United States District Court,
E.D. Pennsylvania.

VISICU, INC,
Plaintiff.
v.
IMDSOFT, LTD. et al,
Defendants.

May 7, 2009.

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MEMORANDUM & ORDER

GOLDBERG, District Judge.

I. *Introduction*

This matter involves apatent claim construction pursuant to Markman v. Westview, Inc., 517 U.S. 370, 388-91, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). The invention at issue is a computerized monitoring system of intensive care unit ("ICU") patients.

Plaintiff, VISICU, Inc. ("VISICU"), commenced this action for patent infringement against defendants iMDsoft, Ltd. ("iMDsoft") and Lehigh Valley Hospital ("LVH") on October 30, 2007, alleging that LVH uses and promotes a computer program for remote monitoring of ICU patients that infringes upon two existing VISICU patents, U.S. Patent Nos. 6,804,656 ("the '656 patent") and 7,256,708 ("the '708 patent") (collectively, "the patents-in-suit".) VISICU also accuses iMDsoft of contributory infringement of the patents for offering to sell and selling the computer program.

IMDsoft responded through an answer and counterclaims, filed on December 10, 2007, asserting that its inventors shared confidential information with VISICU's inventors that contributed to VISICU's origination and development of its claimed inventions. LVH also filed a counterclaim on December 21, 2007, seeking declaratory judgments regarding the patents-in-suit.

On November 18, 2008, the parties submitted their proposed claim constructions and respective briefs. A

Markman hearing followed on February 12 and 13, 2009, wherein, by agreement, no witnesses were called and counsel set forth their respective arguments.

II. *The Patents*

The '656 and '708 patents cover systems and methods for the centralized management of care of patients in ICUs. VISICU explains that intensive care doctors, known as intensivists, are in short supply across the United States and internationally. Thus, the essence of VISICU's invention is to connect intensivists, through centralized monitoring, with greater numbers of ICU patients, in order to provide improved care. The systems and methods for doing so involve a computer system that monitors multiple types of patient information, reviews developments in that patient information according to established rules, and notifies medical staff at a remote command center when a rule is triggered, indicating that intervention in a patient's care may be necessary.

The '656 patent, entitled "SYSTEM AND METHOD FOR PROVIDING CONTINUOUS, EXPERT NETWORK CRITICAL CARE SERVICES FROM A REMOTE LOCATION(S)," was issued to VISICU, as the assignee of inventors Brian A. Rosenfeld and Michael Breslow, on October 12, 2004. The patent was challenged twice by iMDsoft based on newly presented prior art references, and the Patent Trademark Office ("PTO") twice reexamined the patent. The PTO issued a first *ex parte* reexamination certificate on or about September 26, 2006 and a second *ex parte* certificate on October 30, 2007. The '708 patent, entitled "TELECOMMUNICATIONS NETWORK FOR REMOTE PATIENT MONITORING" was issued to VISICU on August 14, 2007.

The two patents are similar and cover the same inventions. The majority of the disputed claim terms are found in independent method claim 17 of the '656 patent and independent system claim 1 of the '708 patent. As these sections of the patent are extensively referred to herein, they are set forth verbatim below.

Claim 17 of the '656 patent reads:

17. A method for providing expert critical care simultaneously to a plurality of geographically dispersed intensive care units (ICUs) from a remote location comprising:

monitoring patient data elements of patients in a plurality of geographically dispersed ICUs;

communicating over a network the monitored patient data elements to a remote command center, the remote command center comprising a database and a workstation;

storing the monitored patient data elements in the database, wherein the database comprises stored patient data elements;

applying a rules engine continuously to at least two patient data elements stored in the database to search for patterns of data indicative of a medical condition of a patient;

utilizing an output from the rules engine to determine if intervention is warranted; and

wherein the monitoring and determining if intervention is warranted for individual patients occurs in an automated fashion at the remote command center 24 hours per day 7 days per week.

Claim 1 of the '708 patent reads:

1. A hospitalized patient care system comprising: a telecommunication network;

monitoring stations comprising monitoring equipment adapted to monitor data elements from geographically dispersed hospitalized patients and to send the monitored data elements to a remote command center via the telecommunications network, wherein the remote command center is adapted to:

receive the monitored data elements from the geographically dispersed hospitalized patients;

access patient data elements indicative of a medical condition associated with each of the geographically dispersed hospitalized patients; and establish patient-specific rules associated with each of the geographically dispersed hospitalized patients; and

apply the patient-specific rules continuously and simultaneously using a rules engine adapted to:

select data elements from the monitored data elements and the patient data elements associated with a hospitalized patient;

apply a patient-specific rule associated with the hospitalized patient to the selected data elements;

determine in an automated fashion at the remote command center whether the patient-specific rule for the hospitalized patient has been contravened; and

in the event the patient-specific rule for the hospitalized patient has been contravened, issue an alert from the remote command center.

At the commencement of the *Markman* hearing, 17 claims remained in dispute. FN1 Many of the disputes overlap in the two patents. The few distinguishing characteristics between the two patents include what will be referenced to as the ' 656 patent's "wherein" clause, requiring automated 24/7 "monitoring and determining," and the ' 708 patent's "patient-specific rules" language.

