

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION**

THE CHAMBERLAIN GROUP, INC. and	)	
JOHNSON CONTROLS INTERIORS	)	
L.L.C.,	)	
	)	
Plaintiffs,	)	No. 05 CV 3449
	)	
v.	)	Hon. Amy J. St. Eve
	)	
LEAR CORPORATION,	)	
	)	
Defendant.	)	

**MEMORANDUM OPINION AND ORDER**

AMY J. ST. EVE, District Court Judge:

In 2005, patentee The Chamberlain Group, Inc. (“Chamberlain”), and its exclusive licensee Johnson Controls Interiors, L.L.C. (“JCI”), filed suit against Lear Corporation, alleging that Lear’s Car2U<sup>®</sup> product infringed U.S. Patent Nos. 6,154,544 and 6,810,123. Plaintiffs subsequently amended their complaint to allege that Lear also had infringed U.S. Patent No. 7,412,056. Following the close of discovery, the parties filed a number of dispositive motions. Lear seeks summary judgment as to its asserted noninfringement of the ‘544, ‘123, and ‘056 patents. (R. 406; R. 407.) Lear also requests summary judgment of invalidity of all three asserted patents under 35 U.S.C. § 101. (R. 637.) In addition to opposing the preceding motions, Chamberlain and JCI urge the Court to grant summary judgment in their favor as to Defendant’s alleged infringement of all three patents. (R. 418; R. 428; R. 431.) Plaintiffs also move for summary judgment on Lear’s invalidity defense that the asserted claims are directed to

unpatentable subject matter. (R. 652.) Plaintiffs further seek summary judgment on Defendant's inequitable-conduct claim. (R. 665.) They also move for summary judgment on Defendant's invalidity defenses based on alleged lack of definiteness, enablement, and written description. (R. 659.)

The Court rules as follows on these motions: Lear's motion for summary judgment as to its noninfringement of the '544 and '123 patents is granted in part and denied in part; Lear's summary-judgment motion of noninfringement of the '056 patent is denied; Plaintiffs' motions for summary judgment of Lear's alleged infringement of the '544, '123, and '056 patents are denied; Lear's motion for summary judgment of invalidity under 35 U.S.C. § 101 of the '544, '123, and '056 patents is denied; Plaintiffs' motion for summary judgment on Lear's invalidity defense that the asserted claims are directed to unpatentable subject matter is granted; Plaintiffs' motion for summary judgment on Lear's inequitable-conduct claim is granted in part and denied in part; and Plaintiffs' motion for summary judgment on Lear's invalidity defenses based on alleged lack of definiteness, enablement, and written description is granted in part and denied in part.

## **BACKGROUND**

### **I. The Parties and the Lawsuit**

Plaintiff, The Chamberlain Group, Inc., a manufacturer and purveyor of garage-door openers, is incorporated in Connecticut and has its principal place of business in Illinois. (R. 270 at ¶ 1; R. 410 at ¶ 2.) On November 28, 2000, Chamberlain acquired the rights to U.S. Patent No. 6,154,544 ("the '544 patent"), entitled "Rolling Code Security System." (R. 270 at ¶ 9.) Almost four years later, Chamberlain also acquired U.S. Patent No. 6,810,123 ("the '123

patent”), which bears the same title as the ‘544 patent. (R. 270 at ¶ 15.) The ‘544 and ‘123 patents disclose a remote-control, garage-door opening system, which includes a transmitter and a receiver. (R. 342 at ¶ 3.) The ‘544 and ‘123 patents are in the same patent family (the ‘123 patent is a continuation of the ‘544 patent) and the two share the same specification. (R. 410 at ¶ 9.) The similarity between the two patents led Chamberlain to file a “terminal disclaimer” to the ‘123 patent. (*Id.*)

On June 13, 2005, Chamberlain, owner of the ‘544 and ‘123 patents, sued Lear Corporation for infringement of those intellectual-property rights. (R. 410 at ¶ 5.) Lear is a manufacturer and seller of vehicle interior systems and components. (R. 342 at ¶ 1.) Chamberlain filed an Amended Complaint on October 5, 2005. (R. 43.) JCI, Chamberlain’s exclusive licensee of the ‘544 and ‘123 patents, joined in the Amended Complaint as a named Plaintiff. (*Id.*) On August 19, 2008, Plaintiffs again amended their complaint to add a count of infringement of the subsequently issued U.S. Patent No. 7,412,056 (“the ‘056 patent”). (R. 270.) Chamberlain and JCI allege that Lear’s transmitters, which are installed in automobiles made by OEM for actuating garage-door operators made by Chamberlain, infringe the ‘544, ‘123, and ‘056 patents. (*Id.*)

The allegedly infringing product is a universal transmitter used to open garage doors. (R. 434 at 26-27.) In opening those doors, the product’s transmitter acts as a remote-control device that encrypts a coded signal each time the transmitter is actuated by the user and communicates that signal on a radio frequency carrier to the receiver, which is usually attached to a mechanical device that operates the garage door. *Id.* The receiver recognizes the coded signal sent from the transmitter, and then causes the mechanical device to operate the garage door. *Id.* The accused

device is interoperable with Plaintiffs' garage-opening product, which incorporates the allegedly infringed patented technology. (R. 410-6 at 12; R. 455 at 14.)

## **II. The District Court's Grant of a Preliminary Injunction and Defendant's Successful Appeal to the Federal Circuit**

Having held a *Markman* hearing, the district court<sup>1</sup> entered a claim-construction order in which it defined "binary code" as a "code in which each code element may be either of two distinct kinds of values, which code may represent various kinds of letters and numbers including, but not limited to, a representation of a base 2 number." (R. 148 at 8.) Construing "binary code" to encompass more than a binary number, the district court rejected Lear's proposed construction of "binary code generator." (*Id.* at 8-9.) Judge Moran reached the same conclusion with respect to "trinary code generator," observing that the claims did not limit the initial binary code to a binary number, but instead left "the term open to encompass other numerical and character languages, including trinary code." (*Id.* at 9.)

Shortly thereafter, the district court issued a preliminary injunction in Plaintiffs' favor. (R. 166.) Defendant contended that its Car2U<sup>®</sup> product used only trinary numbers and algorithms, and Plaintiffs argued that the distinction was irrelevant because the Car2U<sup>®</sup> device relied on binary language to communicate trinary numbers.<sup>2</sup> Since Defendant conceded (as it had to) that the trinary numbers used by its Car2U<sup>®</sup> product were necessarily represented by 0s and 1s in the product's computer, the district court held that the accused product's "binary-coded trinary numbers"

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<sup>1</sup> This case was originally before the Hon. James B. Moran, who presided over the litigation until it was transferred to this Court on April 9, 2009. (R. 315.)

<sup>2</sup> As the Federal Circuit recognized, and as the parties agreed on appeal, modern computers operate in "binary code." As the Federal Circuit put it, "microprocessors and memory devices use low and high voltages to manipulate, transmit, receive, and store vast amounts of data. A low voltage represents a 0, while a high voltage represents a 1." *The Chamberlain Group, Inc., et al. v. Lear Corp.*, 516 F.3d 1331, 1335 (Fed. Cir. 2008).

necessarily use binary code, and so the Car2U<sup>®</sup> product would likely fall within the ‘544’s “binary-code” limitation. *Id.* This ruling formed the basis of the district court’s decision preliminarily to enjoin Defendant.

On appeal, the Federal Circuit vacated the preliminary injunction and reversed the claim construction on which the district court had relied. *The Chamberlain Group, Inc., et al. v. Lear Corp.*, 516 F.3d 1331 (Fed. Cir. 2008). Judge Rader for the panel noted that, “for the district court, Lear’s ‘binary-coded trinary numbers’ were binary code, not trinary code.” *Id.* at 1336. Examining the ‘544 patent’s specification, the Federal Circuit found that the disclosure restricts the term “binary code” to a narrower meaning than the ordinary or customary reading of the term. *Id.* at 1337. The Federal Circuit construed “code” as it is used in the claims and concluded that “the ‘544 patent’s term ‘trinary code’ is relevant to construing ‘binary code’ because the term ‘code’ presumptively should carry the same meaning throughout the patent.” *Id.* at 1337. Specifically, the Federal Circuit agreed with Lear that the ‘544 patent uses the term “binary code” “to represent the meaning of the message,” or content, and “not its mere form.” *Id.* In other words, the ‘544 limits “binary code” to binary, or base 2, numbers and “trinary code” to trinary, or base 3, numbers, even though the trinary numbers may be still expressed in the binary “0s and 1s” language of the transmitter’s microcontroller. *Id.* at 1139.

Observing that its reversal of the district court’s claim construction “fundamentally influence[d] the likelihood of success in proving infringement,” the Federal Circuit vacated the preliminary injunction. *Id.* at 1340.

### **III. Post-Remand Developments**

On remand, Defendant moved for summary judgment, arguing that the Federal Circuit’s

construction made it impossible for Plaintiffs to prove infringement of the '544 and '123 patents. (R. 236.) The district court ordered discovery to close on August 15, 2008, and entered a briefing schedule. (R. 258.) Two days before discovery was scheduled to close, Plaintiffs sought leave to file a second amended complaint, adding a new patent, U.S. Patent No. 7,412,056, which issued just one day earlier. (R. 260.) On December 8, 2008, Defendant filed its second motion for summary judgment, arguing noninfringement of the '056 patent. (R. 293.) On April 9, 2009, the Executive Committee reassigned the case to this Court. (R. 315.)

On April 16, 2009, the Court denied Lear's motion for summary judgment of noninfringement of the '544, '123, and '056 patents as premature. On July 9, 2009, the Court stayed the case after Lear filed for bankruptcy. (R. 359.) The parties conducted further discovery and, on March 18, 2010, Lear filed renewed motions for summary judgment as to its noninfringement of the three asserted patents. (R. 406; R. 407.) Plaintiffs then filed their own motions for summary judgment of infringement. (R. 418; R. 428; R. 431.)

In addition to ruling upon these cross-motions for summary judgment, the Court now addresses several other motions that are presently before it. These are: Lear's motion for summary judgment of invalidity under 35 U.S.C. § 101 of the three asserted patents (R. 637); Plaintiffs' motion for summary judgment on Lear's invalidity defense that the asserted claims are directed to unpatentable subject matter (R. 652); Plaintiffs' motion for summary judgment on Lear's invalidity defenses based on alleged lack of definiteness, enablement, and written description (R. 659); and Plaintiffs' motion for summary judgment on Defendant's inequitable-conduct claim (R. 665).

## SUMMARY-JUDGMENT STANDARD

Summary judgment is appropriate when “the pleadings, the discovery and disclosure materials on file, and any affidavits show that there is no genuine issue as to any material fact and that the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(c)(2). A genuine issue of material fact exists if “the evidence is such that a reasonable jury could return a verdict for the nonmoving party.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). In determining summary-judgment motions, “facts must be viewed in the light most favorable to the nonmoving party only if there is a ‘genuine’ dispute as to those facts.” *Scott v. Harris*, 550 U.S. 372, 380 (2007). The party seeking summary judgment has the burden of establishing the lack of any genuine issue of material fact. *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986). After “a properly supported motion for summary judgment is made, the adverse party ‘must set forth specific facts showing that there is a genuine issue for trial.’” *Anderson*, 477 U.S. at 255 (quotation omitted); *see also* Fed. R. Civ. P. 56(e)(2) (requiring adverse party to “set out specific facts”).

“[I]nfringement must be shown literally or equivalently for each limitation; general assertions of facts, general denials, and conclusory statements are insufficient to shoulder the non-movant’s burden.” *TechSearch, L.L.C. v. Intel Corp.*, 286 F.3d 1360, 1372 (Fed. Cir. 2002) (citations omitted). “Thus, the party opposing the motion for summary judgment of noninfringement must point to an evidentiary conflict created on the record, at least by a counter-statement of a fact set forth in detail in an affidavit by a knowledgeable affiant. Mere denials or conclusory statements are insufficient.” *Id.* at 1372 (citations omitted).

## ANALYSIS

### I. The '544 and '123 Patents

Lear has moved for summary judgment of noninfringement of the '544 and '123 patents, contending that the Federal Circuit's 2008 opinion in this case, in conjunction with undisputed facts in the record, reveals that its Car2U<sup>®</sup> product does not use binary numbers. (R. 407; R. 409.) Since the asserted claims in the '544 and '123 patents literally require the presence of those numbers—as all parties to this case agree—Lear contends that the absence of binary code in the allegedly infringing device entitles it to summary judgment as a matter of law. Lear, having failed to obtain a license from Chamberlain to practice the claimed invention, argues that it successfully invented around the '544 and '123 patents, thus allowing it to market a substitutable product that evades the zone of exclusivity inherent in those patent rights. (R. 410 at ¶ 62.)

In its response to Lear's motion, JCI devotes considerable time challenging Defendant's efforts to design around the claims underlying those patents. (R. 422 at 4-5.) Far from being a source of consternation, however, inventing around a patented technology is highly desirable from both an intellectual-property and public-policy perspective. *See, e.g., WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339,1355 (Fed. Cir. 1999) (noting that “the patent law encourages competitors to design or invent around existing patents”); *State Indus., Inc. v. A.O. Smith Corp.*, , 1236 (Fed. Cir. 1985) (“One of the benefits of a patent system is its so-called ‘negative incentive’ to ‘design around’ a competitor’s products, even when they are patented, thus bringing a steady flow of innovations to the marketplace.”). The question before the Court, of course, is whether, viewing all facts in favor of the nonmoving party, Lear succeeded in its



design-around efforts. Answering that question requires the Court to determine whether a genuine issue of material fact exists as to whether Lear's Car2U<sup>®</sup> product uses binary numbers, a binary-code generator, or a trinary-code generator for generating a three-valued or trinary code responsive to the variable binary code. If no reasonable jury could find that Defendant's Car2U<sup>®</sup> product operates in such a manner, Lear is entitled to summary judgment as to the '544 and '123 patents. *See, e.g., Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1323 (Fed. Cir. 2009) (citing *Anderson v. Liberty Lobby*, 477 U.S. 242 (1986)). In light of the claim construction adopted by the Federal Circuit, a genuine issue of fact exists that Defendant's Car2U<sup>®</sup> product literally generates, uses, or otherwise employs binary numbers. Lear is therefore not entitled to summary judgment of literal noninfringement of the '544 and '123 patents on that ground. Furthermore, there is a genuine issue of fact as to whether the accused device infringes those patents under the doctrine of equivalents. Lear is entitled to summary judgment, however, of literal noninfringement of the '544 patent and claim 17 of the '123 patent because the Court construes "binary code generator" to require the fact of storage. This result follows because there is no genuine issue that the accused product does not store binary numbers.

**A. The Federal Circuit's Claim Construction Controls**

A preliminary issue concerns the impact of the Federal Circuit's 2008 ruling. Plaintiff JCI contends that "the Federal Circuit wiped the slate clean on claim construction and gave the parties a blank slate on which to move forward." (R. 422 at 6.) Plaintiff Chamberlain similarly argues that the appellate court's ruling was merely preliminary, such that this Court can and should revisit the relevant claim construction. (R. 432 at 4, 16-18.) Specifically, Chamberlain contends that the Federal Circuit's construction of relevant claim terms—including that "code" is

synonymous with “number” due to the effect of the ‘544 patent’s specification in giving particular limited meanings to the language in the claims—was qualified by a footnote in the court’s opinion. (*Id.* at 16 (quoting *Chamberlain*, 516 F.3d at 1340 n.2).) This footnote observed that “Chamberlain did not identify even any expert reports or testimony in support of its particular claim meaning theory.” *Id.*

A full reading of the Federal Circuit’s opinion, however, reveals that the court’s construction was premised on Chamberlain’s lack of expert reports. The appellate court went to some length to explain how the disputed claim terms, when read together and in light of the specification, compel the conclusion that, for the purpose of the ‘544 patent, “code” is synonymous with “number” and “binary code” represents “the meaning of the message.” *Chamberlain*, 516 F.3d. at 1335. The Federal Circuit’s construction remains invariant in the face of Chamberlain’s proffered expert reports, and, as previously noted, it is the “law of the case.” (R. 319 at 4.)

