UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

SPX CORPORATION,

        Plaintiff,

vs.

BARTEC USA, LLC, BARTEC AUTO
ID LTD., SCHRADER-BRIDGEPORT
INTERNATIONAL, INC., MYERS TIRE
SUPPLY DISTRIBUTION, INC.,

        Defendants.

Case No. 06-14888
Hon. David M. Lawson
Magistrate Judge Steven D. Pepe

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OPINION AND ORDER GRANTING MOTION FOR RECONSIDERATION OF ORDER CONSTRUING CLAIMS AND PERMITTING PARTIES TO REFILE MOTIONS FOR SUMMARY JUDGMENT

This matter is before the Court on the plaintiff's motion for reconsideration of the Court's

opinion and order construing claims entered January 7, 2008. The plaintiff filed this action alleging

that the defendants infringed United States Patent 6,904,796 (the '796 patent) for a handheld tool

that helps auto mechanics rotate and change tires on vehicles equipped with "remote tire monitoring

systems" (RTMS). The plaintiff asks the Court to reconsider its determination that the term "means

for generating modulated signals" is invalid for indefiniteness. The Court based its finding on the

conclusion that the specification corresponding to this limitation did not disclose an algorithm, the

structural requirement in microprocessor-implemented means-plus-function claims. The Court

believes reconsideration is warranted in light of the Federal Circuit's recent decisions in *AllVoice*

Computing PLC v. Nuance Communications, Inc., 504 F.3d 1236 (6th Cir. 2007), *Aristocrat Tech.*

Australia Pty Ltd. v. Int'l Game Tech., 521 F.3d 1328 (Fed. Cir. 2008), and *Aristocrat Tech.*

Australia Pty Ltd. v. Multimedia Games, Inc., __ Fed Appx. __, 2008 WL 484449 (Fed. Cir. Feb.

22, 2008) (unpublished), cases that were not available when the parties filed their *Markman* briefs. After reviewing those decisions, the Court concludes that the reference in the specification of the '796 patent to a "microprocessor [that] can provide the modulation to the frequency generator circuitry" adequately identifies an algorithm to one ordinarily skilled in the art, which distinguishes a general purpose microprocessor from a special purpose computer. A computer programmed to perform the disclosed algorithm – modulating the signals from the frequency generator – adequately defines a structure to satisfy the means-plus-function requitement of 35 U.S.C. § 112 ¶ 6. Therefore, the Court will vacate the portion of its order finding the term "means for generating modulated signals" void for indefiniteness and construe the claim as set forth below.

I.

The device covered by the '796 patent is well described in the Court's previous opinion and order and need not be discussed with any elaboration here. It is sufficient to observe that remote tire monitoring systems measure the air pressure in tires through sensors and then transmit that data to an instrument in the passenger compartment of a motor vehicle, signaling to the driver when air pressure is low. The patented tool derives its value from the fact that it can be used with a multitude of RTMS platforms, eliminating the need to purchase brand-specific tools.

The plaintiff filed its complaint alleging patent infringement on October 30, 2006. Bartec USA, LLC thereafter filed an answer denying liability and asserted a counterclaim for invalidity, unenforceability, and non-infringement. After the parties amended their pleadings and engaged in discovery, they filed briefs advocating in favor of their respective interpretations of the claim limitations. On January 7, 2008, the Court issued its opinion and order construing claims.

The plaintiff takes issue with only one portion of the Court's opinion – its analysis of the limitation "means for generating modulated signals." This term appears in a handful of the '796 patent claims, *see* '796 Patent at Clms. 1,3, 4, 6, 7, 9, 11, 13, 15, and it generally represents one of the many ways in which the tool can activate RTMS tire sensors. To put it in context, it is helpful to consider the patent's first claim:

> **1.** A tool comprising a plurality of means for activating remote tire monitoring system tire sensors, the plurality of means selected from the group consisting of a magnet, a valve core depressor, means for generating continuous wave signals, and *means for generating modulated signals*, wherein the tool is capable of activating a plurality of tire sensors, each of the plurality of tire sensors utilizing a different method for activating the said tire sensor.

'796 Patent at Clm. 1 (emphasis added).