FN1. Originally, the parties had 52 disputed claims; however, agreements on the construction of many of these claims were reached prior to the *Markman* hearing.

III. *Applicable Precedent*

Patent infringement cases typically involve a two-part analysis. The first step, known as the "claim construction" involves a determination of the meaning and scope of any disputed claims. Because a patent is a written instrument, judges, not juries, must interpret the words of the patent's claims. Markman, 517 U.S. at 388-89. In short, claim construction is a matter of law to be determined by the court.

The claims analysis begins and remains focused on the language of the claims themselves because that is what the inventor used to describe his invention. Interactive Gift Express, Inc. v. Compuserve Inc., 256 F.3d

1323, 1331 (Fed.Cir.2001) (citing 35 U.S.C. s. 112, para. 2); *Sipco LLC v. Toro Co.,* slip op. at 1 (E.D. Pa. Feb 11, 2009). "Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." Phillips v. AWH Corp., 415 F.3d 1303, 1316 (Fed.Cir.2005), *cert. denied,* 546 U.S. 1170, 126 S.Ct. 1332, 164 L.Ed.2d 49 (2006) (citations omitted).

Claim language is generally given its "ordinary and customary meaning." Patents are "addressed to and intended to be read by" those skilled in the field of the invention. Phillips, 415 F.3d at 1313. Thus a term's "ordinary and customary meaning" is what it would be to a "person of ordinary skill in the art in question at the time of the invention." *Id.* (citing Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1116 (Fed.Cir.2004)); *see also* Elbex Video, Ltd. v. Sensormatic Elecs. Corp., 508 F.3d 1366, 1371 (Fed.Cir.2007) ("claim terms are entitled to a 'heavy presumption' that they carry their ordinary and customary meaning to those skilled in the art in light of the claim term's usage in the patent specification").

The context in which a term is used in the claim can also be "highly instructive." Phillips, 415 F.3d at 1314. The words surrounding a disputed term may help suggest whether a proposed construction is redundant or incorrect. Additionally, the use of a term in other claims of the patent is informative because terms are normally used consistently throughout the patent. *Id.; Sipco LLC,* at 2.

More specifically, a Court should consider four main sources in analyzing a claim: (1) the words of the claims themselves, (2) the specification,FN2 (3) the prosecution history, and, if necessary, (4) "extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art." Phillips, 415 F.3d at 1314. The first three sources, collectively, are referenced to as intrinsic evidence, and the court's interpretation begins with these sources. *Id.*

FN2. The required contents of the specification are set forth in 35 U.S.C. s. 112: "The specification shall contain a written description of the invention, and of the manner and processing of making and using it, in such full, clear concise, and exact terms as to enable any person skilled in the art of which it pertains, or with which it is most nearly connected, to make sure and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."

The Federal Circuit has emphasized the importance ofthe specification in claim construction. *Id.* at 1315. "[C]laims must be read in view of the specification, of which they are a part." Markman, 52 F.3d 967, 979 (Fed.Cir.1995) (en banc), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). The specification's written description of the invention "must be clear and complete enough to enable those of ordinary skill in the art to make and use it." Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996). Indeed, the specification is the "single best guide to the meaning of a disputed term." Phillips, 415 F.3d at 1315 (quoting Vitronics, 90 F.3d at 1582).

"Although the prosecution history often lacks the clarity of the specification and thus is less useful for claim construction purposes ... the prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." Phillips, 415 F.3d

at 1317. Accordingly, the court examines "the patent's prosecution history, when placed in evidence, to determine whether the inventor disclaimed a particular interpretation of a claim term during the prosecution of the patent." Ventana Medical Systems, Inc. v. Biogenex Labs., 473 F.3d 1173, 1182 (Fed.Cir.2006). Where the patentee has unequivocally disavowed a certain meaning to obtain his patent, the doctrine of prosecution disclaimer prevents it from later expanding the scope of the invention. 800 Adept, Inc. v. Murex Secs., Ltd., 539 F.3d 1354, 1364 (Fed.Cir.2008) (citing Omega Eng'g v. Raytek Corp., 334 F.3d 1314,1324-25 (Fed.Cir.2003)).

Conversely, the disclaimer doctrine is not applied where the alleged disavowal of claim scope is ambiguous or vague. Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1347 (Fed.Cir.2001) (refusing to limit the ordinary meaning of the claim because the alleged disclaimer in the file wrapper was at best "inconclusive"); *N*. Telecom Ltd. v. Samsung Electrs. Co., Ltd., 215 F.3d 1281, 1295 (Fed.Cir.2000) (where the inventors' statements were amenable to multiple reasonable interpretations, court deemed the remarks too ambiguous to apply doctrine). In sum, for prosecution disclaimer to attach, the alleged disavowing actions or statements made during prosecution must be clear and unmistakable, as well as demonstrate reasonable deliberateness. Omega Eng'g, 334 F.3d at 1326; *N*. Telecom, 215 F.3d at 1294-95.