This conclusion holds despite the case law relied on by Chamberlain. (R. 432 at 16 (quoting *SEB S.A. v. Montgomery Ward & Co., Inc.*, 594 F.3d 1360, 1368 (Fed. Cir. 2010); *CVI/Beta Ventures, Inc. v. Tura L.P.*, 112 F.3d 1146, 1160 n.7 (Fed. Cir. 1997)).) Neither decision establishes that the Court is free, or ought, to disregard the Federal Circuit’s prior claim construction. Both *Montgomery Ward* and *Marchon Eyewear* involved situations in which the Federal Circuit had to determine how it, as an appellate court, should receive a claim construction tendered by a district court on the basis of an incomplete factual record. *Montgomery Ward*, 594 F.3d at 1360, *passim*; *CVI*, 112 F.3d at 1146, *passim*. Neither case speaks to a situation in which a lower court, in light of a more complete record, is asked to

jettison a prior claim construction adopted by the Federal Circuit. It further bears noting that, in the present case, the district court already had held a *Markman* hearing by the time the Federal Circuit determined the appropriate claim construction. (R. 148 at 1.) The Federal Circuit was not asked to ascertain the meaning of disputed claim terms in the presence of an impoverished factual record.

In continuing to abide by the Federal Circuit's claim construction in the face of a subsequent and contrary opinion proffered by Chamberlain's expert witness, Dr. Rhyne, this Court also notes the appellate court's earlier proclamation that "[i]ntrinsic evidence, that is the claims, written description, and the prosecution history of the patent, is a more reliable guide to the meaning of a claim term than are extrinsic sources like technical dictionaries, treatises, and expert testimony." *Chamberlain*, 516 F.3d at 1335. Given the Federal Circuit's careful exposition as to why its construction followed from such intrinsic sources as the claims and written description, the dearth of relevant case law relied upon by Chamberlain, and the fact that the relevant aspects of Dr. Rhyne's report would not persuade the Court to rule otherwise, the Federal Circuit's claim construction holds.

The Court therefore denies Chamberlain's cross-motion for summary judgment of infringement of the '544 and '123 patents, which is premised on the adoption of Chamberlain's proposed claim construction over that previously found by the Federal Circuit. (R. 432 at 16-18; R. 491 at 4-8.)

**B. JCI's Contention That Lear's Product Infringes The '544 And '123 Patents Because It Performs The Same Function As Plaintiffs' Patented Product Fails**

Plaintiff JCI's first substantive argument is that "Lear performs the method disclosed in the Chamberlain patents, not because it wants to, but because it **needs** to. . . . For Lear to have a commercially viable product . . . [its] garage door opener must be capable of opening . . . Chamberlain's garage door openers." R. 422 at 5 (emphasis in original). JCI thus claims that Lear's Car2U<sup>®</sup> product must infringe the '544 and '123 patents because there is no other way to "open Chamberlain garage door openers" but "to use the patented Chamberlain security algorithm or its equivalent." *Id.* at 5; *see also id.* at 7-9. This assertion is a non-starter, for it is well established that mere functional equivalence does not render an accused product or process infringing. *See Chiuminatta Concrete Concepts v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1309-10 (Fed. Cir. 1998). Put differently, the fact of interoperability does not require mathematical identity in all material respects, such that an accused device necessarily infringes a patented product or process that achieves precisely the same result. Instead, the fact of infringement must be determined by reference to the claims in the patent. *See Zenith Lab, Inc. v. Bristol-Meyers Squibb Co.*, 19 F.3d 1418, 1423 (Fed. Cir. 1994). This is not to say, of course, that interchangeability is irrelevant to the infringement analysis—it may be quite pertinent in assessing validity under the doctrine of equivalents. *See, e.g., Fiskars, Inc. v. Hunt Mfg. Co.*, 221 F.3d 1318, 1324 (Fed. Cir. 2000) (observing that "[i]nterchangeability is indeed relevant to equivalency"). Nevertheless, the Federal Circuit has made clear that "interchangeability . . . is certainly not dispositive." *Cardinal Industries*, 145 F.3d at 1309.

JCI next contends that Lear’s Car2U<sup>®</sup> product “**must** produce a trinary number that corresponds to the value of a mirrored (reversed) **binary** number.” R. 422 at 8 (emphasis in original). Looking to the Federal Circuit’s claim construction, which emphasized that “trinary code is still trinary code when expressed as a trinary number represented by (base 2) bit pairs, using 0s and 1s,” it does not follow that Lear’s production of a trinary number that corresponds to the value of a mirrored binary number necessarily constitutes the use of a “binary number.” *Chamberlain*, 516 F.3d at 1339. There is no reason to infer that mere correspondence is enough. Furthermore, Plaintiff Chamberlain’s own expert, Dr. Rhyne, testified at his deposition that Lear’s software “stores both the rolling code value and the mirrored rolling code value in what the Federal Circuit calls trinary.” (R. 410-2 at 48.)

**C. There Is No Genuine Issue Concerning the Fact that Lear’s Car2U<sup>®</sup> Product Does Not Literally Use “Binary Code” as the Federal Circuit Has Construed that Claim**

**1. The ‘544 and ‘123 Patents Require the Generation or Use of Binary Codes**

The Court now turns to the crux of the parties’ dispute: whether a genuine issue of fact exists as to whether the accused device uses “binary code.” The parties do not dispute that the absence of binary code, either literally or equivalently, within the accused product would necessitate a finding of noninfringement as to the ‘544 and ‘123 patents. *Accord* R. 432-1 at 6 (“[T]he sole infringement dispute is whether the Lear transmitter generates a binary code on which the trinary code is based.”).

As highlighted in italics, each asserted claim requires the presence or use of binary code. Of course, it is black-letter law that the absence of a patented claim in the accused device is fatal

to any contention of literal infringement. *See Research Plastics, Inc. v. Fed. Packaging Corp.*, 421 F.3d 1290, 1297 (Fed. Cir. 2005).

Claim 1 of the '544 patent claims as follows:

A transmitter for sending an encrypted signal to control an actuator, comprising:  
[1] oscillator for generating a radio frequency oscillatory signal;  
[2] apparatus for enabling the sending on an encrypted signal;  
[3] *binary code generator* responsive to the enabling apparatus for generating a *variable binary code*, said variable code being different for each enabling by the enabling device;  
[4] trinary code generator for generating a three-valued or trinary code *responsive to the variable binary code*; and  
[5] transmitting apparatus for modulating the radio frequency oscillatory signal with the trinary code to produce a modulated trinary coded variable radio frequency signal for operation or control of a secure actuator.

(R. 270-2 at 27) (emphasis added).

Claim 1 of the '123 patent reads as follows:

A transmitter comprising:  
[1] an oscillator for generating radio frequency oscillatory signal;  
[2] a source of *a sequence of binary codes*, successive *binary codes* in the sequence being different from predetermined preceding codes in the sequence;  
[3] trinary code generator for *converting said sequence of binary codes* to a sequence of trinary codes; and  
[4] a transmitting apparatus for modulating the radio frequency oscillatory signal with the *binary codes* to produce a modulated trinary coded radio frequency signal.

(R. 270-2 at 51) (emphasis added).

Finally, Claim 17 of the '123 patent claims:

A transmitter for authorizing access to a secure area by a control actuator receiver, comprising:  
[1] an oscillator for generating a radio frequency oscillatory signal;  
[2] a *binary code generator* for generating *a sequence of binary codes*, predetermined ones of the *binary codes* being different from others of the *binary codes* of the sequence;  
[3] a trinary code generator *responsive to the binary codes* for generating three-valued or trinary codes; and

[4] a transmitting apparatus for modulating the radio frequency oscillatory signal with the trinary codes to transmit a modulated trinary coded radio frequency signal to the control actuator receiver.

(R. 270-2 at 51) (emphasis added).

## **2. The Parties Dispute Whether Lear’s Car2U® Product Uses Binary Code**

The principal dispute concerns the question whether Lear’s Car2U® product operates using purely trinary numbers, as its designers apparently sought to achieve. (R. 434 at 54-55; R. 410 at 21, ¶ 62.) Defendant’s expert, Dr. Schonfeld, contends that “the securePlus module operates exclusively on trinary numbers and performs only trinary operations.” (R. 410-7 at 13, ¶ 30.) He submits that “the Lear Car2U product uses and operates only on trinary numbers” and thus that the device “is neither responsive to nor does it convert “binary codes.” (*Id.* at 16, ¶ 36.)

Dr. Schonfeld’s conclusions are bolstered by a number of meaningful concessions by Plaintiffs’ experts. First, Chamberlain’s expert, Dr. Rhyne, admitted in his deposition that Lear’s code “stores both the rolling code value and the mirrored rolling code value in what the Federal Circuit calls trinary.” (R. 410-2 at 48.) He also opined that the “fixed code” is stored as a trinary number in Lear’s software. (*Id.*). Similarly, Chamberlain’s expert, Mr. Cole, agreed in his deposition that “both the variable and fixed code[s] are trinary numbers in Lear’s system.” (R. 410-8 at 6; *see also id.* at 10.) Lear argues that these admissions, read in light of the Federal Circuit’s claim construction and in conjunction with Dr. Schonfeld’s report, necessitate an entry of summary judgment in its favor as to noninfringement of the ‘544 and ‘123 patents. (R. 409 at 12-18; R. 455 at 5-13.)

Plaintiffs dispute this assessment. They do not seek to counter the fact, well established in the record, that Lear’s Car2U® product uses trinary numbers. (R. 410-7 at 2-112; R. 410-2 at

48; R. 410-8 at 6, 10.) Instead, they challenge whether the allegedly infringing product operates using *exclusively* trinary code. Specifically, Plaintiffs contend that the operation of the “CompareTernary function” in the accused product entails the employment of a binary number. (R. 422 at 10-18; R. 432 at 9-11.) Plaintiffs assert that this function employs the subtraction method for binary conversion. (R. 422 at 11.) To this end, Plaintiffs proffer the expert reports of Mr. Cole and Dr. Stevenson.

Mr. Cole opines that the “Lear microcontroller performs the steps to convert a trinary number to a binary number” and asserts that the “microcontroller memory uses binary values (high and low bit), which represent 0 and 1.” (R. 410-6 at 13, 15, ¶¶ 40, 47.) He finds binary numbers in the “special function register Status Z-bit[, which] fluctuates between 0 and 1 depending on whether a component power of 2 has been found in the counter. When a component power of 2 is not found, the value of this bit is 1. When the component power of 2 is found, the value of this bit is zero.” (*Id.* at 25, ¶ 89.) He thus concludes that, “[r]ead sequentially, these Z-bit values constitute . . . a binary number.” (*Id.* at ¶ 90.)

Professor Stevenson similarly explains that, although he does “not dispute that Compare Ternary () eventually returns a trinary number, it is [his] opinion that there is a ‘binary code generator.’ It is the comparison of the return value of CompareTernary () to 0 inside the if () statement when run 31 times through the for () loop in Step 3 of the SecurityPlus () function. This comparison determines bit by bit whether the power of two in a binary number is present or absent.” (R. 410-4 at 109.)

Plaintiff JCI summarizes the relevant process as follows:

- Each time a button on the garage door opener is pressed, the SecurityPlus()



function increments the value of the variable code, `button.data.chamberlain_sync[]`, by 3.

- Using the newly incremented value, a “for() loop” is executed.
- This “for() loop” runs 31 times, once for each of the 31 powers of two that the variable code could contain.
- Each time through the “for() loop,” a comparison of the `CompareTernary()` function is made to the number 0 (this happens inside the “if()” statement); the internal comparison checks whether the variable code value contains that specific power of two.
- In other words, the first time through the “for() loop,” the code checks whether the value of the variable code is greater than or equal to 231, (which is 2 raised to the thirty-first power), and if so, subtracts 231 from the variable code value to create a new temporary value `Temp_Copy_K[]`, the second time through the loop the code checks whether the value of the variable code is greater than or equal to 230, the third time through the loop the code checks whether the value is greater than 229, etc.
- The resulting sequence of the outputs from the 31 comparisons made inside the “if()” statements is, in Dr. Stevenson’s opinion, a binary number, because it is *verbatim* to the binary number that represents the quantity of the variable code.

(R. 422 at 11) (internal citations omitted) (emphasis in original).

### **3. Expert Disagreement Is Not Necessarily Enough In Itself to Preclude Summary Judgment**

Plaintiffs’ principal contention is that, because the plaintiff- and defense-side experts in the present case reach diametrically opposed conclusions as to whether Lear’s Car2U<sup>®</sup> product generates or otherwise employs a binary number, summary judgment is categorically improper.

(R. 422 at 10; R. 432 at 4-11.) It is indeed true that a “battle of the experts” can preclude

summary judgment. *See, e.g., Hot Wax, Inc. v. Turtle Wax, Inc.*, 27 F. Supp. 2d 1043, 1048

(N.D. Ill. 1998). Nevertheless, not every contention asserted by an expert will suffice to create a genuine issue of material fact to defeat summary judgment. Gratuitous assertions, for example, which are devoid of substantive explanation and analysis, need not be credited. *See, e.g.,*

*Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1329 (Fed. Cir. 2001) (“Broad conclusory statements offered by . . . experts are not evidence and are not sufficient to establish a genuine issue of material fact.”); *Moore U.S.A., Inc. v. Standard Register Co.*, 229 F.3d 1091, 1112 (Fed. Cir. 2000). Similarly, expert contentions that cannot be squared with applicable claim construction, as passed upon in this case by the Federal Circuit, will not create a genuine issue of material fact. *Accord Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1578 (Fed. Cir. 1995) (“Claim interpretation, as a question of pure law, is amenable to summary judgment and disagreement over the meaning of a term within a claim does not necessarily create a genuine issue of material fact.”). Furthermore, courts may disregard expert testimony introduced through affidavits that is inconsistent with that expert’s prior deposition testimony. *See Delaware Valley Floral Group, Inc. v. Shaw Rose Nets, L.L.C.*, 597 F.3d 1374, 1382 (Fed. Cir. 2010).<sup>3</sup>

In the face of the discordant expert testimony referenced above, Lear articulates several arguments why Plaintiffs’ proffered evidence is insufficient both to meet their burden of proof in responding to a motion for summary judgment and hence to raise a genuine issue of material fact. As discussed in detail below, Lear has established that it is entitled to summary judgment as to literal noninfringement of the ‘544 and ‘123 patents. *See Anderson*, 477 U.S. at 255 (requiring an adverse party to “set forth specific facts showing that there is a genuine issue for trial”).

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<sup>3</sup> Ultimately, summary judgment of no literal infringement is appropriate if no reasonable jury could find that Lear’s Car2U<sup>®</sup> device literally meets the claims of the ‘544 and ‘123 patents. *See DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314 (Fed. Cir. 2009). It is for that reason that Plaintiff JCI oversteps in asserting that, to obtain summary judgment, “Lear must prove that JCI has provided no expert testimony whatsoever on the subject.” (R. 422 at 10.)

**4. Defendant Is Not Entitled to Summary Judgment By Virtue of its Broad Contention That the Accused Product Does Not Operate With or Convert Binary Code as That Term Has Been Construed by the Federal Circuit**

Defendant’s case for noninfringement begins with a far-reaching assertion that, because its “software program was specifically designed in such a way as to avoid using binary numbers,” since its “transmitter operates only with trinary numbers,” and due to the asserted fact that its product “does not convert any binary numbers into trinary numbers,” the accused device cannot infringe. (R. 409 at 13) (emphasis omitted). Lear grounds this argument in the Federal Circuit’s claim construction, which, it contends, precludes the possibility of infringement. (*Id.* at 16-18.)

In light of the diametrically opposed contentions of fact advocated by the parties’ respective experts, Lear’s summary-judgment argument on the basis of this broad argument fails. This holds true in spite of the Federal Circuit’s claim construction, which holds that trinary numbers constitute trinary code even when they are stored in the microcontroller in 1s and 0s (as they must be). *Chamberlain*, 516 F.3d. at 1339. Since Plaintiffs’ experts articulate reasoned explanations as to why they believe the Z-bit generates binary code as that term has been defined by the Federal Circuit, the Court declines to grant summary judgment on the blanket ground that the relevant claim construction categorically forecloses literal infringement. (R. 410-5 at 58-59, ¶¶ 186-89; R. 410-6 at 33-41, ¶¶ 124-51.)

**5. Defendant Is Not Entitled to Summary Judgment on its Argument That the Z-Bit Cannot Be Understood to Generate or Use a Binary Number Because It Is Merely a Switch or Status Flag**

Lear next contends that there is no dispute concerning the fact that the Z-bit status register is not a number. (R. 409 at 17; R. 455 at 6.) Defendant instead characterizes the Z-bit register as a “status flag” or “register.” (*Id.*) This, Lear asserts, entitles it to summary judgment. Plaintiff Chamberlain counters that Dr. Rhyne and Mr. Cole testified that “the Z-bit does indeed represent a binary number.” (R. 432 at 12.)

