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

BAXTER INTERNATIONAL, INC., *Plaintiff* v. CAREFUSION CORPORATION, and BECTON, DICKINSON AND COMPANY, *Defendants*.	)	No. 15 C 9986 Judge Virginia M. Kendall

MEMORANDUM OPINION AND ORDER

Plaintiff Baxter International, Inc. sues Carefusion Corporation and Becton, Dickinson, and Company alleging that Defendants' product, the Alaris system, breaches various patents relating to medical infusion pumps. Defendants move for summary judgment that one of the patents at issue, U.S. patent number 5,782,805 ('805 patent"), is invalid for indefiniteness and lack of written description. (Dkt. 346). Defendants also move to exclude certain opinions provided by Baxter's technical expert, Warren P. Heim. (Dkt. 370). Baxter moves for partial summary judgment of no invalidity by reason of anticipation or obviousness. (Dkt. 334). For the reasons that follow, Defendants' motion for summary judgment of invalidity is denied, Defendants' motion to exclude Heim's testimony is granted in part and denied in part, and Baxter's motion for partial summary judgment of no invalidity is granted.

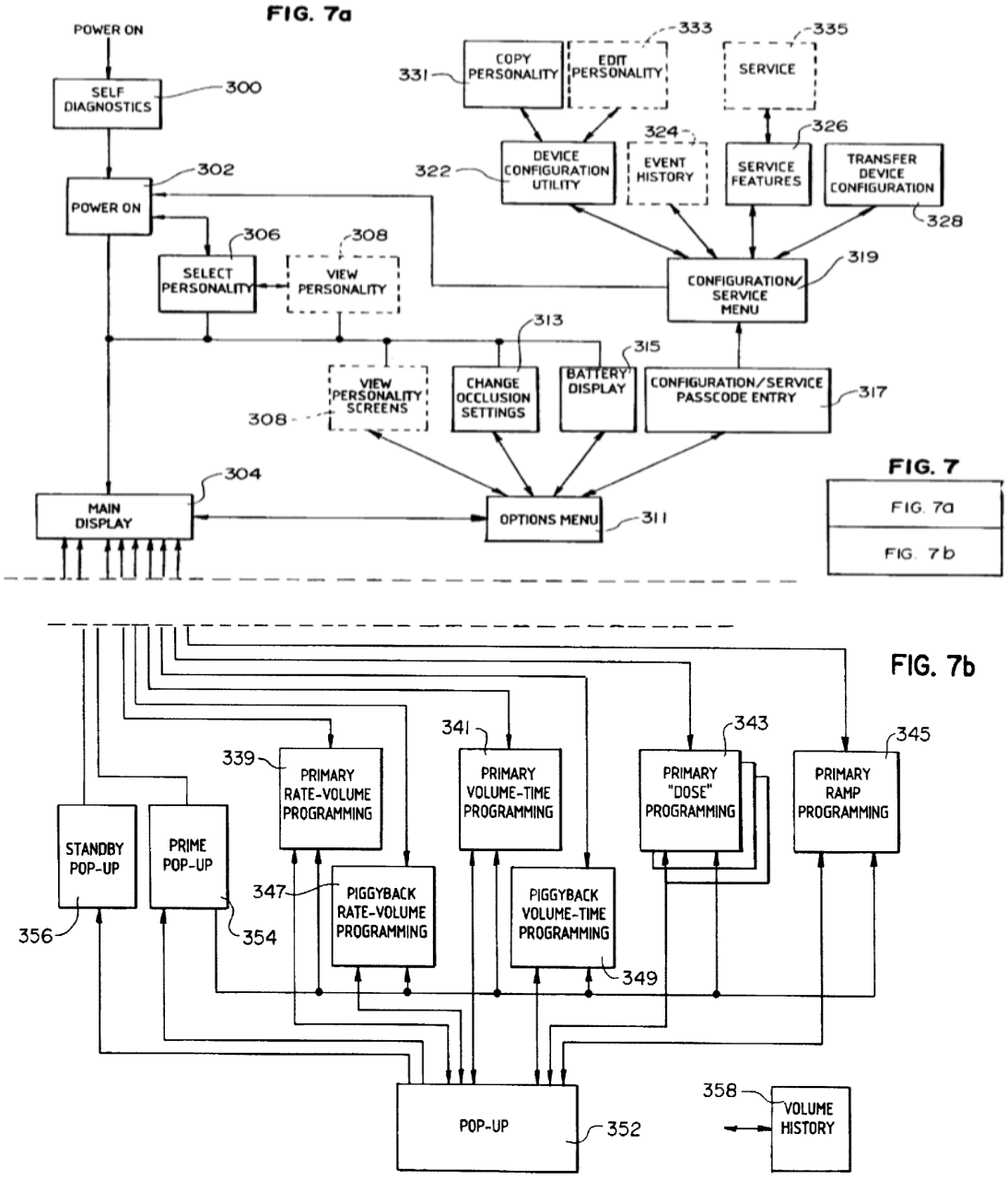
BACKGROUND

I. The '805 Patent's Means-Plus Function Limitations

The '805 Patent discloses a medical infusion pump "having a main body portion" which "includes a display area for displaying user interface information." (Dkt. 405 at ¶ 6). The main