In addition, "extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art," may be consulted. Phillips, 415 F.3d at 1314. However, because the universe of extrinsic evidence is boundless and such evidence is not created at the time of the patent or for the purpose of explaining the patent's scope, it is considered less reliable than intrinsic evidence. Id. at 1318-19. Therefore, extrinsic evidence should be used only when intrinsic evidence is insufficient to resolve claim interpretation disputes.

Lastly, as a general rule, the patent language must not be rewritten even when it may be clearer if done so. Helmsderfer v. Bobrick Washroom Equip., Inc., 527 F.3d 1379, 1383 (Fed.Cir.2008). An attempt to clarify could mistakenly add or subtract requirements. If the inventor or his attorney could not get it right, it is not for a court to correct. *See* K-2 Corp.v. Salomon S.A., 191 F.3d 1356, 1364-65 (Fed.Cir.1999). Nor can language be engrafted onto existing language to accommodate the dispute solely for the purpose of aiding jury comprehension. 800 Adept, Inc., 539 F.3d at 1366-67 (trial court erred when, in an effort to help the jury better understand a claim, added a sentence to its original claim construction, and the modified construction was incorrect).

In other words, courts should avoid the temptation to write claim language in what appears to be a better way. Adherence to the original meaning of the patentee whenever possible is the paramount principle. Texas Instruments, Inc. v. U.S. Int'l Trade Comm'n, 988 F.2d 1165, 1171 (Fed.Cir.1993) ("Courts can neither broaden nor narrow the claims to give the patentee something different than what he has set forth"); *Sipco LLC,* at 3-4.

IV. *Claim Construction*

A. *Defendants' Proposed 24/7 Limitation*

The parties have organized their proposed claim constructions for the 17 disputed claims into 11 categories. (*See* Chamberlain Decl., Ex. 1, Joint Claim Construction Chart.) Generally, plaintiffs argue the disputed claim language should be construed according to the language and context of the claims and specifications, and that in most instances, the prosecution history is both unnecessary and unhelpful in determining the meaning of the disputed claims. Defendants argue that the prosecution history mandates that several

limitations be added into individual claim constructions. Defendants also propose that a temporal limitation be applied pervasively to the disputed claims. As defendants propose this addition to the majority of disputed constructions, we will discuss defendants' suggested temporal limitation first, before addressing the remaining proposed claim constructions.

Defendants seek to add the phrase, "24 hours a day seven days a week," to numerous constructions. However, the 24/7 limitation appears only once in the ' 656 patent claims as a component of the last line of claim 17 in the "wherein" clause. Specifically, the "wherein" language states:

"wherein the monitoring and determining if intervention is warranted for individual patients occurs in an automated fashion at the remote command center *24 hours per day 7 days per week*" (emphasis added)

Neither side disputes that the 24/7 language should be preserved in the claim construction of the above referenced "wherein" clause. However, defendants propose to add the 24/7 language to additional claim language pertaining to: the monitoring of patient data; definitions of the remote command center; when to determine if intervention is warranted; and when to apply a rules engine. (*See* Chamberlain Decl., Ex. 1, Joint Claim Construction Chart Nos. II, III, IV, VI, X.) Defendants also seek to add the 24/7 language to two claim terms in the '708 patent, even though the '708 patent contains no language suggesting a 24/7 component.

In support of this construction, defendants first argue that the added temporal language throughout the claim will "make it easier for the jury" by "put[ting] all of the information in one place." (Hr'g., p. 94.) We disagree. Adding the 24/7 term to other claims does not stay true to the claim language and is redundant and unnecessarily complicating. As claim terms are to be read in the context of the surrounding claims, there is no reason to repeatedly add language already contained in a specific part of the claim.

Defendants also assert that plaintiff's characterization of its invention as operating 24/7 in the prosecution history justifies the 24/7 language be added throughout. (Id. at 150, 152-53.) Specifically, defendants argue that the 24/7 factor was instrumental to VISICU's being awarded the ' 656 patent because it distinguished VISICU's invention from prior art that did not have a 24/7 quality. However, the appropriate question is whether the prosecution history reflects that VISICU clearly and unambiguously disclaimed a particular meaning and is now attempting to broaden its claims by excluding the 24/7 requirement from other claim terms. *See* 800 Adept, Inc., 539 F.3d at 1364.

As the 24/7 language does appear in the final line of claim 17 (the "wherein" clause) and refers to the "monitoring and determining" steps, VISICU acknowledges that such language should be maintained in this context. Consistent with the "wherein" clause, the prosecution history does identify the invention as providing for "24-hour dedicated monitoring/management." (Decl. of Todd R. Samelman, Ex. 9, p. 18). The prosecution history does not, however, reflect that VISICU intended to adopt the 24/7 language to justify that phrase being construed throughout.

For instance, pertinent portions of the prosecution history state: "in contrast to the present invention, the Rosenfeld Study provided only 4-5 hours of *ad hoc monitoring* by a single intensivist from the intensivist's home (i.e. no continuous *monitoring,* no support personnel, and no dedicated facility) (emphasis added). This is consistent with the single phrase in the final "wherein" paragraph that states that monitoring occurs "24 hours per day 7 days per week." In no way does it establish an unambiguous disclaimer necessitating

that the 24/7 language be interspersed throughout the claim.FN3 (*Id*. at 19). In sum, nothing in the prosecution history mandates that the 24/7 temporal requirement be dispersed throughout the claim construction.

