

UNITED STATES DISTRICT COURT
DISTRICT OF CONNECTICUT

David A. Potts and Geomatrix, LLC,
Plaintiffs,

v.

Cur-Tech, LLC,
Defendant.

Civil No. 3:09cv65 (JBA)

February 14, 2011

CLAIM CONSTRUCTION OF DISPUTED TERMS IN U.S. PATENT NO. 7,374,670

In their Second Amended Complaint, filed August 14, 2009, Plaintiffs David Potts and Geomatrix, LLC allege that Defendant Cur-Tech, LLC has infringed U.S. Patent No. 7,374,670 (‘670 patent), issued to Mr. Potts and assigned in part to Geomatrix, through Cur-Tech’s marketing, sale, and commercial distribution of the Cur-Tech CTL System. The ‘670 patent, entitled “High Aspect Ratio Wastewater System,” describes a leaching conduit for receiving wastewater and effluent under aerobic conditions.

I. Background

Potts and Geomatrix claim that Cur-Tech’s CTL System, which utilizes “a high aspect ratio infiltration system including a channel in fluid communication with a U-shaped geonet” infringes Claims 6 and 12 of the ‘670 patent. (Second Am. Compl. [Doc. # 39] ¶¶ 10–12.) Claims 6 and 12 of the ‘670 patent read:

6. A leaching conduit comprising:

a channel;

a first pipe in fluid communication with the high aspect ratio channel; and
the channel comprising:

at least one first geonet of a first height, formed into a generally U-shaped configuration, with a bottom of the U laying generally parallel to the first pipe, and the at least first geonet in fluid communication with the first pipe;

at least one second geonet of a first height, formed into a generally U-shaped configuration, with a bottom of the U laying adjacent to bottom of the U of the at least one first geonet, and the at least one second geonet in fluid communication with the first pipe; and wherein the aspect ratio of each geonet is between about 96 and about 3.

...

12. The leaching conduit of claim 6, wherein each geonet comprises the material selected from the group consisting of an irregularly coiled stringy structure with one layer of an air-permeable sheeting; an irregularly coiled stringy structure contained between two layers of an air-permeable sheeting; crushed stone; pea stone; polystyrene aggregate incorporated into suitable netting; polystyrene aggregate incorporated into a suitable blanket; and a molded plastic three dimensional grid.

U.S. Patent No. 7,734,670 col. 16 ll. 10–28, 41–49. The claim construction dispute primarily concerns the interpretation of two terms: “geonet” and “high aspect ratio channel.”

II. Legal Standard

Claim construction is a matter of law, and the Court has the exclusive power to construe “the meaning of the language used in the patent claim.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977–79 (Fed. Cir. 1995), *aff’d* 517 U.S. 370 (1996). In the construction of patent claims, the words of a claim are typically given their “ordinary and customary meaning,” that is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005).

“Properly viewed, the ‘ordinary meaning’ of a claim term is its meaning to the ordinary artisan after reading the entire patent.” *Id.* at 1321. Accordingly, although claim construction is dependent on the language of the claims themselves, it requires reading that language “in view of the specification, of which they are a part.” *Pressure Products Med. Supplies, Inc. v. Greatbatch Ltd.*, 599 F.3d 1308, 1314 (Fed. Cir. 2010) (quoting *Phillips*, 415

F.3d at 1314–15). The specification from which a claim arose is “the best source for understanding a technical term” within that claim: “Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Phillips*, 415 F.3d at 1315 (quoting *Vitronics Corp. v. Conceptor, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). The correct claim construction “stays true to the claim language and most naturally aligns with the patent’s description of the invention.” *Id.* at 1316 (quoting *Reninshaw PLC v. Marposs Societa’ Per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)). This means that where the specification reveals “a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess,” that lexicography governs; and where the specification reveals “an intentional disclaimer, or disavowal, of claim scope by the inventor,” that intention in the specification similarly governs. *Id.*

Courts must, however, “avoid importing limitations from the specification into the claims,” and “keep in mind that the purposes of the specification are to teach and enable those of skill in the art to make and use the invention.” *Id.* at 1323. To that end, the Court must “determine whether a person of skill in the art would understand the embodiments [in the specification] to define the outer limits of the claim term or merely to be exemplary in nature,” rather than “either strictly limiting the scope of the claims to the embodiments disclosed in the specification or divorcing the claim language from the specification.” *Id.* at 1323–24. Ultimately, “there is no magic formula or catechism for conducting claim construction. Nor is the court barred from considering any particular sources or required to analyze sources in any specific sequence, as long as those sources are not used to contradict claim meaning that is unambiguous in light of the intrinsic evidence.” *Id.* at 1324.