body portion of the device contains a microprocessor "for generating user interface information on the display areas." (*Id*.) Claim 1 of the patent is the only remaining independent patent claim at issue; the other asserted claims depend on claim 1 and include all of its limitations. (*Id*. at ¶ 7–8). Claim 1 includes two means-plus-function limitations: (1) "microprocessor means contained in the main body portion for generating user interface information on the display areas" and (2) "means for generating a plurality of pictoral graphic representations as user interface information on the main display." (*Id*. at ¶¶ 10–11). Claim 3 includes the additional means-plus-function limitation, "means responsive to the entered values for calculating a dose of the beneficial agent to be infused into the patient." (*Id*.) Accordingly the claimed functions for these limitations are respectively, "generating user interface information on the display areas[,]" "generating a plurality of pictoral graphic representations as user interface information on the main display[,]" and "calculating a dose of the beneficial agent to be infused into the patient." (*Id*. at ¶ 12). These limitations are collectively referred to herein as the "means-plus-function limitations."

Figure 7 of the '805 patent shown below, depicts "a user interface navigation flow diagram" that serves as "an overview of the user interface routine" describe din the patent. (Dkt. 405 at ¶ 15) (Dkt. 348 Ex. 2 at 2:35–40).



(Dkt. 405 at ¶ 14). The patent also illustrates several examples of display screens in accordance with the principles of the invention. (Dkt. 348 Ex. 2 at Figures 8, 10–30).

A. Claim Construction

At claim construction, Defendants argued the '805 patent is invalid for indefiniteness because the patent fails to disclose an algorithm for performing the functions associated with the

means-plus-function limitations of the asserted claims. (Dkt. 157 at 9). In support of their indefiniteness argument, Defendants submitted an expert declaration from Charles B. Kreitzberg opining that "the '805 patent does not describe any step-by-step procedures to explain how the pump's microprocessor generates the information and images that appear on the device's displays" and similarly, fails to disclose an algorithm "for how a microprocessor would be programmed to calculate a dose of the beneficial agent to be infused into the patient." (Dkt. 158 at ¶¶ 21, 23). Baxter presented expert testimony from Warren P. Heim, who opined that "[t]he '805 Patent uses a flow chart, text, and many illustrations of user interface screens to describe to someone of ordinary skill in the art at the time of the patent algorithms to generate user interface information on the main display." (Dkt. 136-1 at ¶ 60). With respect to Figure 7, Heim opined:

> A person of ordinary skill in the art would have recognized Figure 7 … as a flow chart, or in other words, a graphical depiction of a computer algorithm. … Figure 7 and the associated description in the '805 Patent goes on to describe the choices that the algorithm makes available to the user to display information and enter data. … A person of ordinary skill in the art at the time of the invention would have recognized that Figure 7 defines how inputs at one element lead to the algorithm moving to another element in the flow diagram. In other words, Figure 7 describes to a person of ordinary skill in the art an algorithm that uses data input by users to change the user interface information on the main display. Therefore, Figure 7 shows and example of an algorithm that informs a person of ordinary skill in the art how to generate the user interface information shown on the main display.

(*Id*. at ¶¶ 62–65). Heim further opined in addition to Figure 7, the text of the specification and the user interface output screens in the patent "provide very substantial details of the example algorithm that describes how to generate user interface information to display." (*Id*. at ¶ 69). Heim walked through several examples of how the specification text and display screens inform the algorithm a programmer would use to generate user interface on the main display. (*Id*.) Heim reached similar conclusions with respect to the remaining means-plus-function limitations. (*Id*. at ¶¶ 95–138).

Considering this evidence, in addition to the parties' briefs, the Court concluded in an order dated April 29, 2019, "that the algorithm at issue here has been presented in sufficiently understandable terms such that a person of ordinary skill in the art would understand what structure corresponds to the limitation." (Dkt. 191 at 7). Specifically, the Court observed:

> The crux of the … microprocessor claims … is whether Figure 7 of the '805 Patent discloses the algorithm necessary to perform the described function. … The flow diagram in Figure 7 displays a step by step process of how the claimed function operates. Carefusion demands more, but it is difficult to imagine precisely what else could have been disclosed short of the actual computer code, which … is not necessary.

(*Id*.) Defendants did not move for reconsideration of this decision prior to expert discovery.

B. Kirkpatrick's Expert Report

Notwithstanding the Court's claim construction order, Defendants' technical expert, Greg Kirkpatrick, issued an invalidity and unenforceability report opining that because the '805 patent does not disclose an algorithm for performing the claimed functions of the means-plus-function limitations, it is invalid for indefiniteness. (Dkt. 396 at ¶¶ 15–19). Kirkpatrick also opined that the '805 patent is invalid as anticipated and obvious by prior art. (*Id*. at ¶ 20). Regarding this latter opinion, Kirkpatrick testified:

> I compared what's in the '805 patent with prior art. I compared what's in the '805 patent with the Alaris system. But again, since there's no algorithm described in the '805 patent, I cannot say that I have compared an algorithm from the '805, since it does not exist, with prior art or with the Alaris system. … I did not perform an analysis on algorithms. As you see in my report, there's not an analysis of the algorithms of the prior art.

(*Id*. at ¶¶ 35–36).