After setting forth the parties' proposed constructions (the defendants contended the claim was indefinite, while the plaintiff argued that "means for generating modulated signals" should be construed as "a microprocessor in addition to frequency-generating circuitry, an amplifier or driver circuit, and an inductor (plus equivalents thereof) for generating modulated signals," *see* Pl.'s *Markman* Br., Ex. 6, Joint Claim Const. Chart at 7), the Court determined that this claim limitation failed for indefiniteness. The reasoning that the plaintiff believes ought to be reconsidered is restated as follows:

C. *"Means for generating modulated signals"*

The defendants contend that this claim must be declared void for indefiniteness because the designation of the corresponding structure as "a microprocessor" is insufficient. The defendants argue that, when the disclosed structure is a microprocessor or computer, an algorithm must also be disclosed; and no algorithm has been identified in the specification. The Court agrees.

The structure disclosed in the specification for "generating modulated signals" is as follows:

Means for generating modulated signals at a specific frequency are known in the art and any means known in the art can be utilized for generating a modulated signal in tire positioning tools of the present invention. One means for producing a modulated signal in tire positioning tools of the present invention is to include a microprocessor in addition to frequency generating circuitry. As is known in the art, the microprocessor can provide the modulation to the frequency generator circuitry. An amplifier or driver circuit can also be included to amplify the signal.

'796 Patent at 5:48-57. Figure 1, a technical illustration of the tool's overall structure, shows a microprocessor connected to a power supply, receivers, transmitters, a display device, and a frequency generator. '796 Patent at Fig. 1.

It is now well settled that "[a] computer-implemented means-plus-function term is limited to the corresponding structure disclosed in the specification, and the corresponding structure is the algorithm." *Harris Corp. v. Ericsson, Inc.*, 417 F.3d 1241, 1253 (Fed. Cir. 2005); *see also Tehrani v. Hamilton Medical, Inc.*, 331 F.3d 1355, 1361-62 (Fed. Cir. 2003); *WMS Gaming, Inc. v. Intl Game Tech.*, 184 F.3d 1339, 1348-49 (Fed. Cir. 1999). This rule also applies to a "means-plus-function limitation implemented by a microprocessor." *Harris Corp.*, 417 F.3d at 1253. The plaintiff does not contest this rule, but it insists it merely applies when the *only* disclosed structure for performing the recited function is a microprocessor or computer, and it does not apply when the structure consists of a microprocessor working alongside other apparatuses. The Court cannot accept that argument: nothing in the Federal Circuit decisions commends this interpretation, and the plain language of the applicable cases in fact cuts against it. Since the claim at issue is a microprocessor-implemented means-plus-function term, disclosure of an algorithm is required.

That leaves the issue of what constitutes an algorithm. The requirement of an algorithm "does not mean that the patentee must disclose specific source code for the computer. And, the term 'algorithm' is not limited to a formula of mathematical symbols." *Finisar Corp. v. The DirecTV Group, Inc.*, 416 F. Supp. 2d 512, 518 (E.D. Tex. 2006). On the other hand, simply stating that the microprocessor or computer performs the function in the claim is not tantamount to disclosing an algorithm. *See ibid.* (rejecting alleged disclosure of algorithm on the grounds that it was "nothing more than a restatement of the function, as recited in the claim") Rather, the patentee must at least disclose the basic steps that the microprocessor takes to enable one skilled in the art to determine the limitations on what is claimed. *See Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1381-82 (Fed. Cir. 2001); *In re Dossel*, 115 F.3d 942, 946-47 (Fed. Cir. 1997); *see also Harris Corp.*, 417 F.3d at 1254; *Finisar Corp.*, 416 F. Supp. 2d at 518-19. This can be accomplished in a number of ways. "For example, the steps, formula, or procedures to be performed

by the computer might be expressed textually, or shown in a flow chart." *Finisar Corp.*, 416 F. Supp. 2d at 518.

In the present case, no algorithm has been disclosed, and therefore the microprocessor-implemented means-plus-function claim is void for indefiniteness. The closest the specification comes to disclosing an algorithm is the statement that "the microprocessor can provide the modulation to the frequency generator circuitry." '796 Patent at 5:54-56. But this is simply restating the function recited in the underlying claim. The function in the claim is "generating modulated signals." *See, e.g.*, '796 Patent at cl. 9. Although one might argue that "providing the modulation" to the frequency generating circuitry is not a pure restatement of the function (since the signal is produced by the circuitry and not the microprocessor), that argument must fail. "Providing modulation" cannot, under any reasonable understanding, be considered an algorithm because that phrase describes *what* the microprocessor does, not *how* that task is accomplished. Therefore, although "a precise mathematical formula or flow chart" is not required, *Finisar Corp.*, 416 F. Supp. 2d at 519, the disclosure in this case is inadequate, and the claim limitation fails for indefiniteness.

