

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLORADO  
**Judge Philip A. Brimmer**

Civil Action No. 07-cv-02261-PAB-MJW  
(consolidated with 08-cv-01226-PAB-MJW)

ALCOHOL MONITORING SYSTEMS, INC.,

Plaintiff,

v.

ACTSOFT, INC.,  
OHIO HOUSE MONITORING SYSTEMS, INC., and  
US HOME DETENTION SYSTEMS AND EQUIPMENT, INC.,

Defendants.

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**ORDER REGARDING CLAIM CONSTRUCTION**

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This patent case comes before the Court on defendants' motion for summary judgment [Docket No. 104]. The parties have submitted briefs and supporting evidence regarding the construction of U.S. Patent No. 5,220,919. I have reviewed the submitted materials. Because patent construction is a matter of law, I now construe the patent claims as a preliminary matter. *Cf. Ballard Med. Prods. v. Allegiance Healthcare Corp.*, 268 F.3d 1352, 1358 (Fed. Cir. 2001) ("District courts have wide latitude in how they conduct the proceedings before them, and there is nothing unique about claim construction that requires the court to proceed according to any particular protocol . . . , the court may approach the task in any way that it deems best."). For the reasons and in the manner detailed below, I grant defendants' motion for summary judgment as to the claim construction issue. I withhold judgment on the remaining issues raised in the

motion for summary judgment – infringement and invalidity. They will be taken up at the hearing regarding defendants’ motion for summary judgment.

## **I. JURISDICTION**

The Court’s jurisdiction over this case is premised upon 28 U.S.C. § 1331 (federal question jurisdiction) in conjunction with 28 U.S.C. § 1338(a) (district court jurisdiction over patent cases).

## **II. BRIEF FACTUAL BACKGROUND**

Plaintiff Alcohol Monitoring Systems, Inc. is the putative assignee of United States Patent No. 5,220,919 (the “’919 Patent”). The ’919 Patent, entitled “Blood Alcohol Monitor,” describes an invention which, according to the patent itself,

relates to continuous monitoring of human blood alcohol levels and more particularly to a non-invasive blood alcohol level monitoring device. Even more particularly, the invention relates to a portable device, affixed to the subject, for monitoring blood alcohol, without requiring subject participation, by determining the alcohol levels expelled through a subject’s skin.

U.S. Patent No. 5,220,919 col.1 (filed August 23, 1991).

Plaintiff contends that defendants Actsoft, Inc., Ohio House Monitoring Systems, Inc., and US Home Detention Systems and Equipment, Inc. have infringed or contributed to the infringement of the ’919 Patent through the making, using, selling, offering to sell, and/or importing of a product known as the “House Arrest Solution.”

The only claims that the parties have identified as being at issue in this case are Claims 14, 17, and 18 of the ’919 Patent. Claim 14 describes:

A method for monitoring the percentage of blood alcohol content of a human subject, said method comprising the steps of:

- (a) securely attaching an alcohol measurement device to the human subject using an attachment device;
- (b) storing an error indication if the human subject tampers with said measurement device or an error occurs within said measurement device;
- (c) measuring a percentage of alcohol expelled through the subject's skin into said measurement device and storing a measurement result;
- (d) repeating steps (b) and (c) until a predetermined amount of time expires;
- (e) transmitting each of said measurement results and each of said tamper and error indications to said monitoring station; and
- (f) repeating steps (b) through (e).

'919 Patent col.13 I.66 to col.14 I.14. Claim 17 describes:

The method of claim 14 wherein step (b) further comprises the steps of:

- (b1) determining if a temperature measurement of the human subject's skin is within a predetermined range of temperatures; and
- (b2) if said temperature is outside said predetermined range, sending said error indication.

'919 Patent col.14 II.21-27. Claim 18 describes:

The method of claim 14 wherein step (b) further comprises the steps of:

- (b1) measuring a distance between said measurement device and the human subject's skin; and
- (b2) if said distance is outside a predetermined range, sending said error indication.

'919 Patent col.14 II.28-33.

