IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MATTERPORT, INC., Plaintiff, v. GEOCV, INC, Defendant.	Civil Action No. 18-1569-RGA

MEMORANDUM OPINION

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January 3, 2020

ANDREWS, UNITED STATES DISTRICT JUDGE:

Before the Court is the issue of claim construction of various terms in U.S. Patent Nos. 8,879,828 ("the '828 patent"), 8,861,840 ("the '840 patent"), 9,165,410 ("the '410 Patent"), 9,171,405 ("the '405 Patent"), 9,953,111 ("the '111 Patent"), and 10,030,979 ("the '979 Patent"). I have considered the Parties' Joint Claim Construction Brief. (D.I. 49). I heard oral argument on January 2, 2020. (D.I. 51).

I. BACKGROUND

The '840 and '405 Patents describe and claim technology for building three-dimensional scenes that represent a physical space. (D.I. 46, Ex. C at 1:49-2:30). The claimed techniques involve capturing three-dimensional image data from multiple locations and aligning that data into a single three-dimensional scene. (*Id.*) This technology might be used, for example, by someone who uses a 3D camera to collect 3D data of the interior of a house or apartment. The '840 and '405 Patents aim at solving a problem that arises when the image capture process leads to errors. The parties agree that these errors show up in the form of "holes," missing or poor-quality data that remains after three-dimensional image data has been collected.

The '410 patent describes and claims a system and techniques for the "capture and alignment of multiple 3D scenes." (D.I. 46, Ex. D at 1:55-56). Data comprising 3D scenes captured at different locations are aligned into a composite 3D scene. (*Id.* at 2:1-12, 6:20-23). The independent claims of the '410 Patent each contain the term "spatial distortion" and identify the term as something "applied" to sets of three-dimensional data; a transformation that results in an aligned 3D scene. For example, Claim 1 talks about "receiving… two or more sets of three-dimensional data respectively comprising points in a three-dimensional coordinate space" and

then "determining … a spatial distortion to be applied to at least one set of the two or more sets…." (*Id.* at 14:3-5;13-15).

The '111 patent deals with data that could lead to an automated generation of 3D models of real-world locations such as houses, apartments, and office spaces. For example, flat surfaces such as walls and floors are distinctive and could be identified as such. Missing data or "holes" associated with flat surfaces can be generated to fill in the missing 3D data. *See generally*, D.I. 46, Ex. F at 3:9-28.

II. LEGAL STANDARD

"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." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal quotation marks omitted). "'[T]here is no magic formula or catechism for conducting claim construction.' Instead, the court is free to attach the appropriate weight to appropriate sources 'in light of the statutes and policies that inform patent law.'" *SoftView LLC v. Apple Inc.*, 2013 WL 4758195, at *1 (D. Del. Sept. 4, 2013) (quoting *Phillips*, 415 F.3d at 1324) (alteration in original). When construing patent claims, a court considers the literal language of the claim, the patent specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977–80 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). Of these sources, "the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Phillips*, 415 F.3d at 1315 (internal quotation marks omitted).

"[T]he words of a claim are generally given their ordinary and customary meaning. . . . [Which 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, i.e., as of the effective filing date of the patent application."

Id. at 1312–13 (citations and internal quotation marks omitted). "[T]he ordinary meaning of a claim term is its meaning to [an] ordinary artisan after reading the entire patent." *Id.* at 1321 (internal quotation marks omitted). "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 accepted meaning of commonly understood words." *Id.* at 1314.

When a court relies solely upon the intrinsic evidence—the patent claims, the specification, and the prosecution history—the court's construction is a determination of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). The court may also make factual findings based upon consideration of extrinsic evidence, which "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Phillips*, 415 F.3d at 1317–19 (internal quotation marks omitted). Extrinsic evidence may assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art, and how the invention works. *Id.* Extrinsic evidence, however, is less reliable and less useful in claim construction than the patent and its prosecution history. *Id.*

"A claim construction is persuasive, not because it follows a certain rule, but because it defines terms in the context of the whole patent." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that "a claim interpretation that would exclude the inventor's device is rarely the correct interpretation." *Osram GMBH v. Int'l Trade Comm'n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (citation and internal quotation marks omitted).

III. CONSTRUCTION OF AGREED-UPON TERMS

I adopt the following agreed-upon constructions:

Claim Term	Construction
"three dimensional data" ('828 Patent, Claims 1, 3, 5, 14 and 15; '404 Patent, Claims 1, 2, 3, 4, 6, 7, 9, 12, 13, 14, 15, 16, 17 and 21; '840 Patent, Claims 1, 2, 3, 14, 15, 16 and 22; '410 Patent, Claims 1 and 26)	"Data that represents three dimensional information about the scene"
"hole" ('405 Patent, Claims 1, 3, 4, 5, 6, 7, 8, 9, 12, 14, 15, 16, 17, 18 and 21; '840 Patent, Claims 1, 2, 3, 4, 8, 14, 15, 16, 19 and 22)	"Holes are inclusive of areas not seen by the 3D capture device at any point in the capture process. Holes are likewise inclusive of areas present in captured scene data, but that are of insufficient resolution or quality for a particular purpose."
"3D data" ('111 Patent, Claim 15; '979 Patent, Claim 10)	"Data that represents three dimensional information about the scene"
"waypoint location" ('979 Patent, Claims 10, 11 and 17)	"A location within the 3D model where a virtual camera view of the 3D model stops during navigation through the 3D model"
"determining... a virtual navigation path..." ('979 Patent, Claim 10)	"Determining a route to navigate between two locations in a 3D model that includes at least one waypoint"