Op. and Order Construing Clms. at 29-31.

The plaintiff contends that the Court erred in this finding of indefiniteness. The plaintiff has no quarrel with the Court's iteration of the governing standard. However, the plaintiff contends that the Court's analysis conflicts with this standard, particularly in light of the recent decisions in the three cases cited above. According to the plaintiff, the panels in those cases confirmed that the same standard holds true in the case of computer- and microprocessor-implemented functions: although an algorithm may be required, algorithms in the specification need only disclose adequate defining structure to render the bounds of the claim understandable to one of ordinary skill in the art. The plaintiff contends that the reference in the specification to a microprocessor that is programed to modulate the signals manufactured by a frequency generator defines a structure with sufficient definiteness to one ordinarily skilled in the art, particularly in light of the unrebutted testimony set forth in Dr. Gregory W. Davis's affidavit.

The defendants stand by this Court's analysis, and challenge the plaintiff's argument by attacking its initial premise – that an algorithm was ever disclosed. The defendants insist that it matters not whether a person of ordinary skill in the art would comprehend the claim limitation; that step in the analysis is only relevant when a structure has been disclosed in the specification, which in the case of a computer- or microprocessor-implemented function must be an algorithm.

II.

Motions for reconsideration may be granted pursuant to Local Rule 7.1(g) when the moving party shows (1) a "palpable defect," (2) that misled the court and the parties, and (3) that correcting the defect will result in a different disposition of the case. E.D. Mich. LR 7.1(g)(3). A "palpable defect" is a defect which is obvious, clear, unmistakable, manifest, or plain. *Mich. Dep't of Treasury v. Michalec*, 181 F. Supp. 2d 731, 734 (E.D. Mich. 2002) (citations omitted). "Generally . . . the court will not grant motions for . . . reconsideration that merely present the same issues ruled upon by the court, either expressly or by reasonable implication." E.D. Mich. LR 7.1(g)(3).

To reiterate the general principles at work here, federal statutory law governs construction of claim limitations drafted as "means-plus-function" limitations and permits broad claiming ability in such cases:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112, ¶ 6. When a claim includes the word "means," it is presumed that the statutory mandate of § 112, ¶ 6 applies. *Rodime PLC v. Seagate Technology, Inc.*, 174 F.3d 1294, 1302 (Fed. Cir. 1999).

"Once a court concludes that a claim limitation is a means-plus-function limitation, two steps of claim construction remain: 1.) the court must first identify the function of the limitation; and 2.) the court must then look to the specification and identify the corresponding structure for that function." *Biomedino, LLC v. Waters Technologies Corp.*, 490 F.3d 946, 950 (Fed. Cir. 2007). If there is no structure in the specification pertaining to the means-plus-function limitation in the claim, the claim will be deemed invalid for indefiniteness. *Ibid.* In such instances, the inventor has breached the terms of the bargain envisioned in § 112, ¶6: "[I]n return for generic claiming ability, the applicant must indicate in the specification what structure constitutes the means." *Id.* at 948. "'If the specification is not clear as to the structure that the patentee intends to correspond to the claimed function, then the patentee has not paid the price but is rather attempting to claim in functional terms unbounded by any reference to structure in the specification.'" *Ibid.* (quoting *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1211 (Fed. Cir. 2003)).

On the other hand, "[w]hile the specification must contain structure linked to claimed means, this is not a high bar." *Id.* at 950. "All one needs to do in order to obtain the benefit of [§ 112, ¶ 6] is to recite some structure corresponding to the means in the specification, as the statute states, so that one can readily ascertain what the claim means." *Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1384 (Fed. Cir. 1999). However, the question is not whether the average person could comprehend the claim, but whether the person of ordinary skill in the art could do so. *See AllVoice Computing PLC v. Nuance Communications, Inc.*, 504 F.3d 1236, 1240 (Fed. Cir. 2007) ("The test for definiteness asks whether one skilled in the art would understand the bounds of the claim when read in light of the specification.") (citing *Miles Labs, Inc. v. Shandon, Inc.*, 997 F.2d 870, 875 (Fed. Cir. 1993)). A party contending that a claim is invalid for indefiniteness must prove,

by clear and convincing evidence, "that the specification lacks adequate disclosure of structure to be understood by one skilled in the art as able to perform the recited functions." *Intel Corp. v. VIA Technologies, Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003).

