement is insufficient to raise a genuine issue of material fact, and that a party may not avoid that rule simply by framing the expert's conclusion as an assertion that a particular critical claim limitation is found in the accused device.).

In addition, Mr. Walker's affidavit statement runs counter to the Court's Markman Order. The Court has already determined that, "[b]ecause current flow through the diode rectifier could not be controlled and each of the "switch means" in the 329 patent must be controllable by the "control means," a diode is not a structure capable of performing the recited function." (Dkt.#161, p.11.) (emphasis added). Because the Court has already

determined in its Markman Order that a diode is not capable of performing the recited function, even if Mr. Walker's statement is accurate, it is not possible, in light of the claim construction, for Skynet's one-MOFSET models to substitute diodes for MOSFETs and accomplish the same function, in substantially the same way, to achieve substantially the same result, as the limitation at issue in claim 1. Schoell, 247 F.3d at 1209-10. For the same reasons, differences between the '329 Patent and Skynet's one-MOFSET models are not "insubstantial" as a matter of law.

Accordingly, summary judgment as to non-infringement on Skynet's one-MOSFET models is appropriate.

b. Skynet's two-MOSFET Models

Skynet argues that it is uncontroverted that all of the two-MOSFET models at issue in this suit contain two MOSFETs in the primary circuit but no MOSFET in the secondary circuit. Skynet claims that its two-MOSFET models contain a diode in the secondary circuit. Because the Court's Markman Order determined that none of the "switch means" in the '329 Patent can be diodes, there is no genuine issue of material fact as to literal infringement. Similarly, because the Markman Order determined that "a diode is not a structure capable of performing the recited function," Skynet contends there can be no infringement under the doctrine of equivalents. TWI responds by arguing that the two-MOSFET models infringe under the doctrine of equivalents, and that it would be inappropriate for the Court to enter summary judgment before Skynet complies with TWI's legitimate discovery requests and gives TWI the opportunity to determine the scope of potential infringement.

For the same reasons that Skynet's one-MOSFET models do not infringe the '329 Patent, the Court finds that no reasonable jury could conclude that Skynet's two-MOSFET models infringe—either literally or under the doctrine of equivalents. This includes Skynet's Z066 model, which is a two-MOSFET model. It is undisputed that Skynet's two-MOSFET models, including the Z066, have two MOSFETs in the primary circuit and one diode in the secondary circuit, and the '329 Patent requires two-MOSFETs in the primary circuit and one-MOSFET in the secondary circuit. Kemco Sales, Inc., 208 F.3d at 1364; Schoell, 247 F.3d

at 1209-10. Furthermore, as previously stated, the Court will not re-open discovery during summary judgment without a compelling justification, which does not exist here. For reasons previously explained summary judgment in favor of Defendant Skynet is appropriate on non-infringement for its two-MOSFET models.

c. Skynet's three-MOSFET Models

Skynet presently produces at least 18 power supply models that have two-MOSFETs in the primary circuit and one-MOSFET in the secondary circuit. These are referred to as Skynet's three-MOSFET models. At issue here is whether one particular type of its three-MOSFET models, Skynet's Z066-1 product model, infringes the '329 Patent. Skynet contends that all of its three-MOSFET models, including Z066-1, are incapable of infringing the '329 Patent as a matter of law, because its three-MOSFET models do not meet the teachings of the "control means," the "second switch means," and the and the "whereby" clause. On the other hand, TWI, argues that in light of the testimony of its expert, Mr. Walker, and Skynet's expert, Dr. Horenstein, there is a genuine issue of material fact as to literal infringement on Skynet's three-MOSFET models, including the Z066-1.[4]

With respect to the term "control means" under the Court's Markman Order, the "control means" must include (1) PWM controller or (2) a conventional timing circuit, and must be "capable of selectively activating a MOSFET or a diode-switch-capacitor subcircuit, such that the 'switch means' are operated when the voltage drop therethrough is substantially zero." (Dkt.#161 , p. 14). In other words, the "control means" must be a PWM controller or a conventional timing circuit that controls the first, second and third MOSFETs, so that the three MOSFETs are operated when the voltage drop therethrough is substantially zero.