### **III. ANALYSIS**

#### **A. Legal Standards for Patent Claim Construction**

Patent infringement cases consist of two steps: first, the claims of the allegedly infringed patent are construed; second, the claims, as construed, are applied to the allegedly infringing product.<sup>1</sup> *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d

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<sup>1</sup> Claim construction is also an important step in cases, such as the present one, where a defendant raises an invalidity defense. However, that fact does not alter the

1316, 1323 (Fed. Cir. 2001). The Supreme Court in *Markman v. Westview Instruments, Inc.*, made clear that the first step, claim construction, is decided as a matter of law by the presiding court. 517 U.S. 370 (1996).

In construing patent claims, courts are guided by the precedent of the Federal Circuit. See *SunTiger, Inc. v. Scientific Research Funding Group*, 189 F.3d 1327, 1333 (Fed. Cir. 1999). In *Phillips v. AWH Corporation*, the Federal Circuit offered detailed counsel on how to approach claim construction. 415 F.3d 1303 (Fed. Cir. 2005) (en banc). “It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Id.* at 1312 (internal quotation marks omitted).

As a general proposition, courts are to give claims their “ordinary meaning,” in other words, the meaning that the term would have to a person of ordinary skill in the art in question at the time of the effective filing date of the patent application. *Id.* at 1312-13. In ascertaining the ordinary meaning of patent claims, courts may consult a variety of intrinsic and extrinsic sources, with greater weight attaching to the former. See *id.* at 1314, 1317.

Deciphering claim language does not always turn on the parsing of erudite terms. “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely

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Court’s analysis. Cf. *Hybritech Inc. v. Abbott Labs.*, 849 F.2d 1446, 1454 (Fed. Cir. 1988) (“[A] patent claim must be construed by the court the same way for purposes of both validity and infringement.”)

accepted meaning of commonly understood words.” *Id.* at 1314. Where this is not the case, courts look to intrinsic evidence such as the language of the claim at issue, the other claims of the same patent, the patent specification, and the prosecution history. *See id.* Courts may also consult the somewhat lesser regarded “extrinsic evidence, which consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Id.* at 1317 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc), *aff’d* 517 U.S. 370 (1996)) (internal quotation marks omitted).

With these guiding principles in mind, I turn to the construction of the ’919 Patent’s claims.

#### **B. Claim 14 of the ’919 Patent**

Defendants argue in their motion for summary judgment that the House Arrest Solution does not infringe the ’919 Patent because it does not include Steps (c), (d), or (e) of Claim 14 or their substantial equivalent. I focus here on those elements of Claim 14 that are necessary for the current infringement analysis. *Cf. Ballard Med. Prods. v. Allegiance Healthcare Corp.*, 268 F.3d 1352, 1358 (Fed. Cir. 2001) (“As long as the trial court construes the claims to the extent necessary to determine whether the accused device infringes, the court may approach the task in any way that it deems best.”).

As a preliminary matter, I briefly address the preamble of Claim 14: “A method for monitoring the percentage of blood alcohol content of a human subject, said method comprising the steps of . . . .” ’919 Patent col.13 ll.66-68. Although I expound on the import of this language below, this clause deserves quick mention at the outset. The

phrase “comprising the steps of” signifies in patent parlance that the claim is an “open claim,” meaning that the steps listed are not exclusive and an allegedly infringing device is not saved by the presence of additional elements outside the scope of the patent. See *Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1371-72 (Fed. Cir. 2005).

Step (c) of Claim 14 describes a “method for monitoring the percentage of blood alcohol content of a human subject, said method comprising the [step] of . . . measuring a percentage of alcohol expelled through the subject’s skin into said measurement device and storing a measurement result.” ’919 Patent col.13 l.66 to col.14 l.8. The parties disagree sharply about the extent of activity that a person of ordinary skill in the art would interpret this language to cover.<sup>2</sup> Plaintiff essentially argues that Step (c) covers any measurement of the amount of alcohol expelled through a subject’s skin. Defendants, on the other hand, assert that Step (c), viewed more broadly as part of Claim 14 as a whole, only covers devices which measure the amount of alcohol emitted through a subject’s skin and then convert that measurement to a percentage of blood alcohol content.