In *Aristocrat Tech. Australia Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328 (Fed. Cir. 2008), the court of appeals reiterated that the point of the requirement that an algorithm must be disclosed when the structure referenced in a means-plus-function limitation is a general purpose computer is to prevent pure functional claiming, which is not permitted by 35 U.S.C. § 112 ¶ 6 and the Federal Circuit cases construing it. *Int'l Game Tech.*, 521 F.3d at 1333. As the court explained:

> For a patentee to claim a means for performing a particular function and then to disclose only a general purpose computer as the structure designed to perform that function amounts to pure functional claiming. Because general purpose computers can be programmed to perform very different tasks in very different ways, simply disclosing a computer as the structure designated to perform a particular function does not limit the scope of the claim to "the corresponding structure, material, or acts" that perform the function, as required by section 112 paragraph 6.

Ibid. However, the court also acknowledged that "in a means-plus-function claim 'in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.'" *Ibid.* (quoting *WMS Gaming, Inc. v. Intern'l Game Technology*, 184 F.3d 1339, 1349 (Fed. Cir. 1999)).

That point is developed in *AllVoice Computing PLC v. Nuance Communications, Inc.*, 504 F.3d 1236 (Fed. Cir. 2007). In that case, the Federal Circuit reversed a district court's finding of indefiniteness "for failure to set forth sufficient algorithmic structure associated with the contested means-plus-function clauses." *Id.* at 1244. The patent at issue was for "an interface between a speech recognition engine and various end-user application programs on a personal computer." *Id.*

at 1238. For the most part, the invention operated to facilitate translation of a given message into

word-processing programs. *See ibid.* Although some of the technical nuance is difficult to grasp,

the Federal Circuit's holding is not. In reversing the district court, the Federal Circuit held that the

lower court had failed to give due weight to the testimony regarding the ordinarily skilled artisan.

The appellate court abided by the rule that an algorithm is required in computer- and

microprocessor-implemented means-plus-function cases, but noted that the determination of

sufficient algorithmic structure must be made in light of the person of ordinary skill in the art. The

court's analysis reads as follows:

> The district court also found claims 61 and 67 indefinite for failure to set forth sufficient algorithmic structure associated with the contested means-plus-function clauses. The district court held that the disclosure at col.7 l.7, *et seq.*, of the '273 patent, along with Figures 4 and 8A, did not constitute sufficient structure "for determining positions of the recognized words (claim 64 and indirectly claim 67) and for updating word positions after edits (claim 61)." Janicke Report ¶ 60.

> To the contrary, the specification contains sufficient algorithmic structure to give meaning to claims 61 and 67. Claim definiteness, as discussed earlier, depends on the skill level of a person of ordinary skill in the art. *Miles Labs., Inc.*, 997 F.2d at 875. In software cases, therefore, algorithms in the specification need only disclose adequate defining structure to render the bounds of the claim understandable to one of ordinary skill in the art. *See, e.g., Med. Instrumentation and Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1214 (Fed. Cir. 2003) ("[H]ere there would be no need for a disclosure of the specific program code if software were linked to the converting function and one skilled in the art would know the kind of program to use.") *See also Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003) (holding that the internal circuitry of an electronic device need not be disclosed in the specification if one of ordinary skill in the art would understand how to build and modify the device). In that connection, this record does not contain clear and convincing evidence that the disclosure at col.7 l.7, et seq., of the '273 patent, along with Figures 4 and 8A of the patent, do not constitute sufficient structure to define the claim terms for the ordinarily skilled artisan.