C. Heim's Expert Report

Baxter's technical expert Warren P. Heim issued a rebuttal invalidity and enforceability report in which he opines, consistent with his testimony at claim construction, that "a person of ordinary skill in the art would bring to understanding the figures and the specification's text to

recognize that the '805 does present algorithms that could be implemented by a person of ordinary skill in the art." (Dkt. 412 at ¶ 2). Heim once again discusses Figure 7, the display screens, and the specification text to support this opinion. (Dkt. 406 at ¶¶ 219–223).

Heim also issued an infringement report opining that the accused Alaris system infringes the '805 patent. (Dkt. 405 at ¶ 24). Heim's infringement report does not, however, directly compare the user interface of the Alaris system to the navigation flow of Figure 7. (*Id*. at ¶ 26). Instead, Heim testified that he "consider[ed] the specification of the '805 patent in its entirety, including Figure 7[,]" described "the step-by-step procedures of the algorithms associated with the claimed elements" of the patent, and then compared those algorithms to the algorithms disclosed by the Alaris system. (Dkt. 348 Ex. 6 at 29–33). He testified that "[c]omparing the Alaris system to the Figure 7 user interface navigation flow diagram wasn't necessary because that user interface navigation flow diagram is a high-level diagram." (*Id*. at 37–38). Heim further testified:

> Figure 7 wasn't the proper way to evaluate whether generating user interface information on the displays, and the subject of Claim 1 is generating user interface information on the displays[.] I used the algorithms that I determined were in the '805 patent in the infringement report rather than Figure 7. So it was unnecessary to include a description of Figure 7 in the infringement report because it did not cover generating user interface information on the displays.

(*Id*. at 40). Heim's invalidity and infringement opinions are offered "from the perspective of a person of ordinary skill in the art at the time of the invention of the '805 Patent." (Dkt. 350 at ¶ 44) (Dkt. 406 at ¶ 44). His experience includes designing algorithms used to control medical infusion pumps. (*Id*. at ¶¶ 38).

II. The '805 Patent's Configuration Parameters Limitation

In addition to the means-plus-function limitations, Claim 1 of the '805 patent contains a "configuration parameters" limitation that reads: "a plurality of sets of configuration parameters are included as user interface information such that a user can select which of the plurality of sets

of configuration parameters to configure the infusion pump." (Dkt. 348 Ex. 2 at 20:29–32). At claim construction, Baxter proposed that "sets of configuration parameters" be construed to mean a "collection of drugs' parameters that determines the overall pump operating characteristics for a given clinical context." (Dkt. 191 at 11). The Court expressly rejected that construction because it "adds terms and limitations not previously present in the Patent" and held that the limitation required no construction because it is "comprised of commonly used terms[.]" (*Id.*) (internal quotations omitted). Nonetheless, Heim testified during his deposition that the "configuration parameters" limitation requires "configur[ing] the infusion pump to clinical areas." (Dkt. 348 Ex. 6 at 117). Heim applied this "clinical areas" requirement to Claim 1 when reaching his validity, enforceability, and infringement opinions. (*See e.g.*, Dkt. 373 at ¶¶ 963, 1032) Dkt. 350 at ¶ 546).

LEGAL STANDARD

Summary judgment is proper when "the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a); *see, e.g.*, *Reed v. Columbia St. Mary's Hosp.*, 915 F.3d 473, 485 (7th Cir. 2019). The parties genuinely dispute a material fact when "the evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Daugherty v. Page*, 906 F.3d 606, 609–10 (7th Cir. 2018) (citing *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)). In determining whether a genuine issue of material fact exists, the Court draws all reasonable inferences in favor of the party opposing the motion. *Anderson*, 477 U.S. at 255; *Zander v. Orlich*, 907 F.3d 956, 959 (7th Cir. 2018).

Federal Rule of Evidence 702 permits expert testimony only if: "(a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony

is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case." Fed. R. Evid. 702; *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993). In other words, it is this Court's task to "ascertain whether the expert is qualified, whether his or her methodology is scientifically reliable, and whether the testimony will assist the trier of fact to understand the evidence or to determine a fact in issue." *Bielskis v. Louisville Ladder, Inc.*, 663 F.3d 887, 893 (7th Cir. 2011) (quotations omitted). The expert's proponent bears the burden of demonstrating that the testimony would satisfy the *Daubert* standard by a preponderance of the evidence. *Gopalratnam v. Hewlett-Packard Co.*, 877 F.3d 771, 782 (7th Cir. 2017).

DISCUSSION

I. Indefiniteness and Lack of Written Description

"[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). "A determination of claim indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims. *Atmel Corp. v. Info. Storage Devices*, Inc., 198 F.3d 1374, 1378 (Fed. Cir. 1999) (quotations and citation omitted). Means-plus function claim limitations "shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." 35 U.S.C. § 112. "To determine whether a means-plus-function limitation is definite … a court identifies the particular claimed function" and then, "looks to the specification and identifies the corresponding structure, material, or acts that perform that function." *HTC Corp. v. IPCom GmbH & Co., KG,* 667 F.3d 1270, 1278 (Fed. Cir. 2012). In cases where the claim limitation is implemented using a

microprocessor, as here, the specification must disclose the algorithm necessary to perform the claimed function. *Williamson v. Citrix-Online, LLC*, 792 F.3d 1339, 1352 (Fed. Cir. 2015). "The algorithm may be expressed as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure." *Id.* Because a patent is presumed valid, 35 U.S.C. § 282, "a challenge to a claim containing a means-plus-function limitation as lacking structural support requires a finding, by clear and convincing evidence, that the specification lacks disclosure of structure sufficient to be understood by one skilled in the art as being adequate to perform the recited function." *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1376–77 (Fed. Cir. 2001). [1]