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[4]TWI did not argue infringement under the doctrine of equivalents for Skynet's three-MOSFET models, since there is no reference to equivalent infringement contained in the relevant section of TWI's expert report or its Statement of Facts and response brief. Instead, it appears as though TWI chose to rely upon literal infringement with respect to Skynet's three-MOSFET models. As such, the Court will not address infringement under the doctrine of equivalents as it relates to Skynet's three-MOSFET models or the Z066-1 product model.

According to Skynet, it is undisputed that all of its three-MOSFET models are characterized by their inclusion of a SmartRectifier IR 1167 IC in the secondary circuit and an IC and PWM controller in the primary circuit. It is also undisputed that there is no electrical or galvanic connection between the IC and the PWM controller in the primary circuit and the IR1167 IC in the secondary circuit. According to Skynet, the IR 1167 IC is a driver IC specifically designed to be used only in the secondary circuit of a flyback converter. As such, the IR 1167 IC is confined to the secondary circuit and only operates the single MOSFET in the secondary circuit. As such, the IR 1167 IC cannot control MOSFETs on the primary side of the circuit. Similarly, Skynet argues that the PWM controller in the primary circuit is used to activate the two MOSFETs in the primary circuit and does not have the ability to operate the MOSFET in the secondary circuit. Skynet claims that because the PWM controller cannot selectively activate the MOSFET in the secondary circuit, and because the IR 1167 IC is used only in the secondary circuit and cannot activate the two MOSFETs in the primary circuit, its three-MOSFET models do not as a matter of law meet the "control means for selectively activating said first, second, and third switch means…" element in claim 1 of the '329 Patent.

For the same reasons, Skynet contends that its three-MOSFET models cannot meet the requirements of the "second switch means," since the "second switch means" must be "operable substantially in synchronization with said first switch means and coupled to said secondary winding for applying at least a portion of said exchanged energy to said DC load." According to Skynet, this aspect of the '329 Patent requires that the second MOSFET in the secondary circuit be operable substantially in synchronization with the first MOSFET located in the primary circuit. Skynet claims that there is no genuine issue of material fact as to the impossibility of its three-MOSFET models meeting this requirement, since the IR 1167 IC is confined to the secondary circuit and controls only the single MOSFET in the secondary circuit, which cannot be operated in synchronization with the MOSFETs in the primary circuit. Skynet argues that this was confirmed by testing conducted by its expert, Dr. Horenstein.

Besides not being capable of "selectively activating said first, second and third switch means," or meeting the requirement of the "second switch means," Skynet also claims that the IR 1167 IC cannot not be a PWM controller or a conventional timing circuit. The Parties do not dispute that a PWM controller alters its pulse width from some received stimulus, generally a voltage, and produces a voltage signal having a modulated pulse width. The pulse width describes the fraction of the total period over which the voltage is "high," or "on." The pulse width is commensurate with the duty cycle, and the duty cycle changes according to the AC line input voltage and the output load. Furthermore, it is undisputed that the IR 1167 Smart Rectifier IC is described by its manufacturer, International Rectifier, as a:

> smart secondary-side driver IC designed to drive N-Channel power MOSFETs used as synchronous rectifiers in isolated Flyback converters. The IC can control one or more paralleled N-MOSFETs to emulate the behavior of Schottky diode rectifiers. The drain to source voltage is sensed differentially to determine the polarity of the current and turn the power switch on and off in proximity of the zero current transition.