FN3. The prosecution history is "the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent." Phillips, 415 F.3d at 1317. The parties have jointly submitted an electronic copy of the entire prosecution histories for both the '656 patent (including the two reexaminations) and the ' 708 patent. Excerpts cited by plaintiff are attached to the Samelman Declaration; those submitted by defendants are attached to the Chamberlain Declaration.

Lastly, defendants cite to a number of general statements in the specifications that refer to the invention as being "manned by intensivists" 24/7 and as providing "intensivist monitoring" 24/7. This language is consistent with the claim term language in the "wherein" clause identifying "monitoring and determining" as occurring 24/7, but it does not support adding this temporal addition throughout the claim.

For the foregoing reasons, the Court will not add defendants' suggested 24/7 limitation into any disputed claim term other than to maintain it in the "wherein" clause.

B. ***Construction of Other Disputed Terms***

1. "geographically dispersed"

The suggested construction for this phrase submitted by the parties changed from the initial written submissions and during the course of the *Markman* hearing. In its written submissions, plaintiff asserted that the term be construed to mean "in different geographic locations." During the *Markman* hearing, plaintiff suggested they would agree to a construction which states: "in different geographic locations, either within a building or in different buildings." Plaintiff claimed that the phrase "either within a building or in different buildings" was taken directly from the prosecution history. (Pl.'s Resp. Br., fn. 5, p. 6; Hr'g., pp. 81, 85.) Defendants initially requested that the disputed term be assigned its ordinary meaning.

After considering plaintiff's second proposal, defendants took issue only with the use of the word "different" being used to give meaning to "dispersed." Defendants continued to argue that the word "dispersed" would be more informative to a jury and more readily understandable. (Defs.' Br., p. 15; Hr'g., p. 84.) Defendants further argued that while plaintiff cited to the prosecution history to supply meaning for its suggested construction, it failed to cite the prosecution history accurately. On this point, we agree with defendants, and indeed, in its brief, plaintiff cited to instances in the prosecution history where the inventors explained "geographically dispersed" using the terms "disparate," in one instance, and "separate" in another. (Pl.'s Br., p. 14.) Conversely, plaintiff has not cited to any reference in the prosecution history that uses the word "different."

After discussion on this point, plaintiff indicated that it would agree to a claim construction that uses the word "separate" in place of "different." (Hr'g., p. 88.) Defendants similarly conceded they would accept "disparate" in place of "dispersed." (*Id*., p. 89.) Neither side would accept the alternate definition offered by the other. Consequently, the Court adopts the following construction: **"in separate geographic locations, either within a building or in different buildings."** This construction is closest to the prosecution history (which both sides have asked the Court to rely upon) and provides a simple and clear meaning for the disputed claim term.

2. "monitoring patient data elements of patients in a plurality of geographically dispersed ICUs"

Plaintiffproposes: "monitoring at the remote command center data elements of patients who are located in a plurality of geographically dispersed ICUs." Defendants propose the same construction but add, "in an automated fashion 24 hours a day 7 days a week." Thus, the only difference in the proposed construction is defendants' addition of "in an automated fashion 24 hours a day 7 days a week." Defendants argue that by adding this language, it will keep all of the information in one place for the jury and reduce confusion.

As with the 24/7 language, the phrase "in an automated fashion" is already set forth in the concluding "wherein" paragraph. Adding this phrase yet again is repetitive, not within the ordinary meaning of the claim when read in its entirety, and will be more, not less, confusing to the jury. Additionally, the Court has previously addressed and rejected defendants' suggestion of adding the 24/7 language throughout the construction. The term is construed as **"monitoring at the remote command center data elements of patients who are located in a plurality of geographically dispersed ICUs."**

3. "remote command center"

The phrase "remote command center" appears in several sections of claim 17. Plaintiff proposes to define the terms as, "a dedicated location for monitoring and managing the care of hospitalized patients, which location is apart from the geographically dispersed ICUs." Defendants counter with, "a dedicated center for monitoring and directing intervention of hospitalized patients by health care professionals, which center is apart from the geographically dispersed ICUs, twenty-four hours a day 7 days a week." These proposals differ in numerous respects.

At the outset and for reasons set forth above, we reject defendants' addition of a 24/7 temporal component. Thus, the remaining three disputes are as follows: "location" versus "center;" "managing the care" versus "directing the intervention;" and the proposed addition by defendant of "by health care professionals."

Plaintiff has not set forth a specific argument regarding its use of "location" versus "center" in its brief. (Pl.'s Br., pp. 16-18.) At the *Markman* hearing, plaintiff argued that the remote command center is a location and that the best support for this interpretation is the frequency with which the word "location" appears in the patent itself. (Hr'g., p. 107.) Defendants spend little time on this issue, asserting only that a "location" is an unnecessary and inaccurate definition for "center," which has its own commonly understood connotation. (Defs.' Br., p. 15.) We prefer plaintiff's argument and its reliance on intrinsic evidence and determine that the construction will begin: "a dedicated location."