This Court already held during claim construction that the '805 patent discloses an algorithm that "has been presented in sufficiently understandable terms such that a person of ordinary skill in the art would understand what structure corresponds to the limitation." (Dkt. 191 at 7). The Court found Figure 7 particularly compelling in reaching this conclusion, observing that "[t]he flow diagram in Figure 7 displays a step by step process of how the claimed function operates." (*Id.*) Notwithstanding the Court's order, Defendants continue to argue that the '805 patent is invalid because it fails to disclose an algorithm for performing the claimed functions of the means-plus-function limitations. According to Defendants, Warren Heim's expert infringement report and deposition testimony "present[ ] changed circumstances from the *Markman* proceedings" warranting reconsideration. (Dkt. 347 at 2); (*see also* Dkt. 411 at 3) ("It is appropriate for the Court to revisit indefiniteness at the summary judgment stage where, as here, the plaintiff's infringement theories contradict its prior arguments to defeat indefiniteness."). "Motions for reconsideration serve a limited function: to correct manifest errors of law or fact or

[1] Defendants do not address invalidity for lack of written description independently from indefiniteness because they maintain that if the patent claims are indefinite, they also lack adequate written description. (Dkt. 411 at 9–10). Thus, the Court only addresses indefiniteness herein.

to present newly discovered evidence." *Caisse Nationale de Credit Agricole v. CBI Indus., Inc.*, 90 F.3d 1264, 1269 (7th Cir. 1996) (quotations and citation omitted). They are granted only in rare circumstances and the party moving for reconsideration bears a heavy burden. *See Bank of Waunakee v. Rochester Cheese Sales, Inc.*, 906 F.2d 1185, 1191 (7th Cir. 1990). A motion for reconsideration is not a vehicle to relitigate arguments previously rejected by the Court. *Id*.

Although Heim opined during claim construction that Figure 7 presented an algorithm for how to perform the steps of the means-plus-function limitations (Dkt. 136-1 at ¶¶ 62–65), Heim's infringement report does not directly compare the user interface of the Alaris system to the navigation flow of Figure 7. (Dkt. 405 at ¶ 26). Heim testified:

> Because Figure 7 wasn't the proper way to evaluate whether generating user interface information on the displays, and the subject of Claim 1 is generating user interface information on the displays, I used the algorithms that I determined were in the '805 patent in the infringement report rather than Figure 7. So it was unnecessary to include a description of Figure 7 in the infringement report because it did not cover generating user interface information on the displays.

(Dkt. 348 Ex. 6 at 40). Rather, Heim maintained that he "consider[ed] the specification of the '805 patent in its entirety, including Figure 7" to derive the algorithms he uses in his infringement report. (*Id*. at 29). It is apparent from his infringement report that Heim primarily used the example display screens from the '805 patent and specification text describing those figures to derive the algorithms he uses for his infringement analysis; the report does not contain a detailed discussion of Figure 7. (*See generally* Dkt. 350 at ¶¶ 464–612).

Defendants argue Heim's deposition testimony and decision to not use Figure 7 itself as an algorithm undermine the Court's conclusion that that Figure 7 discloses an algorithm to perform the steps of the means-plus-function limitations. At most, however, Heim's deposition testimony that Figure 7 "d[oes] not cover generating use interface information on the displays" creates an issue of credibility that the Court must weigh along with Heim's other testimony. *Bank of Illinois*

v. Allied Signal Safety Restraint Sys., 75 F.3d 1162, 1170 (7th Cir. 1996) ("Variations in a witness's testimony … create an issue of credibility as to which part of the testimony should be given the greatest weight if credited at all. Issues concerning the credibility of witnesses … are questions of fact which require resolution by the trier of fact."). When viewed in light of the full scope of Heim's claim construction testimony, the entirety of his deposition testimony, along with Heim's rebuttal invalidity report, the weight of Heim's testimony continues to support this Court's determination that the '805 patent adequately discloses an algorithm.

To begin, the scope of Heim's testimony during claim construction regarding algorithms disclosed by the '805 patent extended beyond Figure 7. Heim opined that "[t]he '805 Patent uses a flow chart [Figure 7]*, text, and many illustrations of user interface screens* to describe to someone of ordinary skill in the art at the time of the patent algorithms to generate user interface information on the main display." (Dkt. 136-1 at ¶ 60) (emphasis added). After explaining in detail how Figure 7 discloses an algorithm, Heim states that "[i]n addition to Figure 7 itself, the text of the specification for the '805 patent[,]" along with various examples of user output display screens "describe[ ] and provide[ ] further details of the algorithm illustrated in Figure 7." (*Id*. at ¶¶ 64, 66). He goes onto explain how the specification text and display images "provide very substantial details of the example algorithm that describes how to generate user interface information to display." (*Id*. at ¶ 69). Heim reaches similar conclusions with respect to each means-plus-function limitation. (*Id.* at ¶¶ 95–138). Heim's decision to "consider the specification of the '805 patent in its entirety, including Figure 7" to derive the algorithms he uses for his infringement analysis is thus consistent with his claim construction testimony. (Dkt. 348 Ex. 6 at 29). Heim's rebuttal invalidity report, issued more than a year after claim construction, also reiterates Heim's opinion during claim construction that "a person of ordinary skill in the art would bring to understanding

the figures and the specification's text to recognize that the '805 does present algorithms that could be implemented by a person of ordinary skill in the art." (Dkt. 412 at ¶ 2). Heim once again explains how Figure 7, *along with the display screens and specification text* to support this opinion. (*See* Dkt. 406 at ¶¶ 219–223).