The General Description Section of the IR 1167 IC datasheet further states that "[t]he IR1167 Smart Rectifier IC can emulate the operation of diode rectifier by properly driving a Synchronous Rectifier (SR) MOSFET." According to Skynet's expert, Dr. Horenstein, the IR1167 IC is a special purpose high-speed driver IC intended for use only on the secondary side of a flyback converter, which can emulate the operation of a diode rectifier by properly driving the gate of the MOSFET according to its current direction. A designer will choose this method of creating a "super diode" to reduce losses caused by the forward drop of a solitary diode. The chip has no external input by which the user can modulate conduction via gate voltage. In contrast, a PWM controller requires voltage control of a MOSFET gate via a signal supplied externally to the IC. Unlike a PWM controller, which controls the duty cycle of a MOSFET switch via the gate, the IR1167 IC senses the drain-to-source voltage of the MOSFET and drives the gate accordingly so as to ensure a zero-current transition. Because the IR 1167 IC converts the operation of a MOSFET into that of a high current diode, Skynet argues that the IR 1167 IC cannot as a matter of law be a PWM controller.

With respect to whether the IR 1167 IC can be classified as a "conventional timing circuit," Skynet argues that it is undisputed that the IR 1167 IC was sold in 2005, and was the first IC capable of controlling the MOSFET strictly in the secondary circuit of the flyback converter to allow the MOSFET to be operated like a diode. Skynet notes that Mr. Wittenbreder applied for the '329 Patent in 1992, some 13 years before the IR 1167 IC was introduced. As such, the IR 1167 IC, cannot meet the claim construction requirement that the timing circuit be 'conventional.' At the same time, Skynet argues that IR 1167 IC is not even a timing circuit at all, since a timing circuit operates by a clock frequency or timing, while the operation of the IR 1167 IC is based on the amount of current that flows into the anode of the body diode in the MOSFET. (See Dkt.#252, Ex. B, ¶ 28-29.)

With respect to the "whereby" clause, Skynet contends that Plaintiffs expert, Mr. Walker, improperly went into what it calls "a restricted condition" to satisfy a claim limitation. Accordingly, Skynet requests that the Court provide guidance regarding whether it is proper for the patentee to go into a restricted condition, such as the overload or brown-out condition, in order to prove infringement. Specifically, Skynet alleges that TWI's expert, Mr. Walker, was testing Skynet's Z066-1 model to determine whether it met the requirement of the "whereby" clause that "peak to peak AC magnetizing current in the primary winding of said first coupled inductive element is **less than twice** the average magnetizing current in the primary winding of said first coupled inductive element," or if the Z066-1 conformed to the teachings of the '986 Patent, such that the "peak-to-peak magnetizing current is **greater than twice** the average magnetizing current in the primary winding of the transformer." Skynet claims that in Mr. Walker's Initial Expert Report, he provided a graph as evidence to demonstrate that the Z066-1 met the peak-to-peak less than twice condition of the '329 Patent. However, Mr. Walker did not provide Skynet with a description of testing conditions to allow its expert to verify his results. Skynet alleges that its expert, Dr. Horenstein, attempted to recreate Mr. Walker's results by testing the Z066-1 over the entire load range (i.e., 0 to 12 amps) and found that at the rated load condition, (i.e., the maximum power allowed by the power supply, which is at 5V/12 amps for the Z066-1),

and that all Dr. Horenstein could observe was a "peak-to-peak magnetizing current equal to twice the average magnetizing current in the primary winding of the transformer" condition. This, of course, did not satisfy the claim limitation of the '329 Patent. Nevertheless, Dr. Horenstein later discovered that it was only when he went into a "hiccup mode"—which is an overload protection that temporarily shuts down the device if it exceeds the rate load limit at which it is supposed to function— that he was able to come close to duplicating Mr. Walker's findings. Skynet argues that the Z066-1 cannot normally or safely function under the conditions under which Mr. Walker tested it. Skynet claims that those results should be ignored by the Court as improper for purposes of the infringement analysis. Moreover, Skynet argues that TWI provided no proof that the Z066-1 is capable of meeting the peak-to-peak less than twice condition under anything resembling normal operating conditions.