Next, plaintiff seeks the construction "managing the care" as opposed to defendants' proposed "directing intervention." Plaintiff argues that defendants' construction would improperly limit the meaning of the claim term to intervention. (Pl.'s Br., p. 17; Hr'g., pp. 112-13.) Defendants assert that plaintiff represented its invention as different from prior art because it directed the intervention of care. (Defs.' Br. at 14; Hr'g., pp. 133, 159.) Defendants seem to urge the Court to apply the "disclaimer doctrine," *supra,* to narrow the meaning of the disputed claim term. Defendants also point the Court to examples in the specification where the phrase "directing intervention" is used. Plaintiff's counter that the phrase "proactively intervening" was taken out of the claim terms and the Court cannot now use the specification to add a limitation. (Hr'g., pp. 159-60.)

The Court finds that defendants' construction "directing intervention" would improperly narrow the meaning

of "remote command center." The specification does not justify the addition of this language to the claim construction and defendants have provided no evidence that plaintiff has disclaimed a broader meaning. Therefore, the Court adopts the construction: "managing the care."

Lastly, defendants ask the Court to add the language, "by health care professionals" (or alternatively, "by intensivists," "by intensivist-led care team," or "by doctors and nurses") to the definition of remote command center. Plaintiff objects, arguing that "intensivist" was specifically taken out of the claim terms during the patent approval process and that it would be impermissible to now add it back in. (*See* Hr'g., pp. 121, 123, 126.) Plaintiff cites Kistler Instrumente AG. v. United States, 224 Ct.Cl. 370, 628 F.2d 1303, 1308 (Ct.Cl.1980) and United States v. Telectronics, Inc., 857 F.2d 778, 782-83 (Fed.Cir.1988) to support this proposition. A review of this precedent supports plaintiff's proposed construction. The phrase "by health care professionals" will not be included in the claim construction.

In sum, in defining remote command center, the Court adopts plaintiff's proposed construction for "remote command center" in its entirety. "Remote command center" is construed as: **"a dedicated location for monitoring and managing the care of hospitalized patients, which location is apart from the geographically dispersed ICUs."**

4. "utilizing an output from the rules engine to determine if intervention is warranted"

Plaintiff proposes "using information generated by the rules engine to determine if intervention is warranted to manage the care of an individual patient." Defendants propose "using information generated by the rules engine at the remote command center to determine if intervention is warranted." Each side adds one phrase to its proposed meaning that the other side disputes.

Plaintiff proposes "to manage the care of an individual patient" and defendants suggest "at the remote command center." The Court disagrees with both proposed constructions.

First, plaintiff's additional language is unnecessary and redundant. As will be set forth below, at plaintiff's urging, the Court will construe the claim term "intervention" to include the phrase "manage the care of an individual patient." (*See, infra,* s. III.B.6.) Thus, there is no need to repeat the same language a second time here.

We also decline to accept defendants' suggestion to add language about the remote command center. The claim terms refer to the remote command center in reference to where patient data is sent (i.e., "communicating over a network the monitored patient data elements to a *remote command center*.) The remote command center is also referenced in the "wherein" clause where monitoring determines if intervention is warranted. The claim terms at issue here, which deal with a rules engine and determining if intervention is needed, do not reflect that the "utilizing" step should occur at the remote command center. We, again, decline defendants' suggestion that sections of the "wherein" clause be cut and pasted to other unrelated claims in order to narrow the claim language. "Utilizing an output from the rules engine to determine if intervention is warranted" is construed as: **"using information generated by the rules engine to determine if intervention is warranted."**

5. "determin[ing] if intervention is warranted"

Plaintiff requests ordinary meaning. Defendants propose: "determin[ing] if intervention is warranted in an automated fashion 24 hours a day 7 days a week." As explained above, the Court rejects defendants'

additional 24/7 language. (*See* s.s. III.A & III.B.2.) The language is clear and needs no construction.

6. "intervention"

The parties partially agree that "intervention" means "an action by a health care provider." They disagree on how to characterize the nature of that action. Plaintiff submits the remaining construction as: "to manage the care of an individual patient." Defendants differ with: "to change apatient's care." Defendants' argument here is reminiscent of its position regarding the construction of "remote command center," where they asked the Court to adopt the narrower meaning of "directing the intervention" over plaintiff's proposed "managing the care." Here, similarly, "changing" a patient's care is more restrictive than "managing" a patient's care in that managing can encompass a "change" of care (i.e., implementing new or different symptoms or care methods) or monitoring existing conditions. As plaintiff noted, reinserting a clogged breathing tube has not "changed" the care but "managed" the care and this type of intervention was clearly contemplated in the claim. (Hr'g., p. 183.) Read as a whole, claim 17 describes a method for providing expert critical care, which in our view is expansive and does not limit the intensivists to only "changing" the care. Indeed, defendants have not pointed to any specific intrinsic evidence that would support such a limiting role. "Intervention" is construed as: **"an action by a health care provider to manage the care of an individual patient."**

7. "wherein the monitoring and determining if intervention is warranted for individual patients occurs in an automated fashion at the remote command center 24 hours per day 7 days per week"

Plaintiff proposes, "automatically and on a 24/7 basis at the remote command center, monitoring data from individual patients in the plurality of geographically dispersed ICUs and utilizing the output of the rules engine to determine if intervention is warranted to manage the care of an individual patient." Defendants suggest, "wherein the monitoring and determining if intervention is warranted for individual patients is computerized, without human intervention at the remote command center 24 hours per day 7 days per week."