When considered alone, Heim's subsequent deposition testimony that he "used the algorithms that [he] determined were in the '805 patent in the infringement report rather than Figure 7" because Figure 7 "did not cover generating user interface information on the displays" seemingly contradicts his prior testimony. (Dkt. 348 Ex. 6 at 40). Considered in context, however, the contradiction is less apparent. At Heim's deposition, defense counsel extensively questioned Heim about the treatment of Figure 7, or lack thereof, in his infringement report. (*Id*. at 29–40). Heim repeatedly stated that while he considered Figure 7 along with the entire specification to derive the algorithms he used for his infringement analysis, he did not use Figure 7 alone to determine the details of the algorithms or compare it to the Alaris system because it was just a "high-level diagram." (*Id*. at 33) ("Figure 7, being a user interface navigation flow diagram, is at a high level. And to have the step-by-step procedures of the algorithms, I looked at the detail of the '805 patent."); (*id*. at 35) ("Figure 7 is the user interface navigation flow diagram. And it's the high level. … And I describe those step-by-step procedures of the algorithms in my report, based on Figure 7 and the rest of the specification of the '805 patent, so it wasn't necessary to compare the Alaris system to Figure 7."); (*id*. at 36) ("[I]t wasn't necessary to compare the Alaris system to the high-level navigation flow diagram of Figure 7, because that is a high-level diagram."). Heim also reiterated: "The '805 patent discloses an algorithm, and one part of what it discloses is Figure 7 as a user interface navigation flow diagram." (*Id*. at 37). Thus, as a whole, Heim's testimony indicates that while he considered Figure 7 in his analysis, he did not use it alone as a source for a

detailed algorithmic comparison because it describes a high-level algorithm. This testimony is once again consistent with Heim's claim construction testimony that Figure 7 discloses an algorithm, the details of which are provided by the specification text and example display images within the patent. (Dkt. 136-1 at ¶¶ 64, 66).

Defendants place great emphasis on dicta in the Court's claim construction order stating that "[t]he crux of the … microprocessor claims … is whether Figure 7 of the '805 Patent discloses the algorithm necessary to perform the described function." (Dkt. 191 at 7). Defendants misread this statement to mean that the Court found that Figure 7 *alone* discloses the relevant algorithm. To the contrary, the Court understood that from the perspective of Heim as a person of ordinary skill in the art ("POSA"), Figure 7, along with other parts of the patent disclosed the relevant algorithm. "The understanding of one of skilled in the art[,] [however,] does not relieve the patentee of the duty to disclose sufficient structure to support means-plus-function claim terms." *Lucent Techs., Inc. v. Gateway, Inc.*, 543 F.3d 710, 719 (Fed. Cir. 2008). "It is not enough for the patentee simply to state or later argue that persons of ordinary skill in the art would know what structures to use to accomplish the claimed function. … The inquiry is whether one of skill in the art would understand the specification itself to disclose a structure, not simply whether that person would be capable of implementing that structure." *Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1337 (Fed. Cir. 2008) (internal quotations and citation omitted). Thus, while both the input and output of an algorithm inform that algorithm, the Court appropriately focused its inquiry on Figure 7 and its associated specification text which "defines how inputs at one element lead to the algorithm moving to another element in the flow diagram[,]" rather than the "examples of user interface output screens." (Dkt. at ¶¶ 65). The Court credited Heim's opinion that these display screens and the specification text associated with them "provide

very substantial details of the … algorithm" at issue, however, the appropriate inquiry was not whether a POSA would be able to look at these screens and their associated specification text and work backwards to derive the algorithms, but whether the patent itself describes some portion of that algorithm. The Court concluded, as did Heim, that Figure 7 does just that: "The flow diagram in Figure 7 displays a step by step process of how the claimed function operates." (Dkt. 191 at 7). While it does not specify exactly how each input element of the algorithm is generated, it "present[s] a person of ordinary skill in the art at the time of the invention an understanding of how to set up the software that generates the information on the displays so that the user of the pump could navigate through the user interface displays and routines." (Id. at ¶ 63). That is all that is required in light of the demanding clear and convincing evidentiary standard. *See e.g., Finisar Corp. v. DirectTV Group, Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008) (A patent need only disclose "to the satisfaction of one of ordinary skill in the art, enough of an algorithm to provide the necessary structure…."); *Aristocrat Techs.*, 521 F.3d at 1338 (A patentee is "not required to produce a listing of source code or a highly detailed description of the algorithm to be used to achieve the claimed function."). Thus, the Court held that Figure 7 discloses *enough* of an algorithm to satisfy the requirements of § 112, not that it *alone* disclosed the relevant algorithm.