III. Claim Construction

A. “Geonet”

The Parties’ primary disagreement concerns their proposed constructions of the term “geonet.” Plaintiffs interpret geonet, in the context of the `670 patent, as: “A filtering or capturing media, including but not limited to any of the examples list[ed] in claim 12 or at Col. 4, lns. 34, et seq. of the `670 patent, or Col. 9, Lns. 18, et. seq. of the `670 patent.” (Def.’s Claim Construction Br. [Doc. # 61] at 8; Pls.’ Claim Construction Br. [Doc. # 64] at 9.) Potts and Geomatrix rely primarily on the language of Claim 12, which they argue lists materials, all of which represent geonets, such that Claim 12 clarifies that a geonet may be comprised of any of the listed materials. (Pls.’ Br. at 9–11; Pls.’ Reply at 4.)

Cur-Tech, on the other hand, interprets geonet as “an irregularly coiled stringy structure contained between one or two layers of air-permeable sheeting, which layers may feel to the touch like thin felt, and which is commonly and generically called geotextile, consistent with the definition in the specification at Col. 4, lns. 44–48; Col. 9, lns. 59–64; Col. 10, lns. 34–35; Col. 11, lns. 22–25; Figs. 1–5, 11–12, 14–15, 18 and 19 and Col. 13, lns. 39–40.” (Def.’s Br. at 8–9; Pls.’ Br. at 9.) Cur-Tech argues that the `670 Patent repeats the above definition throughout the specification and refers to other filtering and capturing media, such as crushed stone or pea stone, polystyrene aggregate, or a molded three dimensional grid, as alternatives to rather than examples of geonet. (Def.’s Br. at 9–10; Def.’s Reply at 3–6.)

Claim 12 of the `670 patent states that “each geonet comprises the material selected from the group consisting of an irregularly coiled stringy structure with one layer of an air-permeable sheeting; an irregularly coiled stringy structure contained between two layers

of an air-permeable sheeting; crushed stone; pea stone; polystyrene aggregate incorporated into suitable netting; polystyrene aggregate incorporated into a suitable blanket; and a molded plastic three dimensional grid.” When viewed in isolation, this language would appear to suggest that geonet includes all of the above listed filtering materials. However, although claim construction must “stay[] true to the claim language,” the proper approach to claim construction does not “divorc[e] the claim language from the specification.” *Phillips*, 415 F.3d at 1316, 3123. Instead, the Court must read the claim language “in view of the specification of which [the claims] are a part.” *Pressure Products*, 599 F.3d at 1314, and insofar as “a person of skill in the art would understand the embodiments [in the specification] to define the outer limits” of the term geonet, the specification may restrict the broad language in Claim 12. *Phillips*, 415 F.3d at 1316, 1323–24; see *Scimed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1344 (Fed. Cir. 2001).

Although the Court must “avoid importing limitations from the specification into the claims,” *Phillips*, 415 F.3d at 1323, “[i]t is entirely proper to use the specification to interpret what the patentee meant by a word or phrase in the claim,” *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1433 (Fed. Cir. 1988). To the extent that language in the specification “sheds light on either the meaning of the term to the inventor, or the common meaning of the term to one of skill in the art,” it is properly used to assist the Court in interpreting disputed claim language. *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998). However, to the extent that the specification merely offers *recommended* rather than definitional properties of the claim terms, those properties or examples are not properly read into the claims as limitations. *N. Am. Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1347–48 (2d Cir. 2005) (holding

that the district court erred in importing “*recommended* dimensions” contained in the specification of the plastic bottle claimed in Reissue Patent No. 36,639 as limitations on the patent claims).