Chamberlain’s response raises an important question whether the status register’s “representing” a binary number is the same as being one, generating one, or producing a sequence of them. Plaintiffs argue that the Z-bit register’s not being a number does not foreclose the possibility of its generating or otherwise employing a binary number. In support, they reference the expert reports of Dr. Rhyne and Mr. Cole, who opine that Lear’s transmitter determines a series of component powers of 2 for each rolling counter value, and hence generates and uses binary codes. (R. 410-5 at 44-47, 59, 66-69, ¶¶ 138-153, 189, 215-27; R. 410-6 at 13, 19, 25-26, 33-34, 35, ¶¶ 40, 60, 89-92, 124-125, 132.) In light of their supported contentions, the Court cannot award Lear summary judgment of noninfringement on the particular ground of the Z-bit register’s not itself being a number because this is an issue of fact.

**6. Defendant Is Not Entitled to Summary Judgment of Literal Noninfringement of the ‘544 and ‘123 Patents on the Ground that the Z-Bit Register Can Only Be Construed to Generate or Otherwise Use a Binary Number When One Consciously Omits Intervening Statuses**

Lear contends that the Z-bit register’s supposed generation of 1s and 0s cannot constitute the generation of a binary number on the ground that the Z-bit produces multiple intervening

values that Plaintiffs' experts chose not to record. (R. 409 at 17-18; R. 455 at 9-10.) Indeed, Plaintiff's expert Mr. Cole admitted in his deposition that the series of Z-bit statuses he represented corresponds to the status of the Z-bit at successive break points at the BZ command. (R. 410-8 at 19.) He admitted further that he did not write down or represent intervening statuses of the Z-bit—statuses that he did not characterize as significant. (*Id.*) He thus conceded that his recorded sequence of Z-bit sequences "is not a complete record of the Z-bit during the entire time represented in the display." (*Id.* at 20.) This fact is therefore undisputed.

Defense expert Dr. Schonfeld submits that the presence of intervening statuses in the Z-bit, which are ignored by Plaintiffs for the purpose of identifying the generation of a binary number, precludes the existence of such a number, since it would reflect nothing more than a "hypothetical" collection of Z-bit flags. (R. 410-10 at ¶ 22.) He further explains:

Dr. Rhyne and Mr. Cole incorrectly claim that a collection of '1's and '0's from the 'Z-bit' flag forms a 'sequence' which represents a 'binary number' corresponding to the 'trinary number' in Lear's Car2U product. This 'sequence' has been obtained by using the Microchip MPLab emulator debugging software, and then updating the status of the 'Z-bit' flag at specific 'breakpoints' or pausing points selected by Mr. Cole. Specifically, Mr. Cole recorded the status of the 'Z-bit' flag at specific points in the execution of Lear's Car2U software, and ignored the status of the 'Z-bit' flag at other points during the execution of the program between the selected points. Thus, the purported 'binary number' represents a hypothetical collection of the 'Z-bit' flag at nonsuccessive points during the execution of the program and discards the status of the 'Z-bit' flag at intervening points in time. As I pointed out earlier, the 'Z-bit' flag changes in response to arithmetic and logic operations and thus its status toggles repeatedly throughout the execution of the program. For instance, the command 'SUBFWB [Ox1], W' which appears merely four lines below the 'BZ Ox3aOe' command, also alters the status of the 'Z-bit' flag. Therefore, the 'Z-bit' flag will toggle in between the isolated points selected by Mr. Cole, who ignores intervening changes in the 'Z-bit' flag.

(R. 410-10 at ¶ 22) (internal citations omitted).

Lear thus argues that “manually selecting out Z-bit statuses and throwing away intervening values that the experts do not like *is* relevant. It shows that Lear’s product never treats the Z-bit as if it *was* [sic] a number.” (R. 455 at 9) (emphasis in original).

Chamberlain contests the significance of the undisputed fact that not all Z-bit values are recorded on the basis that “Dr. Rhyne and Mr. Cole . . . disagree.” (R. 432 at 13.) Dr. Rhyne explains as follows:

Since most computer programs are performing multiple functions during their execution, it is normal for the Z bit to be used as other functions are performed by the Lear software. The fact that the Z bit performs other functions between the times when it is used to define the sequence of bits in the calculated binary number does not detract from the fact that it shows the generation of powers of two and generation of a binary number when the Lear software is performing the relevant functions in the securePlus module in its software. It is irrelevant that the Z-bit takes on other values when it is executing functions other than generating binary code during the CompareTernary function. The key is that at the times when the each bit of the binary number being generated is calculated, the value of that bit is represented in the Zbit, as it must be to allow the binary mirroring process to be performed by the Lear software.

(R. 434-3 at 290-91.)

Mr. Cole similarly opines:

Whether the Z-bit is an “operand” has no bearing on whether the Z-bit sequence is a number. Although it is entirely possible that the Z-bit is used in arithmetic operations within the processor, the performance of arithmetic operations on the Z-bit is not required for the Z-bit sequence to constitute a binary number. In substance, irrespective of the intermediate values, the generation of values at the Z-bit register during the operation of the securePlus module in the Lear software constitutes generation of a binary number.

(R. 434-3 at 299.)

One might question the sufficiency of these explanations on the ground that they do not explain how the Z-bit could be *literally* read to generate numbers, binary or otherwise, if such values can be ascertained only by recording particular statuses over time and ignoring

intervening ones. Dr. Rhyne and Mr. Cole’s declarations, however, are nevertheless sufficient to reveal a genuine issue of material fact. The Federal Circuit previously explained that “[t]he *substance*, rather than the form, controls whether a ‘code’ is ‘binary’ or ‘trinary’ for the ‘544 patent.” *Chamberlain*, 516 F.3d. at 1339 (emphasis added). Dr. Rhyne and Mr. Cole’s declarations explain that the Z-bit register’s operation can give rise to the generation of a binary number “in substance.” (R. 434-3 at 299.) Although their explanations are not as comprehensive as they could be, to survive summary judgment, they need not “give a primer on why the facts allow the expert to reach that conclusion.” *Vollmert v. Wis. Dep’t of Trans.*, 197 F.3d 293, 300-01 (7th Cir. 1999); *Patton v. MSF/Sun Life Distribs., Inc.*, 480 F.3d 478, 487 (7th Cir. 2007) (“[E]ven brief expert reports will suffice at the summary judgment stage.”); *see also Novartis Corp. v. Ben Venue Labs., Inc.*, 271 F.3d 1043, 1051 (Fed. Cir. 2001) (observing that the sufficiency of the factual basis underlying an expert report is a question for the relevant regional circuit “since the factual foundation necessary to support an expert’s opinion is not a matter peculiar to patent law”).

A reasonable jury could find that, because Plaintiffs’ experts had to pick and choose particular statuses of the Z-bit values, hence necessarily ignoring intervening values, in order to obtain a sequence that they contend to be a binary number, the Z-bit cannot literally generate or use a binary number. In light of Plaintiffs’ experts’ reasoned explanations, however, a reasonable jury would not be confined to reaching that conclusion. To grant summary judgment in Lear’s favor, the Court would have to weigh conflicting evidence. Accordingly, the Court cannot grant Lear summary judgment on this ground. *See, e.g., Dowden v. Polymer Raymond, Inc.*, 966 F.2d 1206, 1207 (7th Cir. 1992) (“Summary judgment is not an appropriate occasion

for weighing the evidence and should not be granted if the evidence supports alternate inferences.”) (internal citations omitted).

**7. Lear Is Entitled to Summary Judgment of Literal Noninfringement of Claim 1 of the ‘544 Patent and Claim 17 of the ‘123 Patent Because “Binary Code Generator” Requires That the Relevant Binary Code Be Stored**

Defendant is entitled to summary judgment as to literal noninfringement of claim 1 of the ‘544 patent and claim 17 of the ‘123 patent because “binary code generator” requires, consistent with the Federal Circuit’s interpretation, the fact of storage. There is no genuine issue that the accused product does not store a binary number.

Plaintiff Chamberlain argues that the accused device does store binary codes. (R. 432 at 12-13.) Chamberlain’s primary contention is that “all variables in the Car2U transmitter are processed and stored as binary codes because all processors use binary architecture for representing and storing.” (R. 434 at 28.) This position, however, is inconsistent with the Federal Circuit’s opinion, which held that, although “the transmitter’s microcontroller, like other computers, undisputably stores and processes data as sequences of 0s and 1s,” the district court had erred in concluding that “‘binary code’ encompassed anything represented in 1s and 0s in a computer.” *Chamberlain*, 516 F.3d at 1337-39. Indeed, Chamberlain would appear to admit that this is the case. (R. 434 at 32) (contending that, “[u]nder the Federal Circuit’s construction of ‘binary number’ . . . the CompareTernary function generates binary numbers,” and further contending that “[u]nder Chamberlain’s construction of ‘binary code,’ the PIC18 processor in Lear’s Car2U transmitter process *and stores* all information as binary code”) (emphasis added).



Because the Federal Circuit’s construction remains law of the case, Plaintiff’s argument fails. *Chamberlain*, 516 F.3d. at 1339.

In the alternative, Chamberlain contends that, “[u]nder Lear’s construction of ‘binary code,’ the Lear transmitter generates and stores a binary number.”<sup>4</sup> (R. 434 at 35.) In doing so, Chamberlain relies on paragraphs 139-44 and 189 of Dr. Rhyne’s expert report, as well as paragraph 55 of Mr. Cole’s report. (*Id.* at 35.) Paragraph 55 of Mr. Cole’s report, however, does not support that position. (R. 410-6 at ¶ 55; R. 434-3 at ¶ 55.) Nor do paragraphs 189 and 139 to 144 of Dr. Rhyne’s expert report offer an opinion as to the alleged fact of storage. (R. 434-2 at 44-45, 59, ¶¶ 139-44, 189.)

The admissions Dr. Rhyne and Mr. Cole made during their respective depositions are even more important. Dr. Rhyne testified that Lear’s code “stores both the rolling code value and the mirrored rolling code value in what the Federal Circuit calls trinary.” (R. 410-2 at 48.) He also opined that the “fixed code” is stored as a trinary number in Lear’s software. (*Id.*) Mr. Cole testified that the Z-bit status register can store a 30-bit number by reading them sequentially. (R. 410-8 at 18.) He further testified that “the counter in the Lear device is stored as a trinary number.” (R. 410-8 at 9-10; *see also* R. 410-6 at 26, ¶ 92.)

In light of the preceding analysis, there is no genuine issue of fact concerning the accused product’s nonstorage of binary numbers. The Court thus proceeds to consider whether the term “binary code generator” necessitates the storage of a binary number. Of course, claim

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<sup>4</sup> Chamberlain similarly contends that “both Dr. Rhyne and Mr. Cole have tested the Lear transmitter and found that the Lear transmitter, in addition to storing trinary numbers, also operates in binary by generating a base two number one power of two at a time, temporarily storing each generated power of two in the Z- bit register, and then using each generated power of two to determine the binary mirror of it from a stored table of mirrored powers of two.” (R. 434 at 30.)

construction is a question of law that entitles the district court to award summary judgment despite the presence of a dispute between experts over the meaning of a claim term. *See Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004) (observing that all claim-construction issues are a matter of law for the court, though evidence from experts may be relevant).

Defense expert Dr. Schonfeld opines that a “‘binary code generator’ produces and stores binary numbers.” (R. 410-7 at 15, ¶ 35; *see also id.* at 13-15, ¶¶ 31-32.) As a result, he contends, the fact that Lear’s Car2U<sup>®</sup> product does not store any binary number it supposedly produces pursuant to the Z-bit sequence of the status register means that it cannot entail the use of a “‘binary code generator.’” (*Id.*) Mr. Cole opposes that view, arguing that the appropriate construction of “‘binary code generator’” does not require storage. (R. 410-6 at 35-37, ¶¶ 133-36.) Plaintiffs’ experts, Professor Stevenson and Dr. Rhyne, echo Mr. Cole’s perspective. (R. 410-4 at 110, ¶ 179; R. 410-5 at 33, ¶ 101.)

Mr. Cole first asserts that the Federal Circuit’s claim construction does not support an interpretation requiring storage. (R. 410-6 at 35, ¶ 133.) He is mistaken. The Federal Circuit observed that, for the purpose of the ‘544 patent, “the term ‘code’ presumptively should carry the same meaning throughout the patent.” *Chamberlain*, 516 F.3d. at 1337. It stressed further that “‘binary code’ and ‘trinary code’ should have parallel meanings, differing *only* insofar as ‘binary’ and ‘trinary’ differ in their relationships to the numbers 2 and 3.” *Id.* (emphasis added). In the very next sentence, the Federal Circuit held that “‘trinary code’ as used in the ‘544 patent means values *stored* and processed in the binary language as 0s and 1s.” *Id.* at 1337 (emphasis added). If this Court is to bestow the term “code” with the same meaning throughout the patent,

then, as with “trinary code,” “binary code” similarly means values that are “stored and processed.” According to the Federal Circuit, then, “the ‘544 patent notes that the transmitter’s microcontroller generates the trinary code,” which “means values *stored* and processed in the binary language as 0s and 1s.” *Id.* at 1337-38 (emphasis added). The Federal Circuit’s claim construction strongly supports an interpretation requiring storage.

Mr. Cole supports his position by appealing to extrinsic dictionary evidence as to the meaning of “binary code” and “binary number.” (*Id.* at 36-37, ¶¶ 134-35.) Such evidence is, of course, relevant, but its hermeneutic value is of ancillary importance. *See Kara Tech., Inc. v. Stamps.com, Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009) (“It is not uncommon in patent cases to have . . . dueling experts. When construing claims, however, the intrinsic evidence and particularly the claim language are the primary resources. . . . While helpful, extrinsic sources . . . cannot overcome more persuasive intrinsic evidence.”). In addition, it is relevant that the Federal Circuit has already determined that the term “binary code” in the context of the ‘544 patent has “a narrower meaning” than “an ordinary or customary reading” would provide. *Chamberlain*, 516 F.3d at 1337.

Mr. Cole, Professor Stevenson, and Dr. Rhyne look further to dependent claim 7, which specifies a “transmitter for sending an encrypted signal to control an actuator according to claim 1, wherein said binary code generator for generating a variable binary code includes a non-volatile memory for storing a variable binary code.” (R. 410-6 at 35, ¶ 133.) The Federal Circuit has made clear that “the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc). Mr. Cole

therefore interprets the fact that storage is specified in a dependent claim as indicating that storage is an optional feature in the asserted independent claim. (R. 410-6 at 35-36, ¶ 133; *see also* R. 410-4 at 110, ¶ 179; R. 410-5 at 33, ¶ 101.) Nevertheless, the Court agrees with Defendant that the proper construction is that the independent claim requires that codes be stored in a computer.<sup>5</sup> Dependent claim 7 imposes a further limitation, which is that the storage take place in “non-volatile memory.” (R. 410-10 at 13, ¶ 25.)

This Court thus construes “binary code generator,” as used in the ‘544 and ‘123 patents, to require not only the production, but the storage of binary numbers. Because there is no material dispute that Lear’s Car2U<sup>®</sup> device does not store a binary number, Lear is entitled to summary judgment of literal noninfringement of claim 1 of the ‘544 patent and claim 17 of the ‘123 patent.

**D. There Is a Genuine Issue of Material Fact as to Whether Lear’s Car2U<sup>®</sup> Product Infringes Under the Doctrine of Equivalents**

Defendant also seeks summary judgment of noninfringement on Plaintiff’s doctrine-of-equivalents claim. Plaintiffs argue that the operation of the Z-bit status register within Lear’s Car2U<sup>®</sup> product involves the generation and use of a binary number. It is a fundamental tenet of patent law that an accused product may infringe a patent if it meets each limitation of the claim equivalently. *See Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1459 (Fed. Cir. 1998) (en banc). “An element in the accused product is equivalent to a claim limitation if the differences between the two are ‘insubstantial’ to one of ordinary skill in the art.” *Amgen, Inc. v. F. Hoffman-La Roche*, 580 F.3d 1340, 1382 (Fed. Cir. 2009) (citing *Warner-Jenkinson Co. v.*

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<sup>5</sup> This construction is a matter of law for the Court. *See Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996).