Finally, Defendants' affirmative evidence and arguments in support of invalidity also remain the same as those presented and already considered by the Court during claim construction. *See* Dkt. 404 at 12–13). During claim construction, Defendants offered the expert testimony of Charles B. Kreitzberg who opined that "the '805 patent does not describe any step-by-step procedures to explain how the pump's microprocessor generates the information and images that appear on the device's displays" and similarly, fails to disclose an algorithm "for how a microprocessor would be programmed to calculate a dose of the beneficial agent to be infused into

the patient." (Dkt. 158 at ¶¶ 21, 23). This testimony is substantially similar to that now offered by Defendants' invalidity expert Gregg Kirkpatrick that "there are no steps-by-step procedures described in the '805 patent to disclose how the pump's microprocessors generate the information and images that appear on the device's displays, or how the processors calculate the drug dose to be administered to a patient." (Dkt. 405 at ¶ 55). Kirkpatrick's testimony, like Kreitzberg's, presents a competing opinion to Heim's regarding indefiniteness, which the Court has already resolved in Baxter's favor in light of the demanding clear and convincing evidence standard for invalidity. (*See* Dkt. 191 at 6–7).

Heim's testimony during claim construction regarding the algorithms disclosed by the '805 patent remains largely consistent with his subsequent testimony and expert reports. Defendants further fail to offer new affirmative evidence or argument in support of their invalidity position. In short, the facts, evidence, and argument have not substantially changed since this Court considered Defendants' indefiniteness challenge more than two years ago. Consequently, Defendants fail to meet their heavy burden to show that reconsideration is warranted and the Court stands by its previous conclusion that "the algorithm at issue here has been presented in sufficiently understandable terms such that a person of ordinary skill in the art would understand what structure corresponds to the limitation." (*Id*. at 7). Defendants' motion for summary judgment of invalidity by reasons of indefiniteness and lack of written description is denied.

II. Heim's Expert Report

In his infringement report, Heim compared the algorithms disclosed by the '805 patent with those disclosed by the accused Alaris system and concluded that the Alaris system infringes the means-plus-function limitations of patent. (Dkt. 350 at ¶¶ 464–612). Heim also applied a "clinical areas" requirement to the "configuration parameters" limitation of Claim 1 when reaching

his validity, enforceability, and infringement opinions. (*See e.g.*, Dkt. 373 at ¶¶ 963, 1032) Dkt. 350 at ¶ 546). Defendants move to strike these opinions, arguing Heim disregarded the Court's claim construction holdings. "Expert opinions that conflict with a court's established claim construction tend only to create confusion and are thus unhelpful to the jury." *Callpod, Inc. v. GN Netcom, Inc.*, 703 F. Supp. 2d 815, 822 (N.D. Ill. 2010) (citing *CytoLogix Corp. v. Ventana Med. Sys., Inc.*, 424 F.3d 1168, 1172 (Fed. Cir. 2005)). "[A] court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves…." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005) (internal quotations and citation omitted). Similarly, experts may not usurp the Court's role by opining as to claim construction. *See Cordin Corp. v. Boston Sci. Corp.*, 561 F.3d 1319, 1337 (Fed. Cir. 2009) ("[T]he risk of confusing the jury is high when experts opine on claim construction.").

A. Means-Plus-Function Limitations

Defendants argue Heim's failure to analyze the navigation flow of Figure 7 to derive the algorithms he used for his infringement analysis is contrary to the Court's claim construction finding that "[t]he flow diagram in Figure 7 displays a step by step process of how the claimed function operates." (Dkt. 191 at 7). Heim's report does not include a detailed discussion of Figure 7. Rather, Heim primarily relied on the example display screens and their specification text to derive the algorithms he uses for his analysis. (*See generally* Dkt. 350 at ¶¶ 464–612). As discussed above, however, the Court did not hold that Figure 7 alone discloses the relevant algorithm. Rather, the Court understood from Heim's claim construction testimony that Figure 7 discloses an overview of an algorithm, the details of which are provided by the specification text and example display screens. Heim's heavy reliance on the specification text and display screens to derive the algorithms used for his infringement analysis is thus entirely consistent with the

Court's claim construction order. Moreover, Heim did not disregard Figure 7. Heim repeatedly testified at his deposition that he "consider[ed] the specification of the '805 patent in its entirety, including Figure 7" to derive the algorithms he uses in his infringement report, but did not perform a direct comparison between Figure 7 and the Alaris system because Figure 7 is only a "high level diagram." (Dkt. 348 Ex. 6 at 29–36). It is reasonable, for the purposes of his infringement analysis, for Heim to have relied on the high-level algorithm of Figure 7 and use the example display screens and their specification text to fill in the details of that algorithm.

Defendants maintain that allowing Heim to testify to the algorithms he found in the patent amounts to impermissible claim construction because the Court already identified the relevant algorithm as Figure 7. Heim, however, derived more detailed versions of that algorithm using the specification text and display images from the patent. While Heim could have chosen to use Figure 7 as the algorithm for his infringement analysis, his decision to use more detailed algorithms is indicative of how Heim thought it best to apply the Court's claim construction to the facts of the case, rather than an attempt at claim construction itself. *See e.g., Not Dead Yet Mfg., Inc. v. Pride Sols., LLC*, 222 F. Supp. 3d 657, 668 (N.D. Ill. 2016) (permitting expert testimony that was "a good-faith attempt to apply the court's construction of claim terms" and "not an attempt to offer his own constructions."). Notably, Defendants nor their technical expert argue that the algorithms Heim used are inconsistent with any algorithm disclosed by Figure 7. Rather, Defendants and their expert continue to maintain, contrary to the Court's claim construction order, that the '805 patent does not disclose an algorithm at all.