Plaintiff argues that “the customary and ordinary meaning of ‘measuring a percentage of alcohol expelled through the skin’ could not possibly mean measuring blood alcohol content.” Pl.’s Br. in Opp’n to Defs.’ Mot. for Sum. J. of Non-Infringement

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<sup>2</sup> The parties have agreed for the purposes of this motion that a person of ordinary skill in the art is someone having at least a Bachelor of Science Degree in Biology, Mechanical Engineering, or Forensic Science and at least two years of experience in blood, breath, and/or transdermal alcohol testing. Pl.’s Br. in Opp’n to Defs.’ Mot. for Sum. J. of Non-Infringement and Invalidity [Docket No. 139] at 45; Reply Br. in Supp. of Defs.’ Mot. for Sum. J. of Non-Infringement and Invalidity [Docket No. 151] at 26.

and Invalidity [Docket No. 139] (“Pl.’s Opp’n Br.”) at 23. Instead, plaintiff argues that “[u]sing the ordinary and customary meaning of these terms, step (c) of claim 14 means ascertaining the proportion of the alcohol expelled through the skin into the device.” *Id.* It is true that Step (c) by itself only describes “measuring a percentage of alcohol expelled through the subject’s skin,” and not the measuring of blood alcohol content. In plain language, “measure” means to ascertain a figure, extent, or amount. See Merriam-Webster’s Collegiate Dictionary 769 (11th ed. 2007). “Percentage” means a part of a whole – in other words, a proportion – expressed in hundredths.<sup>3</sup> See Merriam-Webster’s Collegiate Dictionary 918 (11th ed. 2007). By definition then, percentage is a relative term requiring more than mere detection of an amount in relation to a set unit of measure; it typically requires a calculation whereby one takes the amount measured, divides it by some larger whole, then multiplies it by 100.

J. Robert Zettl, whom the parties have accepted as a person of ordinary skill in the relevant art, on being questioned by defendants’ counsel at a deposition in this case, testified as follows:

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<sup>3</sup> Although *Phillips* cautions courts against undue reliance on dictionary definitions, the case also recognized dictionaries’ utility in claim construction where a dictionary definition is supported by intrinsic evidence. See *Phillips*, 415 F.3d at 1322. The ’919 Patent’s specification supports a conclusion that a person having ordinary skill in the relevant art would interpret the words “measure” and “percentage” as used in the patent in accordance with the common dictionary definition. For example, the ’919 Patent’s summary of the invention states that

[t]he system provides for the continuous monitoring of a subject’s blood alcohol level by measuring the level of ethanol that has been expelled through the subject’s skin. The system determines the subject’s blood alcohol level by measuring the amount of ethanol at a predetermined distance away from the subject’s skin, which provides an indication of the relative amount of ethanol in the subject’s blood.

’919 Patent col.3 ll.23-31.

Q. But the SCRAM, is it fair to say in your opinion, is designed to yield a measurement that is analogous to a measurement from a breathalyzer?

A. Yes.

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Q. So in letter (c), just so I'm clear, when it says "measuring a percentage of alcohol," to you, that means measuring so that you get a measurement that's in grams per 100 milliliters?

[Objection omitted]

A. Yes, since it says "percentage of alcohol."

Q. (By Mr. Tucker) By "percentage of alcohol," you mean blood alcohol concentration?

A. Yes.

Defs.' Mot. for Sum. J. of Noninfringement And Invalidity [Docket No. 104], ex. A-6 at 8-9.

Therefore, Step (c) contemplates more than the mere ascertaining of the amount of alcohol emitted from a person's skin. Some calculation or series of calculations must take place which lead to the identified percentage. It is true that Step (c) does not indicate literally that the calculation undergone at this stage arrives at a measure of blood alcohol content. However, Step (c) is only one part of the overall patented process of Claim 14. Claim 14 as a whole does indicate that such a calculation is to occur; its preambulatory language explains that the invention consists of a "method for monitoring the percentage of blood alcohol content of a human subject." '919 Patent col.13 ll.66-67. It is axiomatic that a device could not "monitor" one's percentage of blood alcohol content without first determining what that percentage is.