With this fine line between the appropriate interpretive use and the inappropriate limitative use of the specification in mind, Cur-Tech’s proposed definition of geonet as “an irregularly coiled stringy structure contained between one or two layers of air-permeable sheeting” is too restrictive. The `670 Patent specification states that the geonet is “*typically comprised of* an irregularly coiled stringy structure contained between one or two layers of air-permeable sheeting.” `670 Patent, col. 4, ll. 44–46 (emphasis added). It thereafter uses the “irregularly coiled stringy structure” as the geonet in figures throughout the specification. *See id.*, col. 9, ll. 59–64; col. 10, ll. 34–35; col. 11, ll. 22–25; col. 13, ll. 39–40; figs. 1–5, 11–12, 14–15, 18, 19. In light of the “typically comprised of” language and the non-restrictive use of “irregularly coiled stringy structure” in the specification figures of the `670 Patent, this language is not properly read in the `670 Patent claims as a limitation. *See N. Am. Container*, 415 F.3d at 1347–48.

Although the language “irregularly coiled stringy structure” is not properly imported from the `670 Patent specification as a definitive limit on the term geonet, it would be equally improper for the Court to “divorce” the `670 Patent claims from the specification and read the broad language of Claim 12 without the context of the specification. *See Phillips*, 415 F.3d at 1323–24. Potts’ and Geomatrix’s argument that a geonet, in the `670 Patent claims, includes all filtering and capturing media listed in Claim 12 “flies in the face” of the specification, *see Scimed Life Sys.*, 242 F.3d at 1343–44, where many of those media are listed as alternatives to the geonet rather than the geonet itself:

Other plastic products *which function similarly to a geonet* may be used, so long as there is a substantial void between top and bottom layers. For example, a molded plastic three dimensional grid may be used. . . . *The geonet may be replaced by granular media . . .*, such as crushed stone or pea stone, captured between two layers of air and water permeable sheeting . . . , such as a geotextile. *In another alternative*, polystyrene aggregate incorporated into suitable netting or blanket may be used.

`670 Patent, col. 7, ll. 54–63 (emphasis added). The `670 Patent refers to granular media as a replacement or substitution for the geonet throughout the specification. For example, the specification notes in Column 9 that “wherever in this patent application a geonet is referenced, that geonet may be replaced by a granular media,” *id.* col. 9, ll. 18–20, in Column 10 that “[a]ll the channels can also be made of crushed stone, or plastic pieces or other granular or permeable media in substitution for the geonet,” *id.* col. 10, ll. 11–14, in Column 11 that “the geonet layer . . . may be replaced with pea stone, crushed stone, plastic pieces or other granular or permeable media,” *id.* col. 11, ll. 59–61, and again in Column 12 that “the geonet can be substituted with other granular material,” *id.* col. 12, ll. 55–56.

In light of the description of plastic products such as a molded grid, and granular and aggregate materials as alternatives to the geonet throughout embodiments in the `670 Patent specification, those embodiments suggest that the outer limits of “geonet” do not reach so far as to categorically include all such materials. *See Phillips*, 415 F.3d at 1323–24. This does not import a limitation from the specification, but instead uses the context of the specification to shed light on the meaning of the term geonet and its usage by Potts in the `670 Patent as a whole. *See Comark*, 156 F.3d at 1187.

“Geonet” does not include within its purview all three–dimensional plastic grids and granular or aggregate filtering media, but instead includes only a smaller subset of materials

that fulfill the characteristics reflected in the `670 Patent specification. In addition to explaining that the geonet is “typically comprised of an irregularly coiled stringy structure,” Column 4 of the specification provides other examples of common commercially available geonets, including Enkadrain, Grasspave2, Gravelpave2, Rainstore2, Slopetrame2, Draincore2, Surefoot4, Rainstore3, and Advanedge flat pipe. `670 Patent, col. 4, ll. 34–44. These products share common characteristics: they are all relatively “flat” in that their length and width are significantly greater than their height; they are produced in “mat” or “roll” form; they are constructed of repetitive structural elements (“entangled filaments” in the case of Enkadrain and repetitive geometric structures with respect to the others) fused together over the course of the mat or roll; and the structural elements that comprise the mat or roll are designed and spaced such that the volume occupied by the product consists of mostly void or open space. As illustrative examples of the intended form of a geonet, these products, along with the “irregularly coiled stringy structure” description, roughly correlate with Figures 2 and 3 of the `670 Patent, which depict, respectively, a “perspective view of a geonet” and “a side view of the geonet,” and both reveal a mat-like structure with a repetitive framework of textured ridges or “irregularly coiled string plastic structure[s].” *Id.*, col. 4, ll. 42–51, figs. 2–3.