Turning to TWI's responses, in terms of whether Skynet's three-MOSFET models are capable of "selectively activating said first, second and third switch means," TWI claims that although there is no electrical or galvanic connection between the PWM controller and IC in the primary circuit and the IR1167 IC in the secondary circuit, there is a magnetic connection via coupling, which facilitates control of the IR 1167 IC by the PWM controller. TWI noted that there is no limitation in claim 1 of the '329 patent requiring an electrical or galvanic connection between the PWM controller and each of the MOSFETs. With respect to magnetic coupling, TWI claims that the PWM controller controls the primary MOSFETS, which provide current through the transformer. The current through the transformer thereby affects VDS on the second MOSFET, which is read by and controls the IR 1167 IC. Therefore, according to TWI, the PWM controller in the primary circuit is not limited to turning on and turning off the two MOSFETs in the primary circuit, but instead selectively activates each of the three MOSFETs by controlling the IR 1167 IC.

The Court notes that TWI's reference to the magnetic coupling effect is found in the Declaration of Mr. Walker, attached to its response brief. (Dkt.#248 Ex. 6, ¶9-14.) In that document, Mr. Walker claims that switches can be controlled through magnetic coupling, as

illustrated in Figure 7 of the '329 patent, and that since the two primary-side MOSFETs drive current through the transformer and affect the second MOSFET, the PWM controller is coupled to and is controlling the IR1167 IC and the second MOSFET. Mr. Walker further notes that the data sheet for the IR 1167 IC illustrates such a magnetic coupling. Mr. Walker's declaration contains no explanation of magnetic coupling principle in general, and no explanation of how the specification of the '329 Patent exemplifies this theory. Furthermore, even if the specification referred to by Mr. Walker indicates that magnetic coupling works in the '329 Patent, based the evidence he has presented, there is nothing in the record that would allow a reasonable jury to conclude that magnetic coupling creates control in Skynet's Z066-1 or other three-MOSFET models. In fact, Mr. Walker fails to explain how the uncontroverted data sheet provided by the manufacturer supports his conclusion that the IR 1167 IC is capable via magnetic coupling of being controlled by the PWM controller in the primary circuit. Providing such proof would be necessary to defeat summary judgment, since the evidence provided by Skynet, including undisputed information provided by the manufacturer of the IR 1167 IC, indicates that the IR 1167 IC is specifically designed to be used only in the secondary circuit of a flyback converter, and that IC in the secondary circuit cannot effectuate any control over the MOSFETs in the primary circuit since there is no electric or galvanic connection between the two circuits.

Furthermore, Plaintiff's argument that there is indirect control over the MOSFET in the secondary circuit or via magnetic coupling is belied by the findings of the Special Master, which the Court adopted in its entirety. As previously stated, it is undisputed that the "[t]he IR1167 Smart Rectifier IC can emulate the operation of diode rectifier by properly driving a Synchronous Rectifier (SR) MOSFET." The adopted Report and Recommendation noted that "current flow through the diode rectifier could not be controlled," and a "a diode is not controllable by any of the 'control means' described in the patent." (See Dkt.#139, p. 12.) Because TWI has failed to create a genuine issue of material fact as to whether there is any connection and control between the MOSFET and IR 1167 IC in the secondary circuit and the PWM controller and the two MOSFETs in the primary circuit, summary judgment is

appropriate on the issue of whether Skynet's three-MOSFET models have a control means "for selectively activating said first, second, and third switch means…"

For similar reasons, TWI is not capable of creating a genuine of issue of material fact as to whether Skynet's three-MOSFET models meet the requirement of the "second switch means." Specifically, in its Statement of Facts (paragraphs 73-74), TWI did not produce any scientific evidence to rebut Dr. Horenstein's testing results, which showed that the MOSFET in the secondary circuit was not operable substantially in synchronization with the first MOSFET in the primary circuit using the IR 1167 IC. Because there is not a genuine issue of material fact as to whether there is a connection between the MOSFET and IR 1167 IC in the secondary circuit and the MOSFETs and ICs in the primary circuit, there is also no genuine issue of material fact as to whether the "second switch means" can be operated in synchronization with the first MOSFET in the primary circuit. As such, summary judgment is also appropriate as to non-infringement on Skynet's three-MOSFET models for failing to meet the "second switch means" limitation of the '329 Patent.