*Hilton Davis Chem. Co.*, 520 U.S. 17, 40 (1997)). To determine whether the difference between an element in the accused product is insubstantially different to a claim limitation, the test is whether the accused device performs substantially the same function in substantially the same way to obtain the same result as the claim limitation. *See id.* (citing *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950)).

Plaintiffs' expert reports provide that the accused product, even if it does not literally infringe the asserted patents, does infringe under the doctrine of equivalents. (R. 410-5 at 62-66, 77-80; R. 410-4 at 85-97.) Dr. Rhyne and Professor Stevenson present detailed analysis as to why, in their respective opinions, each element in the accused device is equivalent to the relevant claim limitations in the '544 and '123 patents. (*Id.*)

Noting the Federal Circuit's command that "the patent claims and specification . . . do not permit [the binary code and trinary code] terms to overlap," Defendant argues that "a key facet of the invention is that it employs both the binary and trinary number systems." (R. 409-1 at 14) (emphasis omitted). Pursuant to this contention, Lear argues that any view that "Lear's trinary code and trinary operations are 'substantially equivalent' to the patents' 'binary code' limitations must fail" because "[s]uch a theory of equivalence would completely vitiate the claim element of a binary code, an element which is separate and cannot overlap." (*Id.* at 15.) *See Vehicular Techs. Corp. v. Titan Wheel Intern., Inc.*, 141 F.3d 1084, 1090 (Fed. Cir. 1998) ("[I]f a claim limitation must play a role in the context of the specific claim language, then an accused device which cannot play that role, or which plays a substantially different role, cannot infringe under the doctrine of equivalents.").

Lear's error lies in its assertion that a jury could not find that its Car2U<sup>®</sup> product infringes under the doctrine of equivalents without conflating the separate requirements of "trinary code" and "binary code." A reasonable jury could find that the operation of a status register cannot literally be said to be or to generate a number (be it binary or trinary) if the construction of such a number depends on the selective omission of intervening values. Under this view, the Z-bit status register would literally constitute neither a binary number nor a trinary number. Nevertheless, a reasonable jury could simultaneously find that the nonsuccessive array of Z-bit statuses is the substantive equivalent of the generation of a binary number. Such a determination would be tantamount to finding that the Z-bit register, which is an element of the accused product, is insubstantially different to the claim limitations involving "binary code." This finding would not vitiate separate claims involving "trinary code."

Plaintiffs offer reasoned expert reports and deposition testimony that bolster their argument that the accused product performs substantially the same function in substantially the same way to achieve substantially the same result as the asserted claims underlying patents '544 and '123. Indeed, it is undisputed that the accused product achieves substantially the same result as the claimed invention. (R. 516-2 at 6 (agreeing that the goal was "to put out the same signal as the Chamberlain system"); R. 432 at 15; R. 455 at 14.) There is, however, a genuine issue of material fact as to whether the substitute element (the Z-bit status register and related operations within the accused product) matches the "way" and "function" of the claimed element. This question is the subject of competing expert reports, all of which are well reasoned. Because the Court cannot weigh conflicting evidence at the summary-judgment juncture, the issue of infringement under the doctrine of equivalents is a question for the jury. The jury could

reasonably decide that the Z-bit status register's operation gives rise to the *de facto* generation or use of a binary number in a way that is insubstantially different to the claimed "binary code."

Defendant presents one further argument why its accused device cannot infringe under the doctrine of equivalents. It submits that infringement under that doctrine is necessarily foreclosed by its ownership of U.S. Patent No. 7,589,613 ("the Kraft patent"), which covers the "all-trinary solution" embodied in its Car2U<sup>®</sup> product. (R. 409 at 15-16.) This argument fundamentally misconceives the nature of a patent grant, which bestows upon its owner a right to *exclude*, but not an affirmative right to practice. *See, e.g., TransCore LP v. Elec. Trans. Consultants Corp.*, 563 F.3d 1271, 1275 (Fed. Cir. 2009). JCI is correct to point out that the existence of a patent on the accused process is not dispositive on the question of infringement under the doctrine of equivalents, but is instead significant to that determination. (R. 516 at 2 n.1 (citing *Nat'l Presto Indus., Inc. v. West Bend Co.*, 76 F.3d 1185, 1191-92 (Fed. Cir. 1996)).) At trial, Lear can point to the existence of the Kraft patent, in addition to the fact that the Kraft application cited the '544 and '123 patents as prior art (which thus demonstrates that the PTO considered the '544 and '123 patents and nevertheless considered the claimed invention to be novel, useful, and nonobvious in light of that prior art.) *See Hogan AB v. Dresser Indus., Inc.*, 9 F.3d 948, 954 (Fed. Cir. 1993). Nevertheless, the existence of the Kraft patent does not in itself entitle Defendant to summary judgment of equivalent noninfringement.

For the preceding reasons, the Court grants in part and denies in part Defendant's motion for summary judgment of noninfringement of the '544 and '123 patents.

## II. The '056 Patent

Plaintiffs also allege that Lear's Car2U<sup>®</sup> product infringes claim 1 of the '056 patent, which claims:

A transmitter for sending an encrypted signal to control an actuator, comprising:

- [1] oscillator for generating a radio frequency oscillatory signal;
- [2] apparatus for enabling the sending of an encrypted signal;
- [3] a memory having a fixed code stored therein;
- [4] code generator responsive to the enabling apparatus for generating a variable code, said variable code being different for each enabling by the enabling device;
- [5] apparatus for providing a code that is based on the fixed code;
- [6] apparatus for combining a trinary code version of the variable code with a trinary code version of the code, wherein the apparatus combines the trinary code version of the variable code with the trinary code version of the code by interleaving trinary bits for the trinary code version of the variable code with trinary bits for the trinary code version of the code to thereby provide an interleaved trinary code combined result;
- [7] transmitting apparatus for modulating the radio frequency oscillatory signal with the interleaved trinary code combined result to produce a modulated trinary code variable radio frequency signal for operation or control of a secure actuator.

(R. 270-2 at 80.)

Lear contends that there is no genuine issue of fact that its Car2U<sup>®</sup> product uses exclusively trinary numbers and employs an encrypted fixed code, which changes with each actuation of the device. Defendant argues that it is entitled to summary judgment on Plaintiffs' claim of infringement of the '056 patent on either one of two interpretations; namely, that the term "variable code" in that patent means "non-trinary code" and that the "code that is based on the fixed code" is itself fixed. (R. 408 at 9-19.) Lear submits that, if the Court accepts either construction (or, indeed, both constructions) in said manner, Defendant is entitled to summary judgment of noninfringement. (*Id.*)



**A. “Variable Code” Means “Nontrinary Variable Number”**

Defendant argues that the “variable code” referenced in [4] and [6] of claim 1 of the ‘056 patent necessarily means “variable non-trinary number.” (R. 408 at 9-10.) Reading the phrase in light of the entire claim language supports Lear’s construction. The patent claims an “apparatus for combining a trinary code version of the variable code”—language that immediately suggests that the underlying variable code must be of a nontrinary character. It would seem odd to claim an “apparatus for combining a trinary code version of the variable trinary code.”

The specification, which reveals a binary number “comprising the variable portion of the code,” adds powerful support to Lear’s proffered construction. More specifically, the patent provides:

In the present system the transmitter includes means for producing a . . . 32-bit frame comprising the variable portion of the code. . . . The transmitter then converts the 32-bit fixed code and the mirrored variable code to a three-valued or trinary bit fixed code and a three-valued or trinary bit variable code or rolling code.

(R. 270-2 at 77.)<sup>6</sup> Previously in this case, and in considering the same specification, the Federal Circuit read “32-bit codes” in the ‘544 patent to refer to binary numbers. *Chamberlain*, 516 F.3d at 1339. The specification thus reveals precisely what a natural reading of the phrase “apparatus

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<sup>6</sup> Lear places great weight on the patent’s use of the phrase “[i]n the present system” in the excerpted part. (R. 454 at 6-7.) It is true that the use of that or similar language means that the patentee is referring to the whole invention, rather than a particular embodiment of it. *See, e.g., Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007); *Honeywell Intern., Inc. v. ITT Indus., Inc.*, 452 F.3d 1312, 1318 (Fed. Cir. 2006). The phrase’s current usage, however, is qualified by the word “includes,” which suggests that the patent is not purporting to describe all potential embodiments of the invention. *Cf. Honeywell*, 452 F.3d at 1318 (the phrase “the present invention” was not qualified by “includes”). Therefore, the Court does not rely on the language “[i]n the present system” in finding that “variable code” means “nontrinary variable number.”

for combining a trinary code version of the variable code” would suggest—the variable code would not otherwise be trinary.

Plaintiffs strenuously object to this interpretation. (R. 421-1 at 1-14; R. 429-1 at 1-12.) Both Chamberlain and JCI contend that Lear places unwarranted reliance on the specification in interpreting “variable code.” (R. 421 at 9-10; R. 429 at 8-9.) JCI correctly notes that the claims, rather than the specification, define the scope of patent protection. *See Silicon Graphics, Inc. v. ATI Techs., Inc.*, 607 F.3d 784, 792 (Fed. Cir. 2010) (“A construing court’s reliance on the specification must not go so far as to “import limitations into claims from examples or embodiments appearing only in a patent’s written description . . . unless the specification makes clear that ‘the patentee ... intends for the claims and the embodiments in the specification to be strictly coextensive.’”) (quoting *Philips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005)). It bears emphasizing, however, that this is not an instance where the specification is being employed to limit the breadth of an otherwise unambiguous claim. The Court cannot agree with JCI’s position that, “[s]ince the claim is clear on its face, there is no reason to even address the specification.” (R. 421 at 9.) JCI does argue that the unbounded use of “variable code” in the present context of claim 1 contrasts with the presence of specific qualifications elsewhere within the patent, where the document makes such reference as “binary rolling code.” (*Id.* at 9-10.) Nevertheless, the fact remains that Plaintiffs’ tendered interpretation fits awkwardly with the larger claim of which the disputed term is a part.

JCI further contends that, in light of the Federal Circuit’s earlier interpretation in this case that “code” means “number,” “variable code” simply means “variable number.” (R. 421 at 8.) This interpretive approach does not answer the question, however, for even if the Court were to

define “variable code” as “variable number,” that would not answer whether the context in which the relevant term is employed counsels its being limited to nontrinary form.

In the presence of ambiguity concerning the meaning of a term within a claim, appeal to the specification is appropriate. *See Abbott Labs. v. Andrx Pharms., Inc.*, 452 F.3d 1331, 1336 (Fed. Cir. 2006) (“Where claim terms are ambiguous or disputed, then we turn to the specification.”). Indeed, the Federal Circuit has seen fit in this very case to emphasize that “[u]sually [the specification] is dispositive; it is the single best guide to the meaning of a disputed term.” *Chamberlain*, 516 F.3d at 1335 (quoting *Philips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005)). In reviewing the ‘544 patent, which shares a common specification with the ‘056 patent, the appellate court also made clear that the specification “gives particular limited meanings to the language in the claims.” *Chamberlain*, 516 F.3d at 1337. The manner in which claim 1 employs the concept of “variable code” indicates that the term refers to a nontrinary variable code.

Chamberlain admits that “the preferred embodiment does convert a binary number to a trinary number,” but nevertheless contends that “there is nothing in the ‘056 patent claims, specification, or prosecution history that limits the scope of the invention or claims to the preferred embodiment.” (R. 429 at 9.) This assertion ignores the interpretive difficulty involved in defining “variable code” to include trinary variable code. Reading “variable code” in light of the larger claim language supports the interpretation excluding trinary variable codes. To define it otherwise would be to construe the patent as potentially calling for a trinary version of an already trinary variable code. Such an incongruous reading is implausible, as it made clear by the specification.

Relying on a declaration of Dr. Rhyne, Chamberlain contends that Lear’s interpretation would exclude an embodiment disclosed in the specification. (R. 429 at 9.) Specifically, Dr. Rhyne submits that Figure 7A of the ‘056 specification reveals a code generator that is not limited to binary. (*Id.*) Chamberlain further proffers the opinions of Drs. Rhyne and Stevenson to the effect that one skilled in the art would understand “code” in the term “code generator . . . for generating a variable code” as not being limited to non-trinary numbers. (*Id.*)

Neither of these contentions persuades the Court that “variable code,” as used in the ‘056 patent, encapsulates variable numbers in trinary form.<sup>7</sup> In the first part, Figure 7A (upon which Dr. Rhyne places considerable focus) does appear unbounded in that the Box does not describe any particular version. Two steps below, however, Box 504 states “REVERSE ORDER OF BINARY DIGITS IN ROLLING CODE.” (R. 454 at 8.) This Box requires that the variable code, before it is later converted to trinary, be in binary form.

Second, the opinions of Drs. Rhyne and Stevenson as to the meaning that one skilled in the art would ascribe to “code generator . . . for generating a variable code” do not convince the Court, particularly insofar as they are offered with respect to the use of “code” in a subset of the claim, rather than in the context of the claim as a whole. As explained above, a larger reading of the claim requires that the variable code is in nontrinary form before a trinary code version of the same is later created. The accuracy of this construction is confirmed by appeal to the specification.

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<sup>7</sup> Plaintiff Chamberlain argues that the proper construction of “code” is “data or instructions.” (R. 429-1 at 5.) In light of the Federal Circuit’s interpretation of “code” in the ‘544 patent (with which the ‘056 patent shares a common specification), the Court rejects Chamberlain’s proffered construction. *Chamberlain*, 516 F.3d. at 1339.

Defendant contends that the Court's adoption of its proposed claim construction entitles it to summary judgment, since its Car2U<sup>®</sup> product "has no binary number, and so performs no such conversion to trinary." (R. 454 at 13.) In light of the fact that a genuine issue of material fact exists concerning the accused product's use of binary code, the Court's construction of "variable code" to mean "nontrinary variable number" does not entitle Lear to summary judgment of both literal and equivalent infringement. A reasonable jury could find that Lear's Car2U<sup>®</sup> product employs binary code, or find that the device achieves the same result, using substantially the same function, in substantially the same way. The Court therefore denies Defendant's motion for summary judgment of noninfringement of the '056 patent.

**B. A "Code That Is Based on a Fixed Code" Within Claim 1 Need Not Itself Be Fixed or Remain the Same for Each Actuation of the Transmitter**

An element of the '056 patent claims involves an "apparatus for providing a code that is based on the fixed code." Contending that its Car2U<sup>®</sup> product entails the transmission of exclusively variable codes, Lear submits that it is entitled to summary judgment because "a code that is based on the fixed code" must remain the same for each actuation of the transmitter. (R. 408 at 10-15, 17-19.) This proposed construction is wholly divorced from the language of the claims. Unlike "variable code," which is implicitly limited to nonbinary form by the larger claim language, there is no reading of Claim 1 of the '056 patent that either suggests or requires that "a code that is based on the fixed code" itself be fixed or remain the same for each actuation of the transmitter. Lear's proposed construction would improperly limit the scope of the claims.

Despite the conspicuous absence of any textual (or contextual) foundation for its argument in the '056 patent claims, Defendant presents a variety of unavailing arguments as to

why its advocated construction is the correct one. Defendant first turns to the prosecution history of the '056 patent. Lear notes that Chamberlain's initial application for that patent included a claim to "an encryptor for generating an encrypted fixed code in response to the rolling code and the fixed code." (R. 408 at 11.) Because the examiner rejected that claim and because Chamberlain then replaced it with the language "a code that is based on the fixed code," which the PTO allowed, Defendant argues that Chamberlain thereby disclaimed that the accepted language could be a variable code. (*Id.* at 11-12.) The Court agrees with Chamberlain, however, that this showing falls short of the requirement that a disclaimer "be both clear and unmistakable" to one skilled in the art. *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1326 (Fed. Cir. 2003). It is particularly relevant that the patentee did not expressly disclaim any subject matter. Indeed, JCI explains that it was the Federal Circuit's 2008 opinion, which was unfavorable to Plaintiffs, that led the patentee to embrace the broader language presently being construed. (R. 421 at 12.)