The specification adds that “[t]he low aspect channel . . . , comprising the geonet . . . , may have an estimated void volume of about 90%.” *Id.*, col. 4, ll. 51–53. Later in the specification, the `670 Patent reemphasizes that the vast majority of the geonet is made up of void space: “the conduit is filled either with a geonet or other medium thereby allowing a void space of about 95%.” *Id.*, col. 7, ll. 36–38. The specification twice offers solutions for avoiding the ingress of soil into that open space: (1) “Optionally, geotextile may be placed

at the opposing side of the vertical edges of the channel . . . , to stop potential ingress of soil,” *id.*, col. 4, ll. 58–60; and (2) “a geotextile shroud . . . may be omitted, and a filler medium such as, but not limited to stone, pebble may be used to prevent soil from entering the geonet,” *id.*, col. 6, ll. 26–28. During the course of the reexamination of the `670 Patent, Potts explains the importance of this void space to the geonet:

[I]t should be clear that a geonet allows water and air to travel generally freely through the geonet because of the void space in the geonet volume. The `670 patent teaches that a granular material such as crushed stone may have a void space of about 50%, and a geonet material comprising an irregularly coiled stringy structure between two layers of air-permeable sheeting, may have a void space of around 90 to 95% (see the `670 patent at column 1, lines 29–31, and column 7, lines 33–37). This ability of water and air to travel through the geonet volume is important because it facilitates aerobic conditions in the system, and at the surface interface between the geonet and the surrounding soil.

`670 Patent Amendment and Response in Reexamination.

These consistent depictions of geonet in the `670 Patent specification, coupled with Potts’ interpretation of geonet during the `670 Reexamination, reveal how one of skill in the art would understand the outer limits of the term as used in the `670 Patent. *See Phillips*, 415 F.3d at 1323–24; *Comark*, 156 F.3d at 1187. In order to maintain the “greater aerobic conditions” that the `670 Patent claims is an improvement on the prior art, the geonet consists of a series of interconnected elements (filaments, coiled stringy structures, geometric structures, or comparable units) that maintain a roughly 90% void space. The Court construes the term “geonet” accordingly: a series of repetitive elements that create a volume consisting of 90–95% void space. This construction of “geonet” conforms with the usage of the term throughout the `670 Patent specification, yet excludes from its purview granular media such as crushed stone or pea stone. As used consistently throughout the

specification, and explained above, these media are alternatives to the geonet, not a type of geonet. This construction, although it includes within its purview “an irregularly coiled stringy structure contained between two layers of an air-permeable sheeting,” is not limited to that specific description. It may include both “polystyrene aggregate incorporated into a suitable netting” or “polystyrene aggregate incorporated into a suitable blanket” as long as those compositions create a 90–95% void space through the use of interconnected elements. A “molded plastic three dimensional grid” may also be a geonet, however that phrase is so broad as to include potential forms and products that are not geonets because they do not share these characteristics. Certain products listed in the `670 Patent such as Grasspave2, Gravelpave2, or Rainstore2, among others, could be described as plastic three dimensional grids, but those products also comprise mats or rolls made of interconnected elements that maintain a roughly 90% void space; thus, they are geonets.

The above claim construction is reinforced by efforts to distinguish the claimed invention from the prior art, both in the `670 Patent and during the August 10, 2010 Markman Hearing before the Court. According to the `670 Patent, there is a need in the prior art for a system “that provides for greater aerobic conditions in leaching conduits, thereby allowing for greater processing of the wastewater prior and during absorption into the soil.” `670 Patent, col. 2, ll. 3–6. The sub-components of the geonet structure (the “irregularly coiled stringy structure” in Figure 16, to which Potts’ counsel was referring at oral argument), “permit[] the structure to hold its shape and allow fluid, effluent if you will, to pass through the geonet volume and to engage in an aerobic exchange permitting the effluent to be treated, decomposed and passed on into the soil.” (Markman Hr’g Tr.