The most logical step in Claim 14 which accommodates the calculation of a percentage of blood alcohol content is Step (c). Therefore, because a person of ordinary skill in the art would understand Claim 14 to require a calculation of blood alcohol content, I construe Step (c) as including that calculation. See *Bell Commc'ns Research, Inc. v. Vitalink Commc'ns Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995) (“[W]hen the claim drafter chooses to use both the preamble and the body to define the subject matter of the claimed invention, the invention so defined, and not some other, is the one the patent protects.”). Reading this requirement into Step (c) is consistent with Federal Circuit law instructing district courts to read patent terms in their context. See *Phillips*, 415 F.3d at 1314 (noting that “the context in which a term is used in the asserted claim can be highly instructive”). Therefore, Step (c) in particular and Claim 14 as a whole are infringed only where the raw measurement of the amount of alcohol emitted from a subject is in some way converted to a percentage of blood alcohol content.

The conclusion that Step (c) as part of Claim 14 requires both measurement of the amount of alcohol emitted and a calculation of blood alcohol content is well supported in the '919 Patent's specification. For example, the specification notes that “[t]he sensor measures the amount of alcohol being emitted through the subject's skin thereby providing an indication of the subject's blood alcohol content.” '919 Patent, col.6 ll.64-66 (emphasis added). To get from an “indication” to an actual blood alcohol content, some calculation must be made. One possible series of calculations is described in the '919 Patent:

If alcohol is present, block **1002** transfers to block **1004** which calculates the amount of alcohol present. The amount of alcohol present is calculated by comparing a reading from the sensor **218** to the known readings in the characterization data to produce a base line blood alcohol result. This base line reading is then multiplied by the calibration factor which compensates for sensor drift from the time the characterization was performed. This result is further multiplied by a temperature coefficient to provide the final amount of blood alcohol present.

'919 Patent col.11 ll.28-39. Additional support for the Court's interpretation is found elsewhere in the specification:

- “There is need in the art then for an apparatus and method to passively test the blood alcohol content of a human subject. . . . The present invention satisfies these and other needs.” '919 Patent col.2 ll.45-61.
- “It is an aspect of the present invention to perform testing which indicates the blood alcohol content of a human subject.” '919 Patent col.2 ll.64-66.
- “The system provides for the continuous monitoring of a subject's blood alcohol level by measuring the level of ethanol that has been expelled through the subject's skin.” '919 Patent col.3 ll.23-26.
- “Typically, the device can be attached to a subject's arm or leg to provide periodic monitoring of the subject's blood alcohol content.” '919 Patent col.3 ll.42-44.
- “The portable blood alcohol monitor **102** analyzes the readings taken to determine whether the subject's blood alcohol content has exceeded a predetermined level.” '919 Patent col.4 ll.47-50.
- “The characterization data is data that was created by characterizing the fuel cell **302** (FIG. 3) and is used to adjust the readings obtained from the fuel cell to obtain a more accurate percentage of alcohol content.” '919 Patent col.8 ll.49-53.<sup>4</sup>

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<sup>4</sup> For the purposes of infringement analysis there is a “distinction 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. A process consists of doing something, and therefore has to be carried out or performed.” *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1317 (Fed. Cir. 2005) (quoting *In re Kollar*, 286 F.3d 1326,

While the Federal Circuit admonishes courts against importing limitations from a patent's specification, it also notes that the specification is particularly useful in construing patent claims as a person skilled in the relevant art would interpret them. *See Phillips*, 415 F.3d at 1323 (“[T]he line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court’s focus remains on understanding how a person of ordinary skill in the art would understand the claim terms.”)

Here, construing Claim 14 to include both measurement of the amount of alcohol emitted from a subject’s skin and conversion of that figure to a percentage of blood alcohol content is not imported from the '919 Patent’s specification. Rather, the specification is consulted to give context to Step (c) and Claim 14 as a whole, assisting the Court in understanding how a person of ordinary skill in the art would view the claim. The portions of the specification excerpted above do not contradict what is the plain reading of Claim 14 in light of its introductory clause; rather, they support it.