Aside from agreeing on the inclusion of the language pertaining to something happening at the remote command center 24/7 and determining "if intervention is warranted," the parties' proposals are drastically different. In attempting to arrive at the proper construction, we first note two concessions each party offered at the *Markman* hearing.

First, plaintiff agreed that the phrase "in the plurality" would not assist the jury and could be confusing. Plaintiff agreed with defendants' suggestion also that the phrase "computerized" be added, and was preferable to "automated." (Hr'g., pp. 193, 202.) Defendants agreed to withdraw their proposed phrase "without human intervention" which they originally argued helped to explain automated. (Hr'g., p. 197.) Thus, the remaining phrases in dispute as suggested by the plaintiff are:

- The inclusion of "automatically" before the 24/7 language; and

- The inclusion of "monitoring data from individual patients .... of geographically dispersed ICUs and utilizing the output of the rules engine."

We find the phrase "automatically," to be redundant and an unnecessary addition to the clear mandate already in the claim language that the monitoring and intervention occur 24/7. Plaintiff's suggestion that the patient monitoring occur in "geographically dispersed ICUs and utilizing the output of the rules engine," is

also rejected as redundant and unnecessary as each of these phrases appear in the 17 claim language just prior to the "wherein" paragraph.

The remainder of this claim is clear and unambiguous. Thus, "wherein the monitoring and determining if intervention is warranted for individual patients occurs in an automated fashion at the remote command center 24 hours a day, 7 days per week," is construed as: **"wherein the monitoring and determining if intervention is warranted for individual patients is computerized at a remote command center 24 hours per day, 7 days per week."**

8. "applying a rules engine continuously to at least two patient data elements stored in the database"

The crux of the parties' dispute here lies in the word "continuously." Plaintiff proposes, "repeatedly and automatically according to the rules of the rules engine" or "repeatedly and automatically ... according to time-driven or event-driven rules." FN4 Defendants seek to define this term as "constantly and automatically ... 24 hours a day 7 days a week."

FN4. Plaintiff submitted this alternative proposal on the second day of the *Markman* hearing. This was in response to the Court's request that plaintiff offer a proposed construction that lacked the awkward "rules of the rules engine" phrase of the initial proposal. (Hr'g., Day 2, pp. 72-74.)

First, as explained previously, the Court has rejected defendants' continued request to add 24/7 to other disputed claim terms when that phrase only appears in the "wherein" clause. Indeed, when questioned by the Court as to why the 24/7 phrase needed to be added to a phrase like "continuously," defendants replied "there is the constant component in that it's always happening, and there is also that it's happening all the time, which is the reason why we have the 24-hour and day, 7 day a week." (Hr'g., p. 203.) The distinction suggested by defendants between "always happening" and "happening all the time" seems to be excessively nuanced. Adding the 24/7 component to words like constantly and automatically would only serve to confuse the jury as would plaintiff's suggested phrase, "the rules of the rules engine."

Thus, the only remaining dispute is whether "continuously" shall be defined as "repeatedly and automatically" (plaintiff's version), or "constantly and automatically" (defendants' version). Despite the fact that continuously is a commonly understood word, the scope of the meaning is still in dispute. Indeed, plaintiff notes that while the Court may be tempted to give "continuously" its ordinary meaning, the dispute is a matter of law that must be decided by the Court. (Pl.'s Br., p. 21, citing *02* Micro Int'l v. Beyond Innovation Tech. Co., 521 F.3d 1351, 1360 (Fed.Cir.2008).)

The dictionary definition of "continuous" is: "1. Uninterrupted in time; without cessation: *continuous coughing during the concert*. 2. Being in immediate connection or spatial relationship: *a continuous series of blasts; a continuous row of warehouses*." (*Webster's Encyclopedie Unabridged Dictionary of the English Language,* 1996.) FN5 As in *02 Micro,* the common meaning of continuously does not completely resolve the parties' dispute regarding the scope of the term as it pertains to the patents-in-suit. *02* Micro, 521 F.3d at 1361 ("a determination that a claim term 'needs no construction' or has the 'plain and ordinary meaning' may be inadequate when a term has more than one 'ordinary' meaning or when reliance on a term's 'ordinary' meaning does not resolve the parties' dispute").

FN5. Continuously, the word in dispute here, is the adverb form of continuous.

Plaintiff's proposed construction, "repeatedly and automatically," is consistent with the intrinsic evidence. In the patent, there are descriptions of time-driven and event-driven rules that trigger the rules engine at varying degrees of frequency. (*See* Pl.'s Br., p. 20, citing examples of laboratory data that can appear relatively infrequently.) This comports more with the idea of something happening "repeatedly" rather than the defendants' more limited meaning of "constantly."