Similarly, Defendants maintain Heim's algorithms are "invented" by Heim and are not found within the patent. Heim reviewed the patent from the perspective of a POSA and detailed the algorithms he understood the patent to disclose. (Dkt. 350 at ¶ 44). Heim identifies the exact

text and/or figures he relied on to generate each algorithm in his infringement report. (*Id*. at ¶¶ 464–612). Thus, although the verbatim text of the algorithms is not recited in the patent, the information Heim relied on as a POSA to derive those algorithms is found within the patent.

Next, Defendants argue Heim's algorithms themselves do not constitute algorithms because they use purely functional language and do not describe how a processor is programmed to perform the claimed functions. Heim's algorithms, however, do more than "simply describe[ ] the function to be performed" by the processor. *Aristocrat Techs.*, 521 F.3d at 1334. They describe the steps a programmer needs to implement to perform the claimed function. For example, Heim describes the following algorithm for generating user interface information on the piggyback infusion programming screen:

Table 7 Algorithm for Generating User Interface Information on Piggyback Infusion Programming Screen As Disclosed in the '805 Patent
Algorithm Step
PB01: [Set title line] Set title text to be "Piggyback Rate-Volume" and specify location coordinates
PB02: [Set title icon] Set title icon to be Piggyback icon and specify location coordinates
PB03: [Set up parameter inputs]
PB03.1: [Set up Rate input]
PB03.1: [Set label for Rate input] Set first line left text field to be "Rate" and specify location coordinates
PB03.1: [Set units field for Rate] Set first line right text field to be "mL/hr" and specify location coordinates
PB03.2: [Set up Volume to be Infused input]
PB03.2.1: [Set label for Volume to be Infused input] Set second line left text field to be "Volume to be Infused" and specify location coordinates
PB03.2.2: [Set units field for Volume to be Infused] Set second line right text field to be "mL" and specify location coordinates
PB04: [Set message text based on operating state of pump] Set message text to be "Primary Rate will be run at 125 ml/hr when the piggyback is complete"
PB05: [Set prompt text based on programming state] Set prompt text to be "ENTER THE VOLUME OR PRESS START" (START is a hard key on the front panel)
PB06: [Set soft key labels]

Set first soft key label to be "CHANGE MODE" Set fourth soft key label to be "PRIMARY"
PB07: [Output to display] Send to display memory the title text, the title icon, text fields, message text, prompt text, soft key labels.

(Dkt. 350 at ¶ 484). Each of these steps tells the programmer what inputs to enter to generate each desired output. Heim also explains how this method of describing an algorithm comports with scholarly practice in the field. (*Id*. at ¶¶ 464–69) (citing "The Art of Computer Programming, Volume 1: Fundamental Algorithms[,]" by Donald Knuth and noting that the notation style for presenting algorithms "breaks each step of an algorithm into a written description that clarifies whether the step is an input, a type of processing step, or an output."). Defendants are free to attach the sufficiency of Heim's algorithms through rebuttal expert testimony and cross examination.

Finally, Defendants take issue with the scope of Heim's analysis. Defendants fault Heim for neglecting to analyze every example display screen describing the subroutines of Figure 7 and, for the screens Heim did analyze, failing to analyze every feature disclosed by the screen. These objections, however, go to the weight the jury should give Heim's testimony rather than its admissibility. Defendants' motion to exclude Heim's infringement opinions regarding the means-plus-function limitations is denied.

B. Configuration Parameters Limitation

Claim 1 of the '805 patent includes a "configurations parameters" limitation: "a plurality of sets of configuration parameters are included as user interface information such that a user can select which of the plurality of sets of configuration parameters to configure the infusion pump." (Dkt. 348 Ex. 2 at 20:29–32). At claim construction, Baxter argued that "sets of configuration

parameters" should be construed to mean a "collection of drugs' parameters that determines the overall pump operating characteristics for a given clinical context." (Dkt. 191 at 11). The Court rejected this construction and opted instead to give the limitation its plain and ordinary meaning:

> Baxter's proposed construction does more to advocate its case than provide clarification to the jury. Baxter's construction would have the Court read in limitations not present in the '805 Patent. … Here, the claim is comprised of commonly used terms; each used in common parlance and has no special meaning in the art. The contested claim requires no further construction and the terms will be given their plain and ordinary meaning.

(*Id*.) (internal quotations and citation omitted).

Notwithstanding this conclusion, in reaching his validity, enforceability, and infringement opinions, Heim reads a "clinical context" requirement into the "configuration parameters" limitation of Claim 1. For example, in his rebuttal invalidity report, when attempting to distinguish the prior art Eggers patent, Heim asserts that "the Eggers patent does not describe sets of configuration parameters that configure the infusion pump to *clinical areas*, as required to meet this claim limitation of the '805 Patent Claim 1." (Dkt. 406 at ¶ 963) (emphasis added). He also opines that Defendants' expert, Kirkpatrick, does not sufficiently describe how a particular obviousness combination describes '"a plurality of sets of configuration parameters' such that the configuration parameters have the meaning meant in the '805 Patent where the set of configuration parameters customize the infusion pump to a specific *clinical area, such as a in a hospital*." (*Id*. at ¶ 1032) (emphasis added). Similarly, in his infringement report Heim opines that Claim 1 requires "algorithms for selecting from a plurality of sets of configuration parameters … in which each *Hospital Area* will have its own set of configuration parameters." (Dkt. 350 at ¶ 546)

(emphasis added). At his deposition, Heim confirmed his view that the "configuration parameters" limitation requires "configur[ing] the infusion pump to clinical areas." (Dkt. 348 Ex. 6 at 117).