Lear's second argument centers on the Federal Circuit's remark that the '544 patent "receiver compares the transmitted fixed code and the rolling code with stored codes to activate the door opener." (R. 408 at 12 (quoting *Chamberlain*, 516 F.3d at 1333-34).) Of course, the Federal Circuit was not concerned with the language specific to the '056 patent of "a code that is based on the fixed code." Insofar as the court's statement was directed to the '544 patent's specification, which is identical to that of the '056 patent, then it may be relevant. Yet, this Court has already determined that the relevant language in the '056 patent—when read in light of the larger claim language of which it is a part—is unambiguous. In such cases, it is improper to limit the claims by reference to the embodiment disclosed by the specification. *See Liebel-*

*Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004) (“[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.”) Thus, adopting the Federal Circuit’s characterization of the specification does not compel the conclusion that “a code that is based on the fixed code” in the ‘056 patent necessarily be fixed.<sup>8</sup>

Defendant further argues that dependent claim 2 makes clear that the claimed invention requires transmitting both a fixed code and a variable code. (R. 408-1 at 13.) Dependent claim 2 refers to the transmission of “a trinary code version of the variable code with a trinary code version of the fixed code.” Lear contends that the dependent claim’s label of the “code that is based on the fixed code” itself being “the fixed code” clarifies the meaning of the relevant language in the independent claim. (R. 408-1 at 13.) The Court declines to restrict the reach of the clear language in the independent claim in this manner. Indeed, it is improper for a district court to read “an additional limitation from a dependent claim into an independent claim.” *See Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006).<sup>9</sup>

Finally, Lear submits that the “code that is based on the fixed code” cannot be a variable code because the claim term is part of a means-plus-function element, which renders the scope of

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<sup>8</sup> Indeed, it bears noting that the appellate court’s statement would not necessarily require that the “transmitted fixed code” be invariant from one actuation of the transmitter to the next. JCI may not be unreasonable in submitting that, as long as the fixed code underlying the transmitted code is capable of being understood by the receiver, there would be no clear conflict with the specification.

<sup>9</sup> Dr. Rhyne’s concession that “the patents do not disclose any further modification of the fixed code before it is used as an interleaving code in order to form the transmitted data” is somewhat more injurious to Plaintiffs’ position. (R. 410-2 at 54.) Nevertheless, Dr. Rhyne’s deposition testimony does not foreclose the “code that is based on the fixed code” changing from one actuation to the next.

the claim coterminous with what is identified in the specification. (R. 408 at 14.) The Court, however, agrees with Plaintiffs that the term should not be construed as a means-plus-function element. The Federal Circuit has made clear that the absence of the word “means” creates a rebuttable presumption that section 112, paragraph 6, does not apply. *Phillips*, 415 F.3d at 1311; *see also Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996) (“The question whether a claim element triggers section 112(6) is ordinarily not a difficult one. Claim drafters conventionally use the preface ‘means for’ (or ‘step for’) when they intend to invoke section 112(6), and there is therefore seldom any confusion about whether section 112(6) applies to a particular element.”). In *Greenberg*, the Federal Circuit further explained that “[w]e do not mean to suggest that section 112(6) is triggered only if the claim uses the word ‘means.’ . . . Nonetheless, the use of the term ‘means’ has come to be so closely associated with ‘means-plus-function’ claiming that it is fair to say that the use of the term ‘means’ . . . generally invokes section 112(6) and that the use of a different formulation generally does not.” *Id.* at 1584. The Federal Circuit referenced its earlier decision in *Raytheon* as an example of a case in which a litigant successfully rebutted the presumption with respect to the term “so that.” *Id.* (citing *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 957 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 835 (1984)).

More recently, the Federal Circuit has clarified that a court, in determining whether particular terms constitute a substitute for “means for,” should consider whether the claim provides any structural context other than to describe its function. *Welker Bearing Co. v. PHD, Inc.*, 550 F.3d 1090, 1096 (Fed. Cir. 2008). There, the court noted that “[n]o adjective endows the claimed ‘mechanism’ with a physical or structural component” and explained that, “[u]nlike



the ‘detent mechanism’ in *Greenberg* which had a known structural meaning, one of skill in the art would have no recourse but to turn to the ‘254 patent’s specification to derive a structural connotation for the generically claimed ‘mechanism for moving said finger. . . .’” *Id.*

“The task of determining whether the limitation in question should be regarded as a means-plus-function limitation, like all claim construction issues, is a question of law.” *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004). There is no basis in the present case for rebutting the presumption that “code that is based on the fixed code” does not constitute a means-plus-function term. Unlike in *Welker*, one skilled in the art would not be forced to turn to the specification to derive a structural connotation. Indeed, Dr. Stevenson explains that “apparatus for providing a code based on a fixed code” would be understandable to one of skill in the art without reference to the specification. (R. 424-2 at 112-113.) Defendant’s expert, Dr. Schonfeld, testified at his deposition that his report does not offer a view on whether the claim limitations are means-plus-function limitations. (R. 427-10 at 13-14.) In light of this evidence, coupled with the well-established presumption created by the absence of “means for” language, the Court concludes that the “code that is based on the fixed code” element of the ‘056 patent is not a means-plus-function element. *See TriMed, Inc. v. Stryker Corp.*, 514 F.3d 1256, 1259 (Fed. Cir. 2008) (“The task of determining whether the relevant claim language contains a means-plus-function limitation is, as with all claim construction issues, a question of law.”). Lear’s objection, namely that the term “code that is based on the fixed code” cannot involve a variable code that is based on the fixed code because it is part of a mean-plus-function element, therefore fails.

**C. Plaintiffs Are Not Entitled to Summary Judgment of Infringement of the '056 Patent**

Plaintiffs move for summary judgment of infringement of the '056 patent. (R. 418; R. 428; R. 431.) JCI contends that, under its proposed construction of “variable code,” there is no genuine issue of material fact that Lear infringes claim 1 of the '056 patent. (R. 419 at 16.) This argument is premised on “variable code” not being limited to nontrinary. (*Id.* at 17.) As explained above, however, the Court construes “variable code” to mean “nontrinary variable number,” and so JCI’s argument for infringement, which is founded on a rejected construction, fails.

JCI and Chamberlain further submit that they are entitled to summary judgment of infringement based on their advocated construction of “code that is based on the fixed code.” (R. 419 at 17-18; R. 429 at 15-16.) The Court construes this term to mean that the “code that is based on the fixed code” need not itself be fixed. Plaintiffs argue that this limitation is satisfied by the accused product, which involves a variable code that is based on the fixed code. (*Id.*) This does not, however, entitle Plaintiffs to summary judgment. It is black-letter law that, “[t]o establish literal infringement, ‘every limitation set forth in a claim must be found in an accused product, entirely.’” *Becton, Dickinson & Co. v. Tyco Healthcare Group, L.P.*, 616 F.3d 1249, 1253 (Fed. Cir. 2010) (quoting *Southwall Techs. Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed. Cir. 1995)). There is a genuine issue of fact as to the existence of “variable code” within the accused product. As a result, the Court denies JCI’s motion for summary judgment of

infringement of the '056 patent.<sup>10</sup>

### **III. Plaintiffs Are Entitled to Summary Judgment on Lear's Invalidity Defense that the Asserted Claims Are Directed to Unpatentable Subject Matter**

Lear proffers the defense that the asserted claims are directed to unpatentable subject matter. (R. 653-1 at 33-34.) Defendant specifically contends that the claims “are directed to various algorithmic operations for the manipulation of numbers that the patentees attempt to limit to a field of use of transmitters for sending an encrypted signal.” (*Id.* at 33.) Plaintiffs' efforts to so limit the claims are unsuccessful, Lear submits, because the physical components merely constitute insignificant post-solution activity. (*Id.* at 33-34; R. 709 at 10-11.) The parties have filed cross-motions for summary judgment. For reasons explained below, the Court grants Plaintiffs' motion for summary judgment on Lear's invalidity defense that the asserted claims are directed to unpatentable subject matter. For the same reasons, it denies Lear's motion for summary judgment of invalidity under 35 U.S.C. § 101 of the '544, '123, and '056 patents.

#### **A. Plaintiffs' Argument that the Asserted Claims Are Directed to a Product Rather than a Process Does Not in Itself Entitle Them to Summary Judgment**

As explored below, in arguing that the asserted claims are invalid under 35 U.S.C. § 101, Defendant relies on several Supreme Court cases that have invalidated process claims on the basis of their incorporating mathematical algorithms or otherwise being abstract in nature. (R. 638 at 5-6, 12-19; R. 709 at 7-13; 749 at 5-12 (citing and discussing *Bilski v. Kappos*, 130 S. Ct.

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<sup>10</sup> Even if there were no dispute that the accused product meets the “variable code” limitation, however, Plaintiffs' assertion that Lear has no other noninfringement positions regarding the '056 patent is mistaken. (*Compare* R. 419 at 16 *and* R. 429 at 16 *with* R. 479 at 14-16.) As disputed issues of material fact remain, Plaintiffs would not be entitled to summary judgment of infringement of the '056 patent.

3218, 3225-27 (2010); *Diamond v. Chakrabarty*, 447 U.S. 303 (1980); *Parker v. Flook*, 437 U.S. 584 (1978); *Gottschalk v. Benson*, 409 U.S. 63 (1972).) Plaintiffs contrast these decisions with the claims at issue in the present case, which “are directed to a physical device.” (R. 653 at 9.) They observe that the cases in which the Court has invalidated patents on the basis of their abstraction involved method claims, rather than product claims. (*Id.* at 9 n.2.) Plaintiffs point out that the claimed invention pertains, for example, to a physical transmitter that sends an encrypted signal to control an actuator. (*Id.* at 9.) They then argue that, “[b]ecause the claimed and described inventions are directed to a ‘transmitter,’ there should be no question that they qualify as a patentable ‘machine’ under Section 101.” (*Id.* at 10; *see also* R. 761 at 5.)

This argument raises the threshold question whether the relevant claims constitute product or process claims. The Federal Circuit has distinguished “between a claim to a product, device, or apparatus, all of which are tangible items, and a claim to a process, which consists of a series of acts or steps.” *In re Kollar*, 286 F.3d 1326, 1332 (Fed. Cir. 2002). *Kollar* further explained that “[a] process . . . is a different kind of invention; it consists of acts, rather than a tangible item.” *Id.*

The Court agrees with Plaintiffs that the asserted claims in the ‘544, ‘123, and ‘056 patents are not process claims. Claims 1-6 and 8 of the ‘544 patent claim a “transmitter.” (R. 270-2 at 27.) Claims 1-4 and 14-26 of the ‘123 patent similarly claim a “transmitter,” as do claims 1 and 2 of the ‘056 patent. (*Id.* at 51-52, 80.) The asserted claims do not recount a method or process, but instead purport to describe a machine. (*Id.*)

Nevertheless, the fact that the asserted claims are directed at a machine rather than a process does not in itself render the claims valid under Section 101. Contrary to what Plaintiffs

suggest, the same standards of patentable subject matter govern both product and process claims.

As the Federal Circuit has explained:

Whether stated implicitly or explicitly, we consider the scope of § 101 to be the same regardless of the form -- machine or process -- in which a particular claim is drafted. . . . [T]he Supreme Court's decisions in *Diehr*, *Benson*, and *Flook*, all of which involved method (i.e., process) claims, have provided and supported the principles we apply to both machine- and process-type claims.

*AT&T Corp. v. Excel Commc'ns, Inc.*, 172 F.3d at 1352, 1357-58 (Fed. Cir. 1999) (*abrogated by Bilski*, 545 F.3d at 943, *passim*); *see also Ex Parte Cornea*, 89 U.S.P.Q.2d 1557, at \*6 (B.P.A.I. 2009) (observing that “analysis of a ‘manufacture’ claim and a ‘process’ claim is the same under § 101”).

Although the preceding case law supports that the same patentability standards apply to both product and process claims, it does not necessarily follow that the “machine-or-transformation” (“MOT”) test is appropriate to assess the patentability of the asserted claims.<sup>11</sup> Beyond the fact that the Supreme Court has held that it is not the exclusive test of patentability, it also made clear that the MOT test is used to determine the patentability of processes. Specifically, the Supreme Court held “that the machine-or-transformation test is a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under § 101. The machine-or-transformation test is not the sole test for deciding whether an invention is a patent-eligible ‘process.’” *Bilski*, 130 S. Ct. at 3225-27. The Court

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<sup>11</sup> According to the MOT test, a process is patent-eligible under Section 101 if “(1) it is tied to a particular machine or apparatus, or (2) it transforms particular article into a different state or thing.” *Bilski*, 545 F.3d at 953 (affirmed but criticized by *Bilski*, 130 S. Ct. at 3218). Furthermore, “the use of a specific machine or transformation of an article must impose meaningful limits on the claim’s scope to impart patent-eligibility” and “the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity.” *Id.* at 961-62.

therefore declines to base its analysis on the MOT test.

Instead, the question is whether the claimed subject matter falls within at least one category of statutory subject matter.<sup>12</sup> *In re Nuijten*, 500 F.3d 1346, 1354 (Fed. Cir. 2007) (“In telling courts where they ‘should not focus’ their analysis, *State Street* was advising not to be concerned about debates over ‘which of the four categories’ subject matter falls into—that is, not to be overly concerned with pigeonholing subject matter once the court assures itself that *some* category has been satisfied.”) (emphasis in original) (citations omitted). The Court must therefore determine whether the asserted claims are in fact directed at a machine. If so, they are patentable subject to the three limitations on patent eligibility articulated by *Bilski*: “‘laws of nature, physical phenomena, and abstract ideas.’” *Bilski*, 130 S. Ct. at 3225 (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980)).

**B. The Asserted Claims Constitute Patentable Subject Matter Under 35 U.S.C. § 101**

Plaintiffs are entitled to summary judgment on account of their asserted claims being directed to a product. Specifically, even reviewing the facts in the light most favorable to Defendant, the asserted claims constitute patentable subject matter because they are directed to a “machine.”

The Federal Circuit has defined “machine” as “a concrete thing, consisting of parts, or of certain devices and combination of devices. This includes every mechanical device or combination of mechanical powers and devices to perform some function and produce a certain

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<sup>12</sup> Section 101 specifies four categories of patentable subject matter, namely processes, machines, manufacturers, and compositions of matter, as well as any improvement of the same. 35 U.S.C. § 101.

effect or result.” *SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1332 (Fed. Cir. 2010) (quoting *In re Nujiten*, 500 F.3d at 1355). The patents at issue satisfy this definition. There is no dispute that the asserted claims are directed to a physical transmitter, which sends an encrypted signal to control an actuator. (R. 270-2 at 27, 51-52, 80.) That transmitter is comprised of an oscillator, which generates a signal, and an apparatus, which enables the sending of the signal. It is also comprised of binary- and trinary-code generators. (*Id.*) As the specification explains, this physical device “relates to a security system or to a barrier operator system, such as a garage door operator, employing a transmitter and a receiver which communicate via code streams having at least a portion thereof which changes with multiple operation of the device.” (*Id.* at 23.) This indisputably constitutes a “machine.” *See also In re Nujiten*, 500 F.3d at 1356 n.3 (“An apparatus that generates the signal is of course a machine.”).

Defendant contends, however, that the preceding characteristics of the asserted claims do not reveal a product. (R. 709 at 6-7.) Instead, Lear submits that the transmitter is merely “an ordinary microcontroller, a digital computer, for processing the mathematical algorithm and that the remaining claim elements merely send the signal.” (*Id.* at 6) Although the relevant patents entail the use of software, Defendant’s contention fails for two reasons. First, Lear fails to cite any evidence in the record to support that the transmitter is nothing more than an ordinary microcontroller—that is, that the transmitter is coterminous with a digital computer. (*Id.*) *Cf. Misher v. Barnett*, No. 07-CV-5242, 2010 WL 2136659, at \* 4 (N.D. Ill. May 26, 2010) (“[Plaintiff] has failed to cite any evidence to support her . . . claim . . . and, therefore, [Defendant] is entitled to summary judgment on that claim.”). Plaintiffs, by contrast, direct the Court to undisputed evidence that a microcontroller is just one component of an RF transmitter,

and further point out that the claimed transmitter also entails an oscillator and a transmitting apparatus, which are separate from a microcontroller. (R. 761 at 10.) Second, Lear’s analysis violates *Bilski*’s instruction that one must “consider the invention as a whole.” *Bilski*, 130 S. Ct. at 3230.