IV. CONSTRUCTION OF DISPUTED TERMS

1. "filling [a/the] hole" ('405 Patent, Claims 1, 5, 9, 12, 16, 18 and 21; '840 Patent, Claims 1, 4, 8, 14, 19 and 22)

    a. *Plaintiff's proposed construction*: No construction needed in light of the agreed-upon construction of "hole." Alternative: plain and ordinary.

    b. *Defendants' proposed construction*: "Adding new 3D data corresponding to the identified hole, taking into account the area or boundary of the hole."

    c. *Court's construction*: Plain and ordinary meaning.

2. "displaying, by the system, the three dimensional visualization on a graphics display device prior to filling the hole" ('405 Patent, Claim 5); "displaying the hole on a graphics display device prior to filling the hole," ('840 Patent, Claim 4)

    a. *Plaintiff's proposed construction*: No construction needed in light of the agreed-upon construction of "hole." Alternative: plain and ordinary.

    b. *Defendants' proposed construction*: "Distinctly highlighting the identified hole"

    c. *Court's construction*: Plain and ordinary meaning.

3. "identifying a hole in the three dimensional visualization where three dimensional data is absent or of poor quality" ('405 Patent, Claim 21)

    a. *Plaintiff's proposed construction*: No construction needed in light of the agreed-upon construction of "hole." Alternative: plain and ordinary.

    b. *Defendants' proposed construction*: "Distinctly marking an area or boundary of a hole as a whole."

    c. *Court's construction*: Plain and ordinary meaning.

4. "Generating other 3D data..." ('111 Patent, Claim 15)

    a. *Plaintiff's proposed construction*: No construction needed in light of the agreed-upon construction of "3D data." Alternative: plain and ordinary.

    b. *Defendants' proposed construction*: "Generating other 3D data for filling a hole based on the understanding that the hole is a flat surface of the architectural element for the 3D model."

    c. *Court's construction*: Plain and ordinary meaning.

Claim terms "are generally given their ordinary and customary meaning" – how "a person of ordinary skill in the art in question at the time of the invention" would have understood the term. *Phillips*, 415 F.3d at 1313. There are two exceptions to this practice: "1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution." *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

Disavowal "requires that the specification or prosecution history makes clear that the invention does not include a particular feature or is clearly limited to a particular form of the invention." *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1372 (Fed. Cir. 2014) (internal citations omitted). An explicit re-definition is not necessary. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1344 (Fed. Cir. 2001). While courts must read claims in view of the specification, they may not simply import limitations from the

specification into the claims. *Prima Tek II, LLC v. Polypap, SARL*, 318 F.3d 1143, 1148 (Fed. Cir. 2003). "There is sometimes a fine line between reading a claim in light of the specification, and reading a limitation into the claim from the specification." *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186-87 (Fed. Cir. 1998).

The Federal Circuit has found disavowal where there were "clear, repeated, and consistent statements in the specification." *SkinMedia, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1203 (Fed. Cir. 2013). Disavowal also applies when the specification includes language such as "the present invention requires…" or "the present invention is…" or "all embodiments of the present invention are…." *Hill-Rom Servs., Inc.*, 755 F.3d at 1372.

For each of these four disputed terms, there is no lexicography or disavowal of claim scope to suggest that the claims should be limited to embodiments disclosed in the specification. I will construe each of the above terms to have its plain and ordinary meaning. Defendant's proposed constructions are rejected.

5. "spatial distortion" ('410 Patent, Claims 1, 2, 4, 9, 11, 12, 14, 15, 22, 23, 24, 25, 26, 27, 28, 32, 34, 35)

   a. *Plaintiff's proposed construction*: "A movement of points within the 3D data."

   b. *Defendants' proposed construction*: "A non-rigid alignment of 3D scenes."

   c. *Court's construction*: "A movement of points within the 3D data."

The '410 patent describes and claims a system and techniques for the "capture and alignment of multiple 3D scenes." (D.I. 46, Ex. D at 1:55-56). Data comprising 3D scenes captured at different locations are aligned into a composite 3D scene. (*Id.* at 2:1-12, 6:20-23).

The independent claims of the '410 Patent each contain the term "spatial distortion" and identify the term as something "applied" to sets of three-dimensional data; a transformation that results in an aligned three-dimensional scene. For example, Claim 1 requires "receiving… two or

more sets of three-dimensional data respectively comprising points in a three-dimensional coordinate space" and then "determining... a spatial distortion to be applied to at least one set