In contrast, defendants' proposed construction narrows the scope of the term's meaning without adequate support. Defendants refer to the prosecution history and plaintiff's argument during similar litigation in the case of *Cerner Corp. v. VISICU, Inc.,* No. 04-1033-CV-W-GAF (W.D. Mo., filed Nov. 12, 2004), to support their position that plaintiff itself defines "continuously" as "constantly" and that it should be bound to this meaning.FN6 The Court has reviewed defendants' argument and is not persuaded to adopt their proposed word, "constantly." Plaintiff's proposed construction, "repeatedly and automatically," is clear and consistent with the intrinsic evidence. The term is construed as: **"applying a rules engine repeatedly and automatically to at least two patient data elements stored in the database."**

FN6. The Court notes that the parties repeatedly asked the Court to take note of arguments and holdings in the *Cerner* case. We have considered all of plaintiff's and defendants' arguments here independently of the *Cerner* litigation. Nonetheless, many of this Court's claim constructions are consistent with those determined by the court in *Cerner*.

9. "database"

This word appears within the phrase "communicating over a network the monitored patient data elements to a remote command center, the remote command center comprising a **database** and a work station."

Plaintiff requests the construction, "an organized collection of electronic information." Defendants propose, "a device for storing an organized collection of all patient data elements." In short, the dispute is over whether the construction should be a collection of organized information or a device.

Plaintiff submitted the un-rebutted declaration of Dr. Jeff C. Goldsmith, which states that a person of ordinary skill in the art at the time of the inventions would understand a database to be a collection of digital information, not a physical device. In their brief, defendants argue that a database is a physical device and the specification refers to a database server, which is also a physical device. However, defendants point to no intrinsic or extrinsic evidence which would justify using the word "device." Thus, relying in part on the Goldsmith Declaration, we adopt plaintiff's construction. The term is construed as: **"an organized collection of electronic information."**

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10. "patient-specific rules"

Plaintiff proposes "a rule tailored to the medical condition of the patient." Defendants propose "a tailored rule designed for a particular patient based on that patient's personal medical condition." Defendants argue that the additional words "designed for a particular patient" are necessary because the specification talks about "patient-specific rules," as opposed to "disease-specific rules." The Court agrees with plaintiff's

proposed construction for several reasons.

First, defendants agreed at the *Markman* hearing that its proposed term "customized" can be replaced with tailored. (Hr'g., Day 2, p. 7.) Thus, the remaining controversy pertains to whether the rules are tailored to the medical condition of a patient (plaintiff's version) or designed for a particular patient based on that patient's personal medical condition (defendants' version.)

Plaintiff argues that defendants take words from the specification out of context and seek to limit the ordinary meaning of "patient-specific rules" as understood by a person skilled in the art at the time of the invention. Based on an examination of the intrinsic evidence and viewed through the prism of a person skilled in the art, the Court finds plaintiff's construction to be the most accurate and is not persuaded by defendants' argument to narrow the claim term. "Patient-specific rules" is construed as: **"a rule tailored to the medical condition of the patient."**

11. "establish[ing] patient-specific rules associated with each of the geographically dispersed hospitalized patients"

The parties agree on plaintiff's proposed language: "establish[ing] patient-specific rules for each of the individual, geographically dispersed hospitalized patients." Plaintiff proposes this language as the entirety of the construction. Defendants seek to add three additional components to this phrase: "at the remote center," at the beginning of the construction; the word "customized" to modify "patient specific rules;" and "who are being monitored" at the end of the phrase. Thus, defendants' complete proposed construction would read: "establish[ing] at the remote command center customized patient-specific rules for each of the individual, geographically dispersed hospitalized patients who are being monitored." We address each in turn.

First, defendants seek to insert a limitation requiring that the establish[ing] patient-specific rules step occur at the remote command center. The claims in question specifically identifies which step occurs at the remote command center and that step relates to the determination of whether a rule has been contravened. This appears to be inconsistent with defendants' proposal. Additionally, the remote command center language defendants propose to add appears nowhere in the phrase at issue which pertains to "rules." The remote command center language was available to the inventors regarding the "establishing rules" step and they chose not to insert this limitation. Thus, we find from the context of the claims that the absence of the "at the remote command center" limitation in the claim terms requires its absence in the construction at issue.

The Court also rejects defendants' request to insert the word "customized," because it is redundant. Defendants agree that "customized" is interchangeable with "tailored." "Patient-specific rules" has already been construed as "a rule *tailored* to the medical condition of a patient." (*See* s. III.B.10.) Adding the word "customized" would only confuse a jury.

Finally, defendants propose to add "who are being monitored" to the end of the construction. For the reasons set forth below (*see* s. III.B.12) we decline to add this additional language. Thus, "establish[ing] patient-specific rules associated with each of the geographically dispersed hospitalized patients" is construed as: **"establish[ing] patient-specific rules for each of the individual, geographically dispersed hospitalized patients."**

12. "monitored data elements;"

"access[ing] patient data elements indicative of a medical condition associated with each of the

geographically dispersed hospitalized patients;"

"receiving at a remote command center monitored data elements from geographically dispersed hospitalized patients."