[Doc. # 73] at 11:12–12:10.)¹ The porous nature of the geonet allows the fluid to drain through the channel and maintains aerobic conditions. Cur–Tech’s counsel agreed: “this aerobic react[ion], this exchange that occurs that’s within the channel that’s brought about by virtue of this geonet material. And so it suggests that the geonet material has to have certain properties or functions. One is that it be permeable. Two is that it create these air pockets or voids.” (*Id.* at 22:11–18.) By virtue of the interconnected structural elements that maintain a roughly 90% void, the geonet enables this aerobic reaction.

B. “High Aspect Ratio Channel”

The parties also disagree on the construction of the phrase “high aspect ratio channel” in Claim 6 of the `670 Patent. They agree that “high” describes an aspect ratio of “about 96 to 3” (Def.’s Br. at 3; Pls.’ Br. at 8), however they do not agree as to which

¹ In discussing the role of the geonet in the aerobic reaction, Potts’ counsel attempted to distinguish between the geonet and “the content of the geonet,” arguing that the term “geonet” referred to the volume of the channel itself, and the material that filled the channel (“the irregularly coiled stringy structure” in this example) is the “material that goes inside of the geonet.” (Markman Hr’g Tr. at 11:12–12:4.) The Court finds this attempted distinction unpersuasive. The `670 Patent makes no similar distinction, but instead refers, with respect to Figure 16 to the “irregularly coiled stringy structure . . . that make[s] up the geonet.” `670 Patent, col. 10, ll. 34–35. The difference in language between “make up the geonet” and “goes inside the geonet” is significant. As discussed above, the structural elements (“irregularly coiled stringy structures” here, and the interconnected geometric plastic structures in the products listed in the `670 Patent) “make up the geonet” in that they are the substance of the mat or roll that is the geonet. The geonet is not the volume; it is the mat or roll that is made up of interconnected structural elements and maintains a mostly void space that is inserted into the volume. The `670 Patent also explicitly distinguishes between the channel and the geonet itself, thereby defeating counsel’s conflation of the channel volume and the geonet: “After the channel . . . is dug, and *geonet . . . is placed in the channel*, then a perforated dosing pipe . . . may be located on top of the geonet.” *Id.*, col. 8, ll. 10–13 (emphasis added).

dimensional measurements are utilized in determining the “aspect ratio.” (See Pls.’ Br. at 6–9; Def.’s Br. at 15–17.)

The parties agree that the ratio is defined by height divided by width, and that the relevant height is the height of the channels that make up the wastewater system, but they disagree as to which dimension “width” properly refers. (*Compare* Def.’s Br. at 16–17, *with* Pls.’ Br. at 8.) Plaintiffs argue that the relevant width is that of the individual channels that make up the wastewater system as depicted in Figure 14 of the `670 Patent. (Pls.’ Br. at 8.) Cur-Tech agrees that the relevant width is that of the channel, but argues that the width must always be measured “perpendicular to the longitudinal axis” of the dosing pipe, such that in Figure 16 of the `670 Patent, the relevant width is that of the entire wastewater system (marked “W”) rather than the width of the individual channels. (Def.’s Br. at 16–17.)

The Court accepts Plaintiffs’ version of the relevant width measurement as it pertains to “high aspect ratio channel” and rejects Cur-Tech’s proposed definition. Viewing the `670 Patent as a whole, and reading “high aspect ratio channel” in light of the claims and specification, *see Phillips*, 415 F.3d at 1313, the relevant ratio utilized the width of the individual channel, not the length of the conduit as oriented perpendicular to the dosing pipe. The specification defines “aspect ratio” only once, and uses Figure 14 to demonstrate that the relevant height is that of the channel and the relevant width is that of the channel when viewing the channel from its narrowest side. `670 Patent, col. 9, ll. 27–34, fig. 14. The specification contains no other reference to “width” as it pertains to the high aspect ratio.

Cur-Tech relies on the `670 Patent’s use of “width” in connection with Figure 16 in arguing that the width of the entire system, as opposed to that of the individual channel, is determinative of the aspect ratio. (Def.’s Br. at 16–17.) However, such an approach