> To the contrary, the record contains the statement of Richard Sonnier. This statement set forth several straightforward ways that the algorithm represented in Figure 8A could be implemented by one skilled in the art using well-known features of the Windows operating system (messages, operating system function calls, and

hooking). The Sonnier statement concluded with the observation that "[a] person skilled in the art reading the '273 specification would know that any of these techniques could be used to determine the position of a recognized word in the third party application, would know the software to use and how to implement it." Second Supplemental Sonnier Decl. ¶ 17. Thus, the record does contain sufficient algorithmic structure to give meaning to the claim terms from the vantage point of an ordinarily skilled artisan. Thus, Mr. Sonnier supplied the only assessment in this record of the adequacy of the specification to disclose enough steps to constitute an actual algorithm for carrying out the functions claimed in the means-plus-function clauses of claims 61 and 67. Without any record evidence to contradict Sonnier's assessment, this court discerns that the district court erred in this indefiniteness judgment as well. Therefore, this court holds that claims 61 and 67 satisfy the definiteness requirement.

Id. at 1244-46 (figures omitted). "The algorithm represented in Figure 8A" shows the overall procedure followed by the invention, similar to Figure 2 in the '796 patent. *Compare AllVoice*, 504 F.3d at 1245 *with* '796 Patent at Fig. 2.

The Federal Circuit followed up on *Allvoice* with a pronouncement regarding the algorithm requirement in *Aristocrat Technologies Australia Pty Ltd. v. Multimedia Games, Inc.*, __ Fed Appx. __, 2008 WL 484449 (Fed. Cir. Feb. 22, 2008) (unpublished), decided by the same panel that decided *Aristocrat Technologies Australia Pty Ltd. v. International Game Technology*. In *Multimedia Games*, the Federal Circuit reversed a district court's finding of invalidity for indefiniteness in the context of a patent for an electronic lottery machine akin to a slot machine. The lower court based its indefiniteness finding on its belief that the patent failed to disclose sufficient structure corresponding to various means-plus-function limitations. Among other things, the appellees defended this conclusion on the grounds that the specification failed to disclose sufficient algorithmic structure. Although the Federal Circuit left many questions to be resolved by the district court, it rejected this particular argument:

Multimedia argues that even if the "random number selection means" corresponds to a "pseudo-random number generating algorithm," that limitation is still indefinite

because the specifics of that algorithm are not disclosed in the specification. Multimedia seemingly urges that *WMS Gaming, Inc. v. International Game Technology*, 184 F.3d 1339 (Fed. Cir. 1999), stands for the rule that when a general purpose microprocessor or computer is the structure corresponding to a recited function, a specific algorithm for performing that function must be disclosed in order to avoid indefiniteness, and, by extension, a specific random number algorithm must be disclosed here. *WMS Gaming*, however, does not require that a particular algorithm be identified if the selection of the algorithm or group of algorithms needed to perform the function in question would be readily apparent to a person of skill in the art.

. . .

Thus, if the district court concludes on remand that a controller is synonymous with a microprocessor and that a person of skill in the art would readily appreciate the type of algorithm necessary to perform the pseudo-random number generating function, the primary focus for purposes of construing "random number selection means" and the final three claim terms in dispute, "means for storing," "means for sequentially selecting," and "means for displaying," will be whether algorithms needed to perform those functions are readily apparent to a person of skill in the art or are disclosed in the specification.

Multimedia Games, Inc., 2008 WL 484449 at *5-6.

In light of these three recent decisions, the Court concludes that it erred in finding indefinite the claim limitation "means for generating modulated signals." There can be no doubt that an "algorithm" must be disclosed in the specification in the case of a microprocessor-implemented means-plus-function claim. *See AllVoice*, 504 F.3d at 1245; *Harris Corp. v. Ericsson, Inc.*, 417 F.3d 1241, 1253 (Fed. Cir. 2005); *Tehrani v. Hamilton Medical, Inc.*, 331 F.3d 1355, 1361-62 (Fed. Cir. 2003); *WMS Gaming*, 184 F.3d at 1348-49. The plain meaning of that term and prior case law suggested that the patentee had to disclose a fairly detailed series of steps (if not mathematical formulae and source code). However, *AllVoice*, *Multimedia Games*, and *International Game* together clarify that the algorithm requirement is not so burdensome; according to the Federal Circuit's analysis, the disclosure in the present case is sufficient, particularly in light of the unrebutted testimony of Dr. Davis.