The Supreme Court’s leading decisions on the patentability of mathematical formulae dispel any lingering doubt as to the asserted claims’ validity under Section 101.<sup>13</sup> Defendant places significant weight on *Gottschalk* (R. 638 at 9, 13-14; R. 709 at 5, 9), where the Supreme

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<sup>13</sup>Nevertheless, the fact that the asserted claims are directed to a “machine” does not necessarily render them patentable, as they would not be if they were directed to “laws of nature, physical phenomena, and abstract ideas.” *Bilski*, 130 S. Ct. at 3225 (quoting *Chakrabarty*, 447 U.S. at 309). The Federal Circuit has addressed the patentability of a machine that entailed the use of mathematical algorithms. *In re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994) (*abrogated by In re Bilski*, 545 F.3d at 959-60.) In *Alappat*, the court explained:

Given the foregoing, the proper inquiry in dealing with the so called mathematical subject matter exception to § 101 alleged herein is to see whether the claimed subject matter *as a whole* is a disembodied mathematical concept, whether categorized as a mathematical formula, mathematical equation, mathematical algorithm, or the like, which in essence represents nothing more than a “law of nature,” “natural phenomenon,” or “abstract idea.” If so, *Diehr* precludes the patenting of that subject matter. That is not the case here.

Although many, or arguably even all, of the means elements recited in claim 15 represent circuitry elements that perform mathematical calculations, which is essentially true of all digital electrical circuits, the claimed invention as a whole is directed to a combination of interrelated elements which combine to form a machine for converting discrete waveform data samples into anti-aliased pixel illumination intensity data to be displayed on a display means. This is not a disembodied mathematical concept which may be characterized as an “abstract idea”. . . .

*Id.* at 1544 (emphasis in original). The Supreme Court recently declined to endorse the useful-concrete-and-tangible-result test employed by the Federal Circuit in *Alappat*. *Bilski*, 130 S. Ct. at 3231. Nevertheless, the specific question whether a machine represents nothing more than a law of nature, natural phenomenon, or abstract idea is unquestionably the correct one in light of *Bilski*. *Id.* at 3225.



Court found a method for converting binary-coded decimal numerals into pure binary numerals not to be patentable because “[t]he claims were not limited to any particular art or technology, to any particular apparatus or machinery, or to any particular end use.” *Gottschalk v. Benson*, 409 U.S. 63, 64 (1972). The Court denied patentability, reasoning that:

The mathematical formula involved here has no substantial practical application except in connection with a digital computer, which means that . . . the patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself.

*Id.* at 71-72. Defendant also appeals to *Flook*, where the Supreme Court found claims directed to a catalytic conversion process in the petrochemical and oil-refining industries to be unpatentable, where the applicant’s only innovation involved a mathematical algorithm. *Parker v. Flook*, 437 U.S. 584, 585-86 (1978).

Neither *Gottschalk* nor *Flook* benefits *Lear*, as the Supreme Court’s subsequent decision in *Diehr* makes clear. *Diamond v. Diehr*, 450 U.S. 175 (1981). In *Diehr*, the Court explored the contours of *Gottschalk* and *Flook*, explaining that

when a claim recites a mathematical formula . . . an inquiry must be made into whether the claim is seeking patent protection for that formula in the abstract. A mathematical formula as such is not accorded the protection of our patent laws, *Gottschalk v. Benson*, 409 U.S. 63 (1972), and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment. *Parker v. Flook*, 437 U.S. 584 (1978). . . . On the other hand, when a claim containing a mathematical formula implements or applies that formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect (e.g., transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of § 101.

*Id.* at 191-92. The Supreme Court went on to hold that, “[b]ecause we do not view respondents’ claims as an attempt to patent a mathematical formula . . . we affirm . . .” *Id.* at 192-93.

There is no genuine issue of fact that the asserted claims in the present case do not attempt to patent a mathematical formula. *Gottschalk* and *Flook* objected to granting patents in cases where intellectual-property protection would foreclose all use of the claimed algorithm. It is undisputed that those preemption concerns are wholly absent in this case. The asserted claims are directed to a particular form of transmitter that is used for generating and sending a secure signal for the purpose of opening and closing doors or gates. (R. 270-2 at 27, 51-52, 80.) Of course, mathematical algorithms are employed within the claimed transmitter. *See Chamberlain*, 516 F.3d at 1137 (observing that “the transmitter’s microcontroller, like other computers, undisputedly stores and processes data”). Yet, the Supreme Court has made clear that a claim is “not unpatentable simply because it contains . . . a mathematical algorithm.” *Parker*, 437 U.S. at 590. The mathematical algorithms underlying the asserted claims are directed at a physical product that is to be used for a specific purpose. The claims do not purport, in any way, to preclude the use of the mathematical algorithms that operate within the transmitter for other purposes. Nor is there any evidence that the physical transmitter of which the algorithms are an underlying part is merely “insignificant extra-solution activity,” as Defendant proclaims. (*Compare* R. 761 at 1, 5-6 *with* R. 709 at 10.) The machine, to the contrary, constitutes the very heart of the invention.

Ultimately, the “existence of merely a scintilla of evidence in support of the nonmoving party’s position is insufficient to defeat a summary judgment motion; there must be evidence on which the jury could reasonably find for the non-moving party.” *Delta Consulting Group, Inc. v. R. Randle Const., Inc.*, 554 F.3d 1133, 1137 (7th Cir. 2009). No reasonable jury could find that the asserted claims are directed at unpatentable abstract principles. The Court therefore denies

Lear’s motion for summary judgment of invalidity under 35 U.S.C. § 101 of the ‘544, ‘123, and ‘056 patents (R. 637), and grants Plaintiffs’ motion for summary judgment on Lear’s invalidity defense that the asserted claims are directed to unpatentable subject matter (R. 652).

#### **IV. Plaintiffs Are Entitled to Partial Summary Judgment on Defendant’s Inequitable-Conduct Claim**

In its answer to Plaintiffs’ Second Amended Complaint, Lear raised the affirmative defense that the ‘544, ‘123, and ‘056 patents are unenforceable due to inequitable conduct. (R. 283 at 8.) Defendant also asserted a counterclaim to the same effect, asserting that,

the inventors (Bradford Farris and James Fitzgibbon), the assignee (The Chamberlain Group, Inc.), the patent prosecution firm (Fitch, Even, Tabin & Flannery), and patent attorney Kenneth H. Samples . . . prosecuting the application resulting in the issuance of the ‘544, ‘123, and ‘056 patents intentionally did not disclose material prior art . . . which they knew was material to the examiners’ determination of the patentability of the claims of the ‘544, ‘123, and ‘056 patents, for the purpose of deceiving the Patent Office into issuing the patents.

(*Id.* at 12-15.) Lear specifically contended that the inequitable conduct derived from “the non-disclosure of the Miyake reference in the proceedings of the ‘544, ‘123, and ‘056 patents.” (*Id.* at 15.) Plaintiffs now move for summary judgment on Lear’s inequitable-conduct claim. (R. 665.) For the reasons explained below, the Court grants Plaintiffs’ motion in part and denies it in part.

##### **A. Background**

Lear’s affirmative defense and counterclaim that the asserted patents are unenforceable due to inequitable conduct center on Plaintiffs’ failure to disclose U.S. Patent No. 5,563,600 (the “Miyake patent”). (R. 706.) In order to resolve Plaintiffs’ motion for summary judgment, it is

essential to understand the prosecution process that led to the issuance of the ‘544, ‘123, and ‘056 patents. The “family” of which these patents are a part began with the filing of U.S. Application No. 08/446,886 (“the ‘886 application”). (R. 666 at 6; R. 706 at 6.) Chamberlain subsequently submitted U.S. Application No. 08/765,795 (“the ‘795 application”), which was a continuation-in-part of the ‘886 application. (R. 666 at 7; R. 706 at 6.) On August 3, 1999, the examiner rejected claims 17 and 18 of the ‘795 application on the ground of its being unpatentable in light of the Miyake patent. (R. 666 at 8; R. 706 at 6-7.) This led Chamberlain to abandon the ‘795 application.

On June 11, 1997, Chamberlain filed U.S. Application No. 08/873,149 (“the ‘149 application”), which was a continuation of the ‘886 patent. (R. 666 at 8; R. 706 at 6.) Chamberlain did not, however, disclose the Miyake reference to the PTO as part of the ‘149 application. (R. 706 at 7; R. 764 at 14.) Nevertheless, in rejecting certain claims in the ‘149 application on the ground of obviousness-type double patenting in light of the related ‘795 application, the examiner displayed awareness of the latter application. (R. 666 at 9.) The ‘149 application subsequently issued as the ‘544 patent. (*Id.*)

In light of its abandonment of the ‘795 application, Chamberlain filed U.S. Application No. 09/489,073 (“the ‘073 application”), which was divisional of the ‘149 application. (R. 666 at 8-10; R. 706 at 6.<sup>14</sup>) Chamberlain disclosed the Miyake reference to the PTO as part of the ‘073 application. (R. 666 at 10; R. 706 at 7.) The ‘073 application subsequently issued as U.S. Patent No. 6,690,796, which listed the Miyake patent as one of the references cited and

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<sup>14</sup> Lear characterizes the ‘073 application as a continuation, while Plaintiffs characterize it as a divisional application. (*Compare* R. 666 at 8-10 and R. 668-1 at 2 *with* R. 706 at 6.) As the classification does not affect the Court’s analysis of the question whether Plaintiffs committed inequitable conduct, the Court need not address this discrepancy.

considered during prosecution. (R. 666 at 10.)

The '073 application gave rise to multiple continuation applications. (R. 668-1 at 2; R. 706 at 6.) One of these was U.S. Application No. 10/674,259, which issued as the '056 patent. (*Id.*) Another was U.S. Application No. 09/981,433, which gave rise to a further continuation, U.S. Application No. 10/215,900 ("the '900 application"). (*Id.*) The '900 application issued as the '123 patent. Chamberlain did not disclose the Miyake reference in any of the continuations that derived from the '073 application. (R. 706 at 7; R. 764 at 16-17.)

**B. Plaintiffs Are Entitled to Summary Judgment on Lear's Inequitable-Conduct Claim as to the '123 and '056 Patents**

There is no dispute that Chamberlain disclosed the Miyake reference in the '073 application. Nor is there a dispute that the '073 application was a parent to '259 and '900 continuation applications, which issued as the '056 and '123 patents respectively. Plaintiffs contend that these uncontested facts entitle them to summary judgment on Lear's inequitable-conduct claims as to the '056 and '123 patents. (R. 666 at 16-18.) The Court agrees.

The PTO's Manual of Patent Examining Procedure explicitly provides that "it will not be necessary for the applicant to submit an information disclosure statement in the continuing application that lists the prior art cited by the examiner in the parent application." MPEP § 609.02 (emphasis in original). Courts have held that it cannot be inequitable conduct for an applicant not to resubmit references that were cited in the parent application. *See ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 547 (Fed. Cir. 1998) (citing *Transmatic, Inc. v. Gulton Indus., Inc.*, 849 F. Supp. 526 (E.D. Mich. 1994), *aff'd in pertinent part, rev'd in part*, 53 F.3d 1270 (Fed. Cir. 1995)); *see also eBay, Inc. v. IDT Corp.*, No. 08-CV-4015, 2009 WL 2706395, at \*3 (W.D.

Ark. Aug. 24, 2009); *Sprint Commc'ns Co. v. Nuvox Commc'ns, Inc.*, No. 08-CV-2047, 2009 WL 86565, at \*2 (D. Kan. Jan. 12, 2009); *Intex Recreation Corp. v. Team Worldwide Corp.*, 390 F. Supp. 2d 21, 26 (D.D.C. 2005); *Adv. Cardio. Sys., Inc. v. Medtronic Vascular, Inc.*, 485 F. Supp. 2d 538, 546 (D. Del. 2007); *Adv. Respiratory, Inc. v. Electromed, Inc.*, No. 00-CV-2646, 2002 WL 31386740, at \*4 (D. Minn. Oct. 22, 2002).

Lear seeks to distinguish this authority on the ground that there is evidence in this case that the examiner did not in fact review the parent ('073) application, and that he was therefore not aware of the Hershey reference in issuing the relevant notices of allowance. (R. 706 at 16.) Lear's argument, which would hold applicants responsible for ensuring that examiners abide by their responsibilities, fails. *See TM Patents, L.P. v. Int'l Bus. Mach. Corp.*, 121 F. Supp. 2d 349, 372 (S.D.N.Y. 2000) ("A patentee cannot be penalized for a patent examiner's dereliction of duty.") (citing *Nintendo of Am., Inc. v. Magnavox Co.*, 707 F. Supp. 717 (S.D.N.Y. 1989)).

Defendant nevertheless maintains that "[t]here is every reason to conclude that where, as here, the Examiner never confirms in writing that prior art from parent applications was actually considered, the patent applicants have a duty to submit earlier-cited prior art." (R. 706 at 16-17.) In making this argument, Lear relies on *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1367 (Fed. Cir. 2003) and *McKeeson Info. Solutions, Inc. v. Bridge Med., Inc.*, 487 F.3d 897 (Fed. Cir. 2007). Neither case benefits Defendant.

*Dayco* involved an applicant who, during prosecution, failed to disclose the fact that a different examiner had rejected claims in a different application that were substantially similar in content and scope to the claims at issue in the pending application. *Dayco*, 329 F.3d at 1367. The question was whether failure to disclose such information met the threshold level of

materiality for a finding of inequitable conduct. *Id.* at 1367-68. The Federal Circuit concluded that it did, such that an applicant's failure to disclose an examiner's adverse decision, with an intent to deceive, constitutes inequitable conduct. *Id.* Nothing in the opinion purports to impose a duty on an applicant to bring prior art to the attention of an examiner who is already charged with knowledge of that art by virtue of its being cited in a parent application.

Nor does *McKeeson* offer support for Lear's argument that applicants have a duty to submit prior art that has been cited in a parent application when they learn or suspect that the relevant examiner has not reviewed it. That case involved an applicant's failure to apprise an examiner of a separate application that the same examiner had allowed. *McKeeson*, 487 F.3d at 907. The Federal Circuit rejected the argument that, because the same examiner had been involved in both applications, the applicant had no need to disclose the earlier allowance. *Id.* at 925. The court explained that, "where inequitable conduct is at issue, mere *possibilities* are insufficient." *Id.* at 925 (citing *J.P. Stevens & Co. v. Lex Tex, Ltd.*, 747 F.2d 1553, 1564 (Fed. Cir. 1984)) (emphasis in original).

This holding, however, does not speak to the relevant issue in the present case. Specifically, *McKeeson* does not stand for the proposition that an applicant commits inequitable conduct when it fails to disclose prior art in divisional or continuation applications that it already had disclosed in the parent application. In light of the black-letter law addressed above, Chamberlain's failure to disclose the Miyake reference in the '259 and '900 applications did not amount to inequitable conduct as a matter of law.

Defendant's final argument why Plaintiffs are not entitled to summary judgment on its inequitable-conduct claim as to the '123 and '056 patents is that "[i]nequitable conduct during

one patent in a family can infect later applications.” (R. 706 at 19 (citing *Consol. Aluminum Corp. v. Foseco Int’l Ltd.*, 910 F.3d 804 (Fed. Cir. 1990).) *Foseco* did indeed hold that an applicant’s concealment “permeated the prosecution of the other patents-in-suit and renders them unenforceable.” *Id.* at 812. *Lear*, however, offers little in the way of explanation or argument as to why the failure to disclose with respect to the ‘544 patent permeated the prosecution of the ‘123 and ‘056 patents. (R. 706 at 19.) Even if Plaintiffs’ failure to disclose during the ‘544 patent application amounted to inequitable conduct, the Court would not exercise its discretion to deem the ‘123 and ‘056 patents unenforceable. *Cf. Aptix Corp. v. Quickturn Design Sys., Inc.*, 269 F.3d 1369, 1377 (Fed. Cir. 2001) (observing that, “if Aptix had procured its patent by inequitable conduct before the PTO, the trial court would have full discretion to declare the . . . patent unenforceable”). The failure to disclose with respect to the ‘544 patent application did not permeate the prosecution of the ‘123 and ‘056 patents because Plaintiffs in fact disclosed the prior-art reference in the parent application. *Cf. Foseco*, 910 F.2d at 811 (“The concealment of the CS1-B slurry from the ‘917 patent enabled Consolidated to present the CS1-B slurry as part of the invention disclosure in the ‘081 specification and as a basis for its successful arguments in prosecuting the applications that became the other patents-in-suit.”); *see also Pharmacia Corp. v. Par Pharm., Inc.*, 417 F.3d 1369, 1375 (Fed. Cir. 2005) (“[T]his court’s inequitable conduct cases do not extend inequitable conduct in one patent to another patent that was not acquired through culpable conduct.”).