Heim's inclusion of a "clinical context" requirement within the "configuration parameters" limitation of Claim 1 is contrary to this Court's order explicitly rejecting that construction and amounts to impermissibly arguing claim construction. Baxter argues that the "plain and ordinary" meaning of a term is its meaning to a POSA, *see Philips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005), and Heim, as a POSA, testified that the "plain and ordinary" meaning of "configuration parameters" is "to facilitate usage in the selected clinical application" or to "configure the pump to clinical areas." (Dkt. 348 Ex. 6 at 116–18). The Court's "plain and ordinary" meaning construction, however, is not an invitation for Baxter to argue a construction of that term that the Court explicitly rejected. *See e.g., Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (district court did not err in excluding expert testimony arguing for a limitation specifically rejected by the court when it construed the term as having its "plain and ordinary meaning."). Accordingly, the portions of Heim's report discussing the "configuration parameters" limitation as including a "clinical context" or a "hospital area" requirement are excluded.

III. Anticipation & Obviousness

Finally, Baxter moves for partial summary judgment of no invalidity due to anticipation or obviousness, 35 U.S.C. §§ 102–03. For a claim to be anticipated under § 102, "each claim element must be disclosed either expressly or inherently, in a single prior art references, and the claimed arrangement or combination of those elements must also be disclosed, either expressly or inherently, in that same prior art reference." *Therasence, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1325, 1332–33 (Fed. Cir. 2010). Similarly, "obviousness requires a suggestion of all limitations in a claim." *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003). As with

indefiniteness, invalidity due to anticipation or obviousness must be proven by clear and convincing evidence. *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 97 (2011*); see also Sciele Pharma Inc. v. Lupin Ltd.*, 684 F.3d 1253, 1260 (Fed. Cir. 2012).

"[A] challenger who seeks to demonstrate that a means-plus-function limitation was present in the prior art must prove that the corresponding structure—or an equivalent—was present in the prior art." *Fresenius USA, Inc. v. Baxter Int'l, Inc.*, 582 F.3d 1288, 1299 (Fed. Cir. 2009). The corresponding structure in the context of a means-plus-function term is the algorithm disclosed by the patent. *Aristocrat Techs.*, 521 F.3d at 1333. Baxter's technical expert, Gregg Kirkpatrick, opines that to the extent the asserted claims of the '805 patent are not indefinite, they are invalid as anticipated and obvious in light of various prior art references and combinations thereof. (Dkt. at ¶ 113). There is no dispute, however, that Kirkpatrick failed to perform an algorithm-based comparison of the '805 patent and asserted prior art references. Rather, Kirkpatrick opined that the '805 patent fails to disclose any algorithm and testified:

> I compared what's in the '805 patent with prior art. I compared what's in the '805 patent with the Alaris system. But again, since there's no algorithm described in the '805 patent, I cannot say that I have compared an algorithm from the '805, since it does not exist, with prior art or with the Alaris system. … I did not perform an analysis of algorithms. As you see in my report, there's not an analysis of the algorithms of the prior art.

(Dkt. 396 at ¶¶ 35–36).

Defendants argue Kirkpatrick's failure to conduct an algorithm-based comparison is excused by his reliance on Baxter's Amended Final Infringement Contentions:

> Kirkpatrick analyzed Baxter's Amended Final Infringement Contentions to understand the alleged scope of the asserted claims, and then compared each piece of prior art to the different claim limitations, on an element-by-element basis. As Kirkpatrick's invalidity report shows, the prior art discloses structures that meet every claim limitation under Baxter's interpretation, including the "microprocessor

> means" limitation. This is sufficient evidence to demonstrates there is a genuine issue of material fact as to anticipation and obviousness.

(Dkt. 395 at 10). That is, however, not the law. To prove that a means-plus-function limitation is anticipated or rendered obvious by prior art, Defendants must show that the corresponding structure, here the algorithm disclosed in the '805 patent, is present within the prior art. *Fresenius*, 582 F.3d at 1299. [2] Defendants' invalidity expert fails to conduct that analysis. Consequently, there is no factual basis from which a reasonable trier of fact could find clear and convincing evidence of anticipation or obviousness. Baxter's motion for partial summary judgment of invalidity by reason of anticipation or obviousness is granted.

CONCLUSION

For the foregoing reasons, Defendants' motion for summary judgment that the '805 patent is invalid for indefiniteness and lack of written description [346] is denied and Defendants' motion to exclude certain opinions provided by Warren P. Heim [370] is granted in part and denied in part. Baxter's motion for summary judgment of no invalidity [334] is granted.

Virginia M. Kendall
United States District Judge

Date: February 14, 2022

[2] Defendants dispute the applicability of *Fresnius*, arguing that it "dealt with the odd procedural posture that the district court had construed some [but not all,] of the means-plus-function limitations at issue," whereas here, "the Court did identify the claimed algorithm structure" at claim construction. (Dkt. 396 at 14). This distinction is irrelevant, however, because there is no dispute that Defendants' expert did not compare the algorithm identified by the Court to the prior art.