Dr. Davis is a professor of mechanical engineering at Kettering University. The Court referred to Dr. Davis's testimony in other portions of its opinion, *see* Op. and Order Construing Clms. at 27, but did not mention it in its analysis regarding "means for generating modulated signals." On this point, Davis testified as follows:

> 3. *I . . . understand that the defendants claim that an algorithm or process performed by the microprocessor is not disclosed in the '796 patent. I disagree.* As disclosed in the '796 patent, the microprocessor "provide[s] the modulation to the "frequency generating circuitry" which results in the "production of a modulated wave." (5:51-57.) "Modulation" is a well known process to those of skill in the art. (Attachment 3, Newton's Telecom Dictionary, definition of modulation.)
>
> 4. Indeed, one of skill in the art would understand the details of the modulation process upon reading of the '796 patent. First of all, it is a basic electronic communication concept that the term "modulation" refers is the process of varying some characteristic of a wave (sometimes referred to as a carrier wave) to transmit information. (Attachment 3, Newton's Telecom Dictionary, definition of modulation.) The result of a modulation process is a modulated wave. (Attachment 4, Modern Dictionary of Electronics definition of modulated wave.) Prior to a modulation process, there is a wave provided as a starting point. (Attachment 3, definition of modulation.) To modulate the wave, information is encoded on that wave by varying the amplitude, frequency or phase of that wave. (Attachment 3, definition of amplitude modulation.) The result is the production of a modulated wave, which is a wave in which the amplitude, frequency, or phase had been varied to convey information. (Attachment 4, definition of modulated wave.) In the '796 patent, the "frequency generating circuitry" creates a continuous wave. (5:13-18.) Since "[s]ome tire sensors may be manufactured such that they are activated upon receiving a modulated signal of a particularly frequency" the continuous wave needs to be modified. (5:45-47.) The microprocessor is included in the specification "to modulate signals, encode signals, decode signals, etc." (10:25-27.) The specification also discloses that the microprocessor "provide[s] the modulation to the frequency generating circuitry" which results in the "production of a modulated wave." (5:51-57.) Accordingly, the starting point of the modulation process in the '796 patent is the continuous wave created by the frequency generating circuitry. *The process performed by the microprocessor is: utilizing the continuous wave from the frequency generating circuitry, encoding information on that wave for activating a tire sensor, and producing a modulated wave. The modulated wave is sent [to] the driver and inductor to create the activation signal. One of skill in the art, reading the specification of the '796 patent, understands that this basic modulation procedure is disclosed.*

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Pl.'s Resp. to Defs.' *Markman* Br., Ex. 23, Davis Dec. at ¶¶ 3-4 (emphasis added) (typographical

errors in original). This testimony is unrebutted.

As stated above, the claim limitation at issue is termed "means for generating modulated

signals." The specification elaborates on this limitation as follows:

> One means for producing a modulated signal in tire positioning tools of the present
> invention is to include a microprocessor in addition to frequency generating circuitry.
> As is known in the art, the microprocessor can provide the modulation to the
> frequency generator circuitry [sic]. An amplifier or driver circuit can also be
> included to amplify the signal.

'796 Patent at 5:51-57. As the Court noted in its earlier decision, the specification does not say *how*

the microprocessor goes about providing modulation. But the patent in *AllVoice* was also silent as

to how the process at issue could be implemented. *See AllVoice*, 504 F.3d at 1245 ("The Sonnier

statement concluded with the observation that '[a] person skilled in the art reading the '273

specification would know that any of these techniques could be used to determine the position of

a recognized word in the third party application, would know the software to use and how to

implement it.'"). The *AllVoice*, *Multimedia Games*, and *International Game* decisions show that

the extent of the algorithm requirement is determined by what the ordinarily skilled artisan would

know. *Ibid.*; *International Game*, 521 F.3d at 1337; *Multimedia Games*, 2008 WL 484449 at *5.

That is, "algorithms in the specification need only disclose adequate defining structure to render the

bounds of the claim understandable to one of ordinary skill in the art." *Allvoice*, 504 F.3d at 1245.