**C. Plaintiffs Are Not Entitled to Summary Judgment on Defendant’s Inequitable-Conduct Claim as to the ‘544 Patent**

Plaintiffs also move for summary judgment on Lear’s claim of inequitable conduct as to the ‘544 patent. (R. 665; R. 666 at 6-20.) It is well established that a “patent may be rendered unenforceable due to inequitable conduct if an applicant, with intent to mislead or deceive the examiner, fails to disclose material information . . . to the PTO during prosecution.” *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, 614 F.3d 1367 (Fed. Cir. 2010) (quoting *Digital Control, Inc. v. Charles Mach. Works*, 437 F.3d 1309, 1313 (Fed. Cir. 2006)). One seeking to prove inequitable conduct must establish both materiality and deceptive intent by clear and convincing evidence. *Id.* Plaintiffs submit that there is insufficient evidence in the record to support a clear and convincing showing that the Miyake reference was material. (R. 666 at 15-16.) They argue further that the record does not support clear and convincing evidence of deceptive intent. (*Id.* at 19-20.) Lear contends that contested issues of fact preclude the entry of summary judgment in Plaintiffs’ favor as to the ‘544 Patent. (R. 706 at 5.) The Court agrees with Lear.

**1. Viewed in the Light Most Favorable to the Nonmoving Party, the Evidence Supports a Showing of Materiality**

Plaintiffs contend that, even viewed in the light most favorable to Lear, the evidence does not support a showing of materiality. (R. 666 at 15-16.) In support of this position, Plaintiffs focus on the fact that, although he initially cited the reference, the examiner ultimately abandoned his reliance on Miyake in rejecting claims 17 and 18 of the divisional ‘795 application. (*Id.* at 15.) Plaintiffs also submit that the Miyake information was cumulative. (*Id.*) They observe that the examiner relied on Miyake during prosecution of the ‘795 application

solely for its disclosure of fixed code and rolling code. (*Id.*) They then contend that there is no dispute that other references also disclose fixed code and rolling code. (*Id.*) Finally, Plaintiffs argue that the examiner's rejection of claims 17 and 18 in the '795 application was immaterial because those claims were different from the claims of the patents in suit. (*Id.* at 16.) They submit that rejected claims 17 and 18 in the '795 application "did not call for generation of trinary rolling codes to modulate a radio frequency signal to operate a secure actuator, as do all the claims of the patents in suit." (*Id.*) Plaintiffs fail, however, to marshal sufficient evidence of the Miyake reference's immateriality to demonstrate a genuine issue of material fact.

First, although the examiner ultimately relied on another reference in rejecting claims 17 and 18 of the divisional '795 application, it is undisputed that he initially based that rejection on Miyake. If "a reasonable examiner would have considered . . . prior art important in deciding whether to allow the parent application," it is material. *Digital Control, Inc. v. Charles Mach. Works*, 437 F.3d 1309, 1314 (Fed. Cir. 2006) (quoting *Driscoll v. Cebalo*, 731 F.2d 878, 884 (Fed. Cir. 1984)). Although the '795 application is not a parent of the '149 application that issued as the '544 patent, the fact that the examiner in the former application initially relied on, but subsequently omitted reference to, the Miyake reference does not establish as a matter of law that that prior art is immaterial to the '149 application.

Second, and significantly, Lear has proffered expert testimony from Dr. Schonfeld as to the importance of the Miyake reference to the '149 application. (R. 706 at 10; R. 707-1 at 157.) Specifically, Dr. Schonfeld opines that the asserted claims of the '544 patent are obvious in light of Miyake. (*Id.*) The materiality of the Miyake reference is therefore a disputed fact question,

which cannot be resolved at the summary-judgment stage.<sup>15</sup>

## 2. There Is a Genuine Issue of Material Fact as to Deceptive Intent

Plaintiffs submit that Lear lacks clear and convincing evidence of deceptive intent during the prosecution process. (R. 666 at 19-20.) They focus on the testimony of Chamberlain’s representative, Kenneth Samples, to the effect that he declined to disclose the Miyake reference during prosecution of the ‘149 application because it was cumulative of references that had already been cited. (*Id.* at 19.) Plaintiffs contend that this evidence forecloses the possibility of inequitable conduct because evidence of deceptive intent need not only be clear and convincing, “it must also be the single most reasonable inference able to be drawn from the evidence to meet the clear and convincing standard.” (*Id.* (quoting *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 537 F.3d 1357, 1366 (Fed. Cir. 2008))). They therefore argue that the existence of two reasonable inferences—namely that Mr. Samples believed that Miyake was cumulative or that he believed that the examiner was already aware of the reference—refutes Lear’s claim of inequitable conduct as a matter of law. (*Id.* at 19-20.) The Court agrees with Defendant, however, that contested issues of material fact preclude the entry of summary judgment in Plaintiffs’ favor.

It is undisputed that Chamberlain failed to disclose Miyake to the PTO with respect to the ‘149 application. Of course, a patent applicant’s “[i]ntent to deceive can not be inferred solely from the fact that information was not disclosed.” *Optium Corp. v. Emcore Corp.*, 603 F.3d

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<sup>15</sup> Furthermore, Defendant is correct to point out that “cumulativeness” requires the identify of each element of a claim in an anticipatory reference. (R. 706 at 10.) Lear also points to the prosecuting attorney’s concession that Miyake disclosed certain information that other references did not. (*Id.*; R. 707 at 18, ¶ 7; R. 707-1 at 66-67.)

1313, 1321 (Fed. Cir. 2010) (quoting *Hebert v. Lisle Corp.*, 99 F.3d 1109, 1116 (Fed. Cir. 1996)). Defendant has raised enough evidence to demonstrate a genuine issue of material fact.

First, in response to the question why he had not disclosed the Miyake reference, Mr. Samples testified at his deposition that “we were, again, just about at the point of an allowance in ‘544. And had I cited yet another reference in ‘544, we would have – it probably would have delayed the issuance while the examiner reviewed it and made all of this.” (R. 707-1 at 65.) This testimony arguably constitutes “clear and convincing evidence . . . that the applicant made a deliberate decision to withhold a known material reference.”<sup>16</sup> *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1181 (Fed. Cir. 1995). Furthermore, as Lear correctly points out, it is improper for an applicant to withhold a reference from the PTO on the ground that it would delay the issuance of a patent. (R. 706 at 12-13.) In upholding a finding of inequitable conduct in *Critikon*, the Federal Circuit emphasized that “[i]t is axiomatic that ‘close cases should be resolved by disclosure, not unilaterally by applicant.’” *Critikon, Inc. v. Becton Dickinson Vascular Access, Inc.*, 120 F.3d 1253, 1257 (Fed. Cir. 1997). Although Mr. Samples testified that he considered Miyake “to be a non-important reference” and that he considered the reference to be cumulative (R. 707-1 at 65), one could conclude that these assertions served to mask deceptive intent.

Second, the timing of the events also supports an inference that Mr. Samples purposefully elected not to disclose the Miyake reference. As Lear points out, Mr. Samples did not disclose that reference in the ‘149 application, even though only twenty-two days had passed since the examiner had rejected claims 17 and 18 of the ‘795 application on the basis of Miyake. (R. 706 at 14.)

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<sup>16</sup> As explained above, there is a genuine issue of fact as to whether the Miyake reference was material to the ‘149 application.

Ultimately, the question of intent is peculiarly fact intensive. *See, e.g., Lorillard Tobacco Co. v. A & E Oil, Inc.*, 503 F.3d 588, 594 (7th Cir. 2007) (“As a general rule, a party’s state of mind (such as knowledge or intent) is a question of fact for the factfinder, to be determined after trial.” (quoting *Chanel, Inc. v. Italian Activewear of Florida, Inc.*, 931 F.2d 1472, 1476 (11th Cir. 1999)); *see also Gen. Analytics Corp. v. CAN Ins. Cos.*, 86 F.3d 51, 54 (4th Cir. 1996) (“It is readily apparent that determining intent is fact-intensive, and when the circumstantial evidence of a person’s intent is ambiguous, the question of intent cannot be resolved on summary judgment.”). Although this does not necessarily foreclose summary judgment as to an applicant’s deceptive intent, it is inappropriate where, as here, there is conflicting evidence as to the nature of that intent. *See, e.g., Leviton Mfg. Co., Inc. v. Universal Sec. Instruments, Inc.*, 606 F.3d 1353, 1363-64 (Fed. Cir. 2010) (observing that “[w]e rarely affirm a grant of summary judgment of inequitable conduct,” surveying the evidence in the case, vacating the district court’s award of summary judgment for inequitable conduct, and concluding that “the district court could not find that Leviton intended to deceive the PTO . . . without an evidentiary hearing.”).

Plaintiffs may be correct that the weight of the evidence reveals that Mr. Sample did not possess the requisite deceptive intent, but that is a determination properly made by the jury rather than the Court. A jury may conclude that deceptive intent is not the “single most reasonable inference able to be drawn from the evidence to meet the clear and convincing standard.” (R. 804 at 1-2 (quoting *Cancer Research Tech. Ltd. v. Barr Labs., Inc.*, -- F.3d --, 2010 WL 4455839, at \*7 (Fed. Cir. Nov. 9, 2010)).) Nevertheless, given the above-referenced deposition testimony, in addition to the fact that all reasonable inferences must be drawn in

Lear's favor at this juncture, the Court denies Plaintiffs' motion for summary judgment on Lear's claim of inequitable conduct as to the '544 patent.

**V. Plaintiffs Are Entitled to Summary Judgment on Lear's Invalidity Defense Based On Alleged Lack Of Definiteness, But Are Not Entitled to Summary Judgment on Lear's Invalidity Defense Based on Enablement And Written Description**

Defendant contends that certain of the asserted claims in the patents in suit are means-plus-function claims, which Lear submits are insufficiently definite under 35 U.S.C. § 112 ¶ 2. (R. 663-1 at 22-23; R. 662-1 at 37-44.) Defendant also presents the expert report of Dr. Schonfeld to the effect that, under Plaintiffs' proposed construction of the "code that is based on the fixed code," claims 1 and 2 of the '056 patent are invalid under 35 U.S.C. § 112 ¶ 1 due to the lack of any enabling disclosure and written description. (R. 662-1 at 49-52.) Plaintiffs have moved for summary judgment on these invalidity defenses. (R. 659.) For the reasons that follow, the Court grants Plaintiffs' motion in part and denies it in part.

**A. Because the Relevant Elements Are Not Written in Means-Plus-Function Terms, Plaintiffs Are Entitled to Summary Judgment on Lear's Invalidity Defense Based on Alleged Lack of Definiteness**

Lear submits that the "'code generator' elements are all functional, lack sufficiently definite structure, and should be construed as means-plus-function claims." (R. 714 at 15.) Lear's argument that the relevant claims of the '056 patent are invalid for lack of definiteness is contingent on the Court's construing the code-generator elements as means-plus-function claims. (*Id.* at 16-20.) As noted above, whether elements are "means-plus-function" elements for the purpose of 35 U.S.C. § 112 ¶ 6 is a legal question for the Court. *See TriMed*, 514 F.3d at 1259. Because the code-generator elements are not means-plus-function elements, Plaintiffs are

entitled to summary judgment on Lear’s invalidity defense based on alleged lack of definiteness.

First, and as previously explained, the absence of means in the relevant claim language creates a presumption that the pertinent terms are not means-plus-function elements. *Phillips*, 415 F.3d at 1311; *Greenberg*, 91 F.3d at 1583. Second, Plaintiffs correctly point out that another court within this district<sup>17</sup> did not construe “binary code generator” and “trinary code generator” as means-plus-function elements.<sup>18</sup> (R. 148 at 8.) Third, Plaintiffs’ experts Dr. Rhyne and Dr. Stevenson both opine that the code-generator terms are not means-plus-function elements. (R. 767 at 8.) Fourth, although the word “means” appears in the summary of the invention, it does not appear in the relevant claims. Given that the inventors saw fit to use “means” language in claim elements of the related ‘544 patent (*e.g.*, R. 270-2 at 27), this suggests that the absence of the language in the ‘056 patent is purposeful.

Lear opposes this evidence on numerous grounds. It focuses first on the presence of “means” within the summary of the invention, arguing that “[t]his language corresponds to the function of the code generator elements of generating variable code.” (R. 714 at 15.) Plaintiffs correctly point out, however, that a court must not rely on the specification to the point of importing limitations into claims “unless the specification makes clear that the patentee intends for the claims and the embodiments in the specification to be strictly coextensive.” (R. 767 at 9 (quoting *Silicon Graphics, Inc. v. ATI Techs., Inc.*, 607 F.3d 784, 792 (Fed. Cir. 2010).) The specification does not make such an intention clear with respect to the ‘056 patent.

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<sup>17</sup> This case was previously before Judge Moran.

<sup>18</sup> The Court declines to put controlling weight on this fact, however, because the district court informed the definition of binary-code generator by adopting a construction of “binary code” that was subsequently reversed by the Federal Circuit. R. 148 at 8; *Chamberlain*, 516 F.3d. at 1339.

Lear also points to cases in which limitations employing the term “generator” are means-plus-function elements. (R. 714 at 15 (citing *Isogon Corp. v. Amdahl Corp.*, 47 F. Supp. 2d 436, 449-50 (S.D.N.Y. 1998), *QS Indus., Inc. v. Mike’s Train House, Inc.*, 230 F. Supp. 2d 1240, 1246 (D. Or. 2002), *Ex Parte Rodriguez*, 92 U.S.P.Q.2d 1395, at \*12 (B.P.A.I. 2009).) None of these cases stands for the proposition, however, that code-generator elements should generally be understood as being a substitute for means-plus-function elements. *Id.* Indeed, in this case, Dr. Rhyne has opined that someone skilled in the art would understand the code-generation terms at issue here “as connoting an appropriately programmed processor that generates a binary code or supplies a sequence of binary codes.” (R. 767 at 8.) Similarly, Dr. Stevenson has opined that the code-generation terms “would convey sufficiently particular or definite structure to a person of skill in the art.” (*Id.*)

Finally, Lear relies on *Aristocrat Technologies* for the principle that disclosure of “an appropriately programmed processor” cannot support a claim term that is written in means-plus-function form. (R. 714 at 16 (citing *Aristocrat Techs. Australia Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1331, 1337-38 (Fed. Cir. 2008).) Plaintiffs accurately observe, however, that this holding only applies when § 112 ¶ 6 has been invoked. (*Id.*; R. 767 at 10.)

In light of the clear principle that elements are presumed not to be in means-plus-function form when they do not use the words “means for,” as well as the evidence recounted above as to why the code-generator elements connote a structure to one skilled in the art, the Court determines the relevant elements not to be means-plus-function elements. As Defendant’s invalidity defense based on an alleged lack of definiteness is premised on the Court’s construing the code-generator elements as means-plus-function elements, the Court grants the relevant part



of Plaintiffs' motion for summary judgment.

**B. Plaintiffs Are Not Entitled to Summary Judgment on Defendant's Defenses Based on Alleged Lack of Enablement and Written Description**

**1. There Is a Genuine Issue of Material Fact as to Whether Claims 1 and 2 of the '056 Patent Are Sufficiently Enabled**

It is well established that, in order to be valid, a patent specification must meet the enablement requirement of Section 112. 35 U.S.C. § 112; *Anascope, Ltd. v. Nintendo of Am., Inc.*, 601 F.3d 1333, 1342 (Fed. Cir. 2010). The Federal Circuit has explained that, “[t]o meet the enablement requirement, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation.” *Martek Biosci. Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1378 (Fed. Cir. 2009) (citations omitted). To prove a lack of enablement, one must “show that one of ordinary skill in the art would be unable to make the claimed invention without undue experimentation.” *Johns Hopkins Univ. v. Cellpro, Inc.*, 152 F.3d 1342, 1359-60 (Fed. Cir. 1998).

As explained above, the Court construes “code that is based on a fixed code” within claim 1 of the '056 patent to mean a claim that need not itself be fixed or remain the same for each actuation. There is no dispute that the specification reveals a fixed code that is based on a fixed code. (R. 661 at 17-18; R. 714 at 10.) There is no genuine issue of fact that the specification does not reveal a variable code that is based on a fixed code.<sup>19</sup> Lear thus argues

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<sup>19</sup> Plaintiffs contend that the specification's description of interleaving fixed and variable code elements constitutes an example of a variable code that is based on a fixed code. (R. 661 at 18.) There is no genuine issue of fact, however, that interleaving does not modify the fixed code in such a manner that it changes with each actuation. (R. 714 at 11.) Construing the '056 patent, the Court agrees with Defendant that it is in fact the “code that is based on the fixed code” that is interleaved with the separate variable code. (*Id.* at 12; R. 270-2 at 80.) Claim 1 claims an “apparatus for providing a code that is based on the fixed code” and an “apparatus [that] . . .

that claim 1 of the '056 patent is insufficiently enabled to allow one skilled in the art to make an invention in which the fixed code that is transmitted changes or is encrypted. (R. 714 at 9-12.) To substantiate this assertion, Lear proffers the second expert report of Dr. Schonfeld, who opines that the Court's construction of "a code that is based on the fixed code" "expand[s] to include any and all ways in which a fixed code could be encrypted or modified." (R. 717 at 12-13; R. 662-1 at 51-52.)