Plaintiff suggests a construction for each of the three claim terms that defendants substantially agree to.FN7 Defendants only propose to add the phrase "who are being monitored" to the end of each of plaintiff's proposed constructions. Defendants argue this phrase is necessary to make clear that the claim terms only apply to the hospitalized patients who are being monitored, as opposed to the other patients in the hospital who are being monitored, generally. Plaintiff objects, asserting that defendants' phrase is redundant and adds no value, because the part of the construction the parties agree on already contains the notion that the data elements are obtained from monitoring patients. Plaintiff also argues that the addition of "who are being monitored" restricts the claim terms improperly as defendants are attempting to insert a meaning not supported by the intrinsic evidence. The claim constructions of the terms without the "who are being monitored" additions are clear on their face. The Court adopts all three of plaintiff's constructions.

FN7. Plaintiff's proposed constructions for each are:
the data elements obtained from monitoring the geographically dispersed hospitalized patients

...

accessing patient-specific data (other than monitored data elements) indicative of a medical condition associated with each of the geographically dispersed hospitalized patients

...

receiving at a remote command center monitored data elements obtained from geographically dispersed hospitalized patients

13. "apply[ing] the patient-specific rules continuously and simultaneously using a rules engine"

Plaintiff proposes, "apply[ing] the patient-specific rules repeatedly, automatically and at the same time according to time-driven or event-driven rules." Defendants propose, "constantly applying all patient-specific rules at the same time 24 hours a day 7 days a week." The Court has already construed "continuously" (*see* s. III.B.8) and has rejected the additional language "24 hours a day 7 days a week." Here, the parties agree that "simultaneously" shall be construed as "at the same time." The parties have stipulated to the construction of "rules engine" and, thus, the Court, agreeing with defendants on this aspect

of their proposed construction, sees no further need to construe that term. The claim term shall be construed as: **"apply[ing] the patient-specific rules repeatedly, automatically, and at the same time."**

14. "continuous assessment"

Plaintiff proposes, "assessment that is performed repeatedly and automatically according to time-driven or event-driven rules." Defendants propose, "assessment that is performed constantly 24 hours a day 7 days a week. For the reasons stated above (*see* s. III.B.13), the Court construes this term as: **"assessment that is performed repeatedly and automatically."**

15. "and in the event the patient-specific rule for the hospitalized patient has been contravened issue[ing] an alert from the remote command center"

Plaintiff consented to defendants proposed construction at the *Markman* hearing. This term is thus construed as: **"when a patient-specific rule has been contravened, issue [ing] an alert from the remote command center."**

For the foregoing reasons, the claims shall be construed as stated in the following Order.

ORDER

AND NOW, this 7th day of May, 2009, upon consideration of the parties' *Markman* briefs, their responses in opposition to *Markman* briefs, and after a hearing, it is ORDERED that the following claim constructions are adopted:

Term	Construction
"geographically dispersed"	"in separate geographic locations, either within a building or in different buildings"
"monitoring patient data elements of patients in a plurality of geographically dispersed ICUs"	"monitoring at the remote command center data elements of patients who are located in a plurality of geographically dispersed ICUs"
"remote command center"	"a dedicated location for monitoring and managing the care of hospitalized patients, which location is apart from the geographically dispersed ICUs"
"utilizing an output from the rules engine to determine if intervention is warranted"	"using information generated by the rules engine to determine if intervention is warranted"
"determin[ing] if intervention is warranted"	"determin[ing] if intervention is warranted"
"intervention"	"an action by a health care provider to manage the care of an individual patient"
"wherein the monitoring and determining if intervention is warranted for individual patients	"wherein the monitoring and determining if intervention is warranted for individual patients is

occurs in an automated fashion at the remote command center 24 hours per day 7 days per week"	computerized at a remote command center 24 hours per day, 7 days per week"
"applying a rules engine continuously to at least two patient data elements stored in the database"	"applying a rules engine repeatedly and automatically to at least two patient data elements stored in the database"
"database"	"an organized collection of electronic information"

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Term	**Construction**
"patient-specific rules"	"a rule tailored to the medical condition of the patient"
"establish[ing] patient-specific rules associated with each of the geographically dispersed hospitalized patients"	"establish[ing] patient-specific rules for each of the individual, geographically dispersed hospitalized patients"
"monitored data elements"	"the data elements obtained from monitoring the geographically dispersed hospitalized patients"
"access[ing] patient data elements indicative of a medical condition associated with each of the geographically dispersed hospitalized patients"	"accessing patient-specific data (other than monitored data elements) indicative of a medical condition associated with each of the geographically dispersed hospitalized patients"
"receiving at a remote command center monitored data elements from geographically dispersed hospitalized patients"	"receiving at a remote command center monitored data elements obtained from geographically dispersed hospitalized patients"
"apply[ing] the patient-specific rules continuously and simultaneously using a rules engine"	"apply[ing] the patient-specific rules repeatedly, automatically, and at the same time"
"continuous assessment"	"assessment that is performed repeatedly and automatically"
"and in the event the patient-specific rule for the hospitalized patient has been contravened issue[ing] an alert from the remote command center"	"when a patient-specific rule has been contravened, issue[ing] an alert from the remote command center"

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