As in *AllVoice*, the testimony regarding the skilled artisan's ability to understand the claim

limitation is undisputed. Dr. Gregory Davis opined that "one of skill in the art would understand

the details of the modulation process upon reading of the '796 patent." Davis Dec. at ¶ 4. It is his

uncontested view that "'[m]odulation' is a well known process to those of skill in the art.'" *Id.* at ¶

3. It is also undisputed that "modulation" is "the process of varying some characteristic of a wave . . . to transmit information," and "[t]o modulate the wave, information is encoded on that wave by varying the amplitude, frequency or phase of that wave." *Id.* at ¶ 4. The ordinarily skilled artisan therefore would know that the microprocessor is included in the specification to perform these tasks. In light of Dr. Davis's unrebutted testimony, the only reasonable conclusion is that the specification contains an algorithm that "disclose[s] adequate defining structure to render the bounds of the claim understandable to one of ordinary skill in the art." *AllVoice*, 504 F.3d at 1245. Although it may seem indulgent to characterize "providing modulation" as an algorithm, it does describe a task that is distinct from the ultimate function of the claim – "generating modulated signals" – and the person of ordinary skill in the art would recognize this to mean that the microprocessor encodes information on a continuous wave by varying a characteristic of the wave (i.e., its amplitude, frequency, or phase). Davis Dec. at ¶ 4. As a consequence, the reference in the specification to a microprocessor that performs modulation designates an algorithm and distinguished that structure from a general purpose computer. This is all the definiteness requirement demands. *AllVoice*, 504 F.3d at 1244-46; *see also id.* at 1240 (citing 35 U.S.C. § 112 ¶ 2; *Miles Labs*, 997 F.2d at 870); *International Game*, 521 F.3d at 1333, 1337. The defendants have not met their burden of showing indefiniteness by clear and convincing evidence. *See AllVoice*, 504 F.3d at 1245; *Intel Corp.*, 319 F.3d at 1366.

This conclusion is consistent with the Congressional policy implemented by the means-plus-function claiming allowed by §112 ¶ 6. The evidence shows that modulation is a simple process that is well known in the art, and not some new development on the cutting edge of electrical and computer engineering. To ask a patentee to outline the steps for providing modulation would be to ask for a level of detail that is both unnecessary and problematic. If details of this variety were

required, the purpose behind § 112, ¶ 6 would be defeated and every patent would have to "include a technical treatise for the unskilled reader." *S3 Inc. v. Nvidia Corp.*, 259 F.3d 1364, 1371 (Fed. Cir. 2001); *see also Creo Products, Inc. v. Presstek, Inc.*, 305 F.3d 1337, 1347 (Fed. Cir. 2002) ("Under our case law interpreting § 112, ¶ 6, knowledge of one skilled in the art can be called upon to flesh out a particular structural reference in the specification for purposes of satisfying the statutory requirement of definiteness.")

The Court finds, therefore, that the plaintiff has identified a palpable defect that misled the Court, and that correcting the defect would lead to a different result. Reconsideration is therefore appropriate. E.D. Mich. LR 7.1(g)(3); *Michalec*, 181 F. Supp. 2d at 734. The Court will vacate its finding of indefiniteness and construe "means for generating modulated signals" in accordance with the plaintiff's alternative proposed construction.

III.

The Court finds that its determination that the term "means for generating modulated signals" is void for indefiniteness was in error. The Court will construe that term and the corresponding claim by adopting the plaintiff's proposed alternative claim construction. In addition, the parties have filed summary judgment motions in reliance on the Court's previous order construing the claims. The Court believes the parties should have an opportunity to refile their motions, if they wish, in light of the new construction set forth in this order.

Accordingly, it is **ORDERED** that the plaintiff's motion for reconsideration [dkt #157] is **GRANTED**.

It is further ordered that the Court's opinion and order construing claims is **AMENDED AND MODIFIED** to provide that the following disputed term in the '796 patent is construed as follows:

B. "Means for generating modulated signals" is construed to mean "frequency generating circuitry, a microprocessor: (1) utilizing the continuous wave of the frequency generating circuitry, (2) encoding information on the continuous wave for activating tire sensors by varying a characteristic of the wave, and (3) producing a modulated wave, to the amplifier or driver circuit, and the inductor for generating modulated signals for activating remote tire monitoring system tire sensors."

It is further **ORDERED** that the parties may, but are not required to, amend their motions for summary judgment. The parties shall either withdraw their present motions for summary judgment and file amended motions, or notify the Court in writing that they do not intend to do so, **on or before June 9, 2008**.

<div align="right">
s/David M. Lawson
DAVID M. LAWSON
United States District Judge
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Dated: May 20, 2008