As noted, there is no dispute that the specification discloses at least one embodiment of a "code that is based on the fixed code." Nor is there a dispute over the fact that the '056 patent is directed to the electrical arts. In light of pertinent case law, Plaintiffs contend that they are therefore entitled to summary judgment on Lear's invalidity defense based on lack of enablement. (R. 661 at 18.) Plaintiffs' argument is bolstered by relevant case law. *See Epistar Corp. v. Int'l Trade Comm'n*, 566 F.3d 1321, 1336 (Fed. Cir. 2009) ("If an invention pertains to an art where the results are predictable . . . a broad claim can be enabled by disclosure of a single embodiment . . . and is not invalid for lack of enablement simply because it reads on another embodiment of the invention which is inadequately disclosed.") (quoting *Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1533 (Fed. Cir. 1987)); *see also In re Vaeck*, 947 F.2d 488, 496 (Fed. Cir. 1991) (observing that electrical elements are predictable and noting that the required level of disclosure for such inventions is less than for unpredictable arts). Nevertheless, the Federal Circuit has distinguished *Spectra-Physics* in *Liebel-Flarsheim Co. v.*

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combines the trinary code version of the variable code with the trinary code version of the code by interleaving trinary bits for the trinary code version of the variable code with trinary bits for the trinary code version of the code to thereby provide an interleaved trinary code combined result." (R. 270-2 at 80.)

*Medrad, Inc.*, 481 F.3d 1371, 1380 (Fed. Cir. 2007).<sup>20</sup>

*Liebel-Flarsheim* concerned a fluid injector with a replaceable syringe that is capable of withstanding high pressures for delivering a contrast agent to a patient. *Id.* at 1373. The claims in the originally filed application recited a pressure jacket in front of the syringe. *Id.* at 1374. During prosecution, “Liebel removed all references in the claims to a pressure jacket” after the applicants learned of the defendant’s jacketless system. *Id.* Having previously construed the claims to encompass embodiments lacking a pressure jacket, the Federal Circuit affirmed the district court’s holding that the claims were invalid for lack of enablement. *Id.* at 1374-75. The appellants argued that the district court had erred in light of *Spectra-Physics*, which stood for the proposition that, “if an invention pertains to an art where the results are predictable . . . then disclosure of a single embodiment can enable a broad claim.” *Id.* at 1379. The appellants noted further that “the specification enables one mode of making and using the invention in its preferred embodiment, viz., an injector with a pressure jacket.” *Id.* The Federal Circuit rejected their reliance on *Spectra-Physics* as “misplaced,” explaining its decision in the cited case as follows:

We did note that the specifications of other patents identified TiCuSil brazing as a suitable alternative attachment technique and thus that the asserted patent’s failure to mention TiCuSil brazing as an attachment was ‘not fatal to enablement under § 112.’ Indeed, in that case, disclosure of one attachment means permitted one skilled in the art to make and use the invention as broadly as it was claimed, which included other attachment means known to one of ordinary skill in the art. In contrast, in this case, disclosure of an injector system with a pressure jacket does not permit one skilled in the art to make and use the invention as broadly as it was claimed, including without a pressure jacket.

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<sup>20</sup> Indeed, commentators have opined that the latter decision has made it easier to establish patents’ invalidity on the basis of a lack of enablement in the predictable arts. *See, e.g.,* Bernard Chao, *Rethinking Enablement in the Predictable Arts: Fully Scoping the New Rule*, 2009 STAN. TECH. L. REV. 3, at \*1.

*Id.* at 1380.

In light of *Liebel-Flarsheim*, the relevant question is whether the ‘056 patent’s disclosure permits one skilled in the art to make and use the claimed invention, including a variable code based on a fixed code, without undue experimentation. This inquiry requires the Court to examine the evidence in the light most favorable to Lear to determine whether the ‘056 patent’s specification embodies the claimed invention entailing a “code that is based on a fixed code” as the term has been construed above. Of course, Lear would have the burden of proof at trial in proving its invalidity defense of inadequate enablement of claims 1 and 2 of the ‘056 patent. *See, e.g., Abbott Labs v. Andrx Pharms, Inc.*, 473 F.3d 1196, 1201 (Fed. Cir. 2007) (observing that the defendant bore the burden of proof at trial on its invalidity defenses). Plaintiffs would therefore be entitled to summary judgment if there is “a complete failure of proof concerning an essential element of the nonmovant’s case,” which would “necessarily render[] all other facts immaterial.” *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986).

Plaintiffs therefore cannot rely on the fact that the specification reveals a single embodiment to conclusively establish that the ‘056 patent meets the enablement requirements of 35 U.S.C. § 112 as a matter of law. The question thus arises whether there is a genuine issue of fact whether one skilled in the art would have to undertake undue experimentation to reproduce a variable code based on a fixed code. The Federal Circuit has observed that “[w]hether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations.” *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1998). The relevant factors identified by the court include: “(1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence

or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.” *Id.*

Defendant’s principal evidence in support of its contention that claims 1 and 2 of the ‘056 patent are not enabled is Dr. Schonfeld’s second expert report. (R. 662-1 at 51-52.) Having reviewed this evidence in the light most favorable to Lear, the Court concludes that it creates a genuine issue of fact for trial. At paragraph 109 of his report, Dr. Schonfeld observes that “there is no disclosure in the patent specification for any modification of the fixed code other than its conversion from binary fixed code to trinary fixed code.” (*Id.* at 51.) Finding further support for this assertion in statements of Dr. Rhyne, and rejecting the validity of Professor Stevenson’s reference to “potential modification of the fixed code in the patent specification,” Dr. Schonfeld states: “I therefore conclude that based on the disclosure in the patent specification, a person of ordinary skill in the art would not be able to practice the claimed invention as broadly as Plaintiffs’ experts contend it is claimed to encompass encryption of fixed codes [sic].” (*Id.* at 52.)

This explanation is sufficient under applicable law to create a genuine issue of material fact, and thus to enable Lear to survive summary judgment. *See, e.g., Patton*, 480 F.3d at 487 (7th Cir. 2007) (“[E]ven brief expert reports will suffice at the summary judgment stage.”); *see also Vollmert*, 197 F.3d at 300-01 (“In demanding a ‘roadmap,’ the Department would require an expert to not only provide the justification for the opinion, but also to give a primer on why the facts allow the expert to reach that conclusion. That requires too much of the plaintiff to avoid summary judgment.”). Dr. Schonfeld’s report explains that the patent specification fails

to disclose any modification of the fixed code, and opines on the basis of this observation that one skilled in the art would not be able to practice the claimed invention without undue experimentation. This goes beyond the wholly conclusory nature of expert testimony that may be insufficient to create a genuine issue of material fact. *Cf. Vollmert*, 197 F.3d at 298 (“On a few occasions, this court has recognized that an admissible expert report may not be sufficient to preclude summary judgment when it offers nothing but naked conclusions.”).

The final evidence proffered by Lear (R. 714 at 11) relates to Mr. Kraft’s experiences in reverse engineering Plaintiffs’ garage-door product. Mr. Kraft did testify that “the ‘544 [patent] was not adequate to tell me how it worked.” (R. 717-1 at 137.) Of course, to be sufficiently enabled for the purposes of section 112, a patent specification need not be so clear that in one skilled in the art would not have to engage in any experimentation at all to make the claimed invention. *See ALZA Corp. v. Andrx Pharms., L.L.C.*, 603 F.3d 935, 940 (Fed. Cir. 2010) (“Enablement is not precluded where a ‘reasonable’ amount of routine experimentation is required to practice a claimed invention.”). Furthermore, as Plaintiffs correctly point out, “the dispositive question of enablement does not turn on whether the accused product is enabled.” (R. 767 at 13-14 (quoting *Durel Corp. v. Osram Sylvania, Inc.*, 256 F.3d 1298, 1306 (Fed. Cir. 2001).) Mr. Kraft ultimately succeeded, of course, in his efforts to determine how Plaintiffs’ product operated. (R. 717-1 at 137 (“I learned how to -- I learned how the unit actually worked.”).) Yet, Mr. Kraft’s efforts took some time, as he explained in his deposition testimony: “I then started looking at this program, that program over a period of several months, and I determined actually how the device worked.” (*Id.* at 138.)

The relevant question is not, as Defendant urges, whether Mr. Kraft had to engage in

undue experimentation to reverse engineer Plaintiffs' product. (R. 714 at 11.) Plaintiffs are correct to point out that the "ability to reverse engineer a product says nothing about the ability to devise the technology in the first place" and that "Mr. Kraft's efforts to reverse engineer the JCI transmitter are thus not relevant to the enablement analysis, and do not suggest that undue experimentation is necessary to practice the claim element 'apparatus for providing a code that is based on the fixed code.'" (R. 767 at 17.) *Accord Metso Minerals Inds, Inc. v. FLSmidth-Excel, L.L.C.*, No. 07-CV-926, 2010 WL 1929781, at \*7 (E.D. Wis. May 13, 2010) ("Excel's only argument regarding its enablement defense is that there is a material factual question as to whether the length of time it would take to reverse engineer one of Metso's crushers constitutes 'undue experimentation.' . . . Excel's argument makes no sense. Indeed, there is no logical connection between how long it would take one of ordinary skill in the art to reverse engineer one of Metso's crushers based on the '681 patent and whether one of ordinary skill in the art can practice the '681 patent without 'undue experimentation.'").

Notwithstanding the questionable relevance of Mr. Kraft's experience in reverse engineering Plaintiffs' product to the issue of enablement, Defendant has provided sufficient evidence in the form of Dr. Schonfeld's expert report to reveal a genuine issue of material fact that requires trial. The Court therefore denies Plaintiffs' motion for summary judgment on Lear's invalidity defense based on alleged lack of enablement.

## **2. The '056 Patent Satisfies the Written-Description Requirement**

The Federal Circuit has recently reaffirmed that section 112 contains a written-description requirement that is separate from enablement. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1344-48 (Fed. Cir. 2010) (en banc). Thus, the fact that Plaintiffs are

entitled to summary judgment on Lear’s defense of lack of enablement does not mean that they are similarly deserving of summary judgment on Defendant’s defense of inadequate written description. *Id.* Lear contends that the ‘056 patent is invalid by virtue of its failure to satisfy the written-description requirement. Plaintiffs have moved for summary judgment, contending that, even viewed in the light most favorable to Lear, the record makes clear that there is no genuine issue of material fact that requires proceeding to trial. (R. 661 at 17-19.)

It first bears noting that “[c]ompliance with patent law’s written description requirement is a question of fact but is amenable to summary judgment in cases where no reasonable fact finder could return a verdict for the non-moving party.” *Spine Solutions, Inc. v. Medtronic Sofamor Danek USA, Inc.*, 620 F.3d 1305, 1312-13 (Fed. Cir. 2010) (quoting *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1307 (Fed. Cir. 2008)). The Federal Circuit has explained that the written-description provision of section 112 “requires that the specification objectively demonstrate that the applicant actually invented – was in possession – of the claimed subject matter.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1349 (Fed. Cir. 2010).

In their opening brief, Plaintiffs contend that Lear has insufficient evidence to prove by clear and convincing evidence that the specification of the ‘056 patent does not provide a written description of a “code that is based on the fixed code” under their proposed construction, which the Court has adopted. (R. 661 at 17-19.) To support this contention, however, Plaintiffs rely only on *Spectra-Physics* for the proposition that a “claim term in the mechanical/electrical arts is adequately . . . described in compliance with § 112 ¶ 1 by just one example in the specification.” (R. 661 at 18 (citing *Spectra-Physics*, 827 F.2d at 1533).)



Plaintiffs' reliance on *Spectra-Physics* is inapposite, however, because the portion of the opinion they cite speaks only to enablement. *See Spectra-Physics*, 827 F.2d at 1533.<sup>21</sup> Plaintiffs proffer no evidence that the '056 patent satisfies the written-description requirement; nor do they explain why the evidence relied upon by Defendant is insufficient to create a genuine issue of material fact. (R. 661 at 17-19 (criticizing Dr. Schonfeld's analysis with respect to enablement, arguing that the specification teaches an example of interleaving fixed and variable code elements, which would relieve one of ordinary skill in the art from engaging in undue experimentation for the purpose of the enablement inquiry, and discussing written description only by reference to *Spectra-Physics*, which Plaintiffs claim refutes Dr. Schonfeld's position that the '056 patent lacks a written description).)

Lear, in contrast, contends that the "specification contains no description of encrypting or changing the fixed code upon each transmission" and argues that "the specification specifically limits the invention to the transmission of 'fixed code bits' that 'remain[] the same for each actuation' of the transmitter." (R. 714 at 13.) Defendant also points to the deposition testimony of Plaintiffs' expert, Dr. Rhyne, which recognized that "the patents do not disclose any further modification of the fixed code before it is used as an interleaving code in order to form the transmitted data." (*Id.*) Lear further contends that the inventors admitted that they did not possess any such invention at the time they filed their patent application. (*Id.*) Lear thus concludes that, "under the Plaintiffs' claim construction[,] which includes encrypting or changing the fixed code, the '056 patent fails the written description requirement." *Id.*

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<sup>21</sup> Nor did *Liebel-Flarsheim*, which distinguished *Spectra-Physics* with respect to enablement, have occasion to consider the law on written description. *Liebel-Flarsheim*, 827 F.3d at 1380 ("Because we are resolving this issue on the enablement ground, we do not need to consider the written description holding of invalidity.").

In their reply, Plaintiffs raise the argument for the first time that “it is sufficient that the ‘056 patent describe the embodiment of controller 78, bus 79, and memory 80 to satisfy 35 U.S.C. § 112.” (R. 767 at 18.) This is an argument that Plaintiffs did not articulate in its opening motion for summary judgment. (Cf. R. 661 at 17-19.) It is black-letter law that “arguments raised for the first time in a reply brief are waived.” *United States v. Wescott*, 576 F.3d 347, 354 (7th Cir. 2009); *see also United States ex. rel Curtis v. Randolph*, No. 09-CV-4751, 2010 WL 3937465, at \*1 n.1 (N.D. Ill. Oct. 5, 2010).

As Lear has offered evidence that the ‘056 patent does not satisfy the written description of section 112, and because Plaintiffs have failed to point to evidence establishing that there is no genuine issue of material fact, the Court denies Plaintiffs’ motion for summary judgment on Lear’s invalidity defense based on lack of written description.

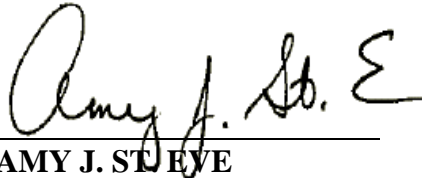
### **CONCLUSION**

For the foregoing reasons, the Court grants in part and denies in part Defendant’s motion for summary judgment of noninfringement of the ‘544 and ‘123 patents; denies Defendant’s motion for summary judgment of noninfringement of ‘056 patent; denies Chamberlain’s cross-motion for summary judgment on the ‘544 and ‘123 patents; denies JCI’s cross-motion for summary judgment on the ‘056 patent; denies Chamberlain’s cross-motion for summary judgment on the ‘056 patent; denies Defendant’s motion for summary judgment of invalidity under 35 U.S.C. § 101 of the ‘544, ‘123, and ‘056 patents; grants Plaintiffs’ motion for summary judgment on Lear’s invalidity defense that the asserted claims are directed at unpatentable subject matter; grants in part and denies in part Plaintiffs’ motion for summary judgment on Lear’s inequitable-conduct claim; and grants in part and denies in part Plaintiffs’

motion for summary judgment on Lear's invalidity defense based on alleged lack of definiteness, enablement, and written description.

**Dated:** November 24, 2010

**ENTERED**

A handwritten signature in black ink that reads "Amy J. St. Eye". The signature is written in a cursive style with a large initial "A" and a stylized "E".

**AMY J. ST. EYE**

**United States District Court Judge**