With respect to whether the IR 1167 IC is a PWM controller or a conventional timing circuit, TWI again argues that although the IR 1167 IC has no electrical or galvanic connection to the PWM controller in the primary circuit, there is control via the magnetic coupling effect, since the two primary circuit MOSFETs drive current through the transformer and affect the secondary circuit MOSFET. As such, the PWM controller is connected to and is controlling the IR 1167 IC and the second MOSFET. According to TWI, the fact that the PWM controller in the primary circuit controls the IR 1167 IC, this functionally makes the IR 1167 IC a component part of a larger PWM controller, which controls the operation of both circuits. However, the Court notes that it has already determined that there is no genuine of issue of material fact as to the lack of control by the PWM controller in the primary circuit over the IR 1167 IC and the MOSFET in the secondary circuit. Because the PWM controller in the primary circuit does not, as a matter of law, control the IR 1167 IC and the MOSFET in the secondary circuit, there is genuine

issue of material fact that the IR 1167 IC is not part of a larger PWM controller that is capable of selectively activating the three-MOSFETs.

In addition, the Court notes that TWI has not produced sufficient evidence to show that the IR 1167 IC can in any sense be classified as a "conventional timing circuit." The Court notes that its Markman Order determined that the "control means" needed to be both a PWM controller or a conventional timing circuit. TWI has failed to produce sufficient evidence rebutting Skynet's contention that the operation of the IR 1167 IC is based on the amount of current that flows into the anode of the body diode in the MOSFET, rather than by clock frequency or timing. As such, summary judgment as to non-infringement of Skynet's three-MOSFET models is appropriate on this element as well.

As to the "whereby" clause, TWI does not dispute that its expert, Mr. Walker, was only able to demonstrate that the Z066-1 met the peak-to-peak less than twice condition while testing at power levels that have been referred to by Skynet as "brown-out" conditions or the product's hiccup mode. TWI notes that power supplies have different ratings for various conditions, such as peak power delivery and continuous power delivery. TWI claims that Skynet confuses these ratings, insisting that any operating condition over the continuous power rating of 12 amperes is restricted. Moreover, according to TWI, the specification for the Z066-1 states that the output current can flow at up to 18 amperes for at least 8 seconds, and that the load for a power supply varies, and it is expected that the current will exceed the continuous supply rating of 12 amperes. Therefore, TWI alleges that even if Mr. Walker brought the output current to above 12 amperes, it would still be within normal operations. TWI contends that nothing in the '329 patent limits the scope of the claims to particular rated operating conditions for delivering continuous power.

While Mr. Walker's method of testing Skynet's three-MOSFET model raises serious questions as to whether literal infringement can be established by testing a power supply beyond its rated load or while the product operates in mode that is incapable of supplying power, Skynet has provided no case law to support its contention that a patentee may not prove infringement in this manner. In addition, this is not a question that currently needs to

be addressed. The Court has already determined that TWI failed to prove infringement as to Skynet's three-MOSFET models as a matter of law. Therefore, a finding of whether these models meet the peak-to-peak less than twice condition so as to satisfy the "whereby" clause is unnecessary in light of the Court's previous finding of non-infringement.

Accordingly, summary judgment as to non-infringement on Skynet's three-MOSFET models, including the Z066-1 model, is appropriate.

2. Invalidity

It appears, based on all the information presented, especially in light of the fact that the '329 Patent is presumed valid and that this presumption can only be overcome by clear and convincing evidence to the contrary, that there would likely be a genuine issue of material fact as to the alleged invalidity of the '329 Patent on the grounds of anticipation and obviousness. See American Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1359 (Fed. Cir.), cert. denied, 469 U.S. 821 (1984). However, because Skynet's one, two and three-MOSFET models do not infringe the '329 Patent as a matter of law, it is unnecessary to determine whether the '329 Patent is invalid due to anticipation or obviousness.

IV. THE PARTIES' STATE LAW CLAIMS

This case is essentially a patent dispute between Technical Witts—and by extension Mr. Wittenbreder—and Skynet over alleged infringement of the '329 Patent. However, during the course of litigating these intellectual property issues, the Parties chose to assert various Arizona state law claims against each other based on allegations that each side engaged in fraudulent activity relating to a May/June 2001 trip taken by Mr. Wittenbreder to Taiwan to meet with officials from Skynet to negotiate a consulting or licensing agreement. All of these claims are without merit. TWI's claims against Skynet for fraud, fraudulent inducement, and negligent misrepresentation are all barred by the statute of limitations. Similarly, Skynet's claims of fraud and injurious falsehood against Technical Witts and Mr. Wittenbreder are also barred by the statute of limitations, and the third-party complaint that Skynet filed against Mr. Wittenbreder constitutes an improper use of Rule 14 of the Federal Rules of Civil Procedure.

As to Technical Witt's claims against Skynet, the statute of limitations for fraud in Arizona is three-years. See A.R.S.. § 12-543(3) ("There shall be commenced and prosecuted within three years after the cause of action accrues, and not afterward, the following actions: For relief on the ground of fraud or mistake, which cause of action shall not be deemed to have accrued until the discovery by the aggrieved party of the facts constituting the fraud or mistake"). The statute of limitations for fraudulent inducement and negligent misrepresentation in Arizona is two-years. See e.g., Design Trend Int'1 Interiors, Ltd. V. Huang, 2007 U.S. Dist. LEXIS 66840, at "15-16 (D. Ariz. Sept. 7, 2007)(fraudulent inducement); CDT, Inc. v. Addison, Roberts & Ludwig, 7 P.3d 979, 980 (Ariz. Ct. App. 2000) (negligent misrepresentation).

TWI's Second Amended Complaint, (Dkt.#87), shows that TWI's claims against Skynet are based on allegations that Mr. Wittenbreder was induced to travel to Taiwan in May/June 2001on Skynet's expense under false pretenses. The Second Amended Complaint alleges that Skynet represented to Mr. Wittenbreder that it was prepared to enter into a licensing agreement for the '329 Patent, when in actuality Skynet's true intent was to enter into a consulting agreement with Mr. Wittenbreder. Mr. Wittenbreder's trip to Taiwan took place in May/June 2001 and this lawsuit was commenced by the filing of the Complaint on September 27, 2004. Meaning, there is a difference of more than three-years between the trip taken by Mr. Wittenbreder to Taiwan and the filing of Technical Witt's Complaint. Based on the evidence presented at summary judgment, the only conclusion that a reasonable jury could reach is that Mr. Wittenbreder should have discovered Skynet's alleged duplicity at some point during or immediately after May/June 2001. As such, TWI's state law claims are barred by the statute of limitations. The Court is not persuaded by TWI's contentions that Mr. Wittenbreder and Skynet were in negotiations until 2003 over a licensing agreement, or that Mr. Wittenbreder should not have been aware of Skynet's intentions regarding his trip until United States Patent No. 6,507,500 ("the '500 Patent") was published in September 2002. The undisputed evidence shows that the 2001 negotiations in Taiwan ended after the Parties could not agree on whether Mr. Wittenbreder would accept a consulting agreement without

a license, and there was no additional communication between the Parties after the trip ended (the scope of the 2003 communications include nothing more than a unilateral attempt by Mr. Wittenbreder's counsel to contact Skynet to again offer a license on the '329 Patent).

As to Skynet's third-party complaint filed against Mr. Wittenbreder, Rule 14 of the Federal Rules of Civil Procedure permits a defendant to "serve a summons and complaint on a nonparty who is or may be liable to it for all or part of the claim against it." Fed. R. Civ. P. 14. Rule 14 demands (1) that the third-party defendant be liable to the third-party plaintiff for all or part of the Plaintiff's claim, and (2) that the third-party defendant is not a current party to the main lawsuit. Clearly, this case does not have the appropriate procedural posture to support an impleader action by Skynet against Mr. Wittenbreder. There are no set of circumstances for Skynet to plausibly argue that Mr. Wittenbreder is somehow liable to Skynet for all or part of Technical Witt's claims relating to patent infringement or fraud. In fact, Rule 14 impleader actions are generally limited to situations where the third-party is liable to the defendant in contribution or indemnity for part of a plaintiff's judgment. See Neal v 21st Mortg. Corp., 601 F. Supp. 2d 828, 830 (S.D. Miss. 2009) ("Typically, this requirement that the third-party claim be for derivative or secondary liability is met by an allegation of a right of indemnity . . . contribution"). Obviously, this is not such a case. Accordingly, Skynet's third-party complaint against Mr. Wittenbreder must be dismissed.

As to Skynet's counterclaims against Technical Witts, the statute of limitation for fraud is three-years, see A.R.S. § 12-543(3), and the statute of limitations for injurious falsehood is either one or two years. See Gee v. Pima County, 612 P.2d 1079, 1179-80 (Ariz. Ct. App. 1980) (discussing whether the statute of limitations for a claim of injurious falsehood should be one-year under A.R.S. § 12-541(1) or two-years under A.R.S. § 12-542(3)). Skynet's claims center around allegations that Mr. Wittenbreder misrepresented his abilities with respect to power converter technologies and his desire to enter into a consulting agreement when he traveled to Taiwan in May/June 2001. As is the case with TWI's fraud claim, the record plainly reveals that Skynet should have been aware of Mr. Wittenbreder's alleged technical shortcomings during his May/June trip to Taiwan. In fact,

Skynet's documents admit that Mr. Wittenbreder "could not read circuit diagrams" or "shed light on how to implement the '329 patent." In light of such statements, no reasonable jury could believe that Skynet was not in a position to questions the nature of Mr. Wittenbreder's qualifications at any point after the May/June 2001 meeting. Similarly, email exchanges between Mr. Jim Liang and Mr. Wittenbreder before the May/June 2001 trip, (Dkt.#183 Ex. 3), conclusively show that Skynet was or should have been aware of Mr. Wittenbreder's desire to enter into a licensing agreement and his reluctance to becoming a Skynet consultant. Accordingly, Skynet's counterclaims against Technical Witts fall outside the statute of limitations and summary judgment on these claims is appropriate.[5]

Accordingly,

IT IS HEREBY ORDERED granting Defendant Skynet Electronic Company, LTD's Motion for Summary Judgment as to Non-Infringement of the '329 Patent, (Dkt.#171).

IT IS FURTHER ORDERED denying as futile Plaintiff Technical Witts, Inc.'s Motion to Amend Complaint, (Dkt.#168).

IT IS FURTHER ORDERED granting Counterdefendant Technical Witts, Inc. and Third Party Defendant Ernest Wittenbreder's Motion for Partial Summary Judgment as to Skynet's State Law Claims, (Dkt.#170).

IT IS FURTHER ORDERED granting Defendant Skynet Electronic Company, LTD's Motion for Summary Judgment as to Technical Witts' State Law Claims, (Dkt.#185).

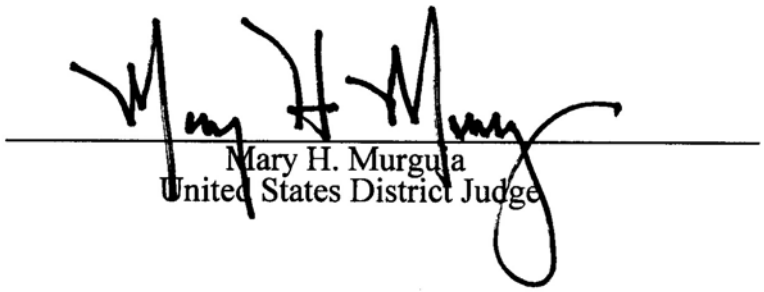
IT IS FURTHER ORDERED directing the Clerk of the Court to enter judgment accordingly.

/ / /

[5]Skynet's third party claims against Mr. Wittenbreder also fall outside the statute of limitations.

IT IS FURTHER ORDERED directing the Clerk of the Court to unseal this Order on March 12, 2010, unless counsel file a notice of opposition to unsealing the Order prior to that date.

DATED this 2nd day of March, 2010.



cc: All counsel