In summary, infringement of Claim 14 can occur only where a device not only measures the amount of alcohol being emitted from an individual’s skin, but uses that measurement to calculate a percentage of blood alcohol content. Claim 14 does not preclude others from merely testing for the presence or amount of alcohol emitted through a person’s skin. Rather, Claim 14 of the '919 Patent entitles the owner of that

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1332 (Fed. Cir. 2002) (internal quotation marks, omission marks, and alteration marks omitted). The '919 Patent specification does not distinguish between descriptions of its method claims, of which Claim 14 is one, and its product claims. That distinction seems inconsequential to the claim construction at hand.

patent to exclude others from making, using, selling, offering to sell, or importing a device that otherwise infringes and measures the presence and level of alcohol in an individual and then converts that measurement into a percentage of blood alcohol content. See 35 U.S.C. § 271(a) (2006); *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1317 (Fed. Cir. 2005) (“A method or process consists of one or more operative steps, and, accordingly, it is well established that a patent for a method or process is not infringed unless all steps or stages of the claimed process are utilized.” (internal quotation marks and alteration marks omitted)).

Step (d) of Claim 14 describes “repeating steps (b) and (c) until a predetermined amount of time expires.” ’919 Patent col.14 ll.9-10. As indicated above, Steps (b) and (c), respectively consist of “storing an error indication if the human subject tampers with said measurement device or an error occurs within said measurement device” and “measuring a percentage of alcohol expelled through the subject’s skin into said measurement device and storing a measurement result.” ’919 Patent col.14 ll.3-8. Step (e) describes “transmitting each of said measurement results and each of said tamper and error indications to said monitoring station.” ’919 Patent col.14 ll.11-13.

The parties do not expend much effort in contesting the construction of Steps (d) and (e), focusing instead on whether the House Arrest Solution infringes these elements of Claim 14. To the extent that I can detect disagreement surrounding these elements, I construe them as follows:

I agree with defendants that the use of the word “repeating” in Step (d) means to do something more than once. See Merriam-Webster’s Collegiate Dictionary 1055 (11th ed. 2007) (defining “repeat” as “to make, do, or perform again”). Therefore, literal

infringement of Step (d) of Claim 14 requires that both Steps (b) and (c) occur more than once.

I construe Step (e)'s "transmitting each of said measurement results and each of said tamper and error indications to said monitoring station" to mean that every measurement and indication must be sent as a distinct and separable unit of the aggregated whole of all measurements and indications. See Merriam-Webster's Collegiate Dictionary 390 (11th ed. 2007) (defining "each" as "being one of two or more distinct individuals having a similar relation and often constituting an aggregate"). Therefore, to literally infringe Step (e), a device must transmit every indication from Step (b) and every measurement from Step (c) in a way that the individual indications and measurements are identifiable.

### **C. Claims 17 and 18 of the '919 Patent**

There appear to be no additional controversies surrounding the language of Claims 17 and 18 of the '919 Patent relevant to defendants' motion for summary judgment. Claims 17 and 18 are dependent claims which incorporate Claim 14. The parties have not presented arguments regarding the construction of these claims. Defendants merely assert that because the House Arrest Solution does not infringe Claim 14, the House Arrest Solution could not infringe dependent claims such as Claims 17 and 18. Without proper argument before the Court, I reserve judgment on the construction of these claims. The Court will take up the question should it become necessary at a later stage in the litigation.

#### IV. CONCLUSIONS

I construe Claim 14 of the '919 Patent to include the following limitations:

“A method for monitoring the percentage of blood alcohol content of a human subject, said method comprising the steps of:”

“securely attaching an alcohol measurement device to the human subject using an attachment device”;

“storing an error indication if the human subject tampers with said measurement device or an error occurs within said measurement device”;

“measuring a percentage of alcohol expelled through the subject’s skin into said measurement device and storing a measurement result,” which requires the measurement of the amount of alcohol being emitted from an individual’s skin and the calculation of a percentage of blood alcohol content;

“repeating steps (b) and (c) until a predetermined amount of time expires,” which requires that both Steps (b) and (c) occur more than once;

“transmitting each of said measurement results and each of said tamper and error indications to said monitoring station,” which requires transmitting every indication from Step (b) and every measurement from Step (c) in a way that the individual indications and measurements are separately identifiable; and

“repeating steps (b) through (e).”

It is so ORDERED.

DATED April 27, 2009.

BY THE COURT:

s/Philip A. Brimmer  
PHILIP A. BRIMMER  
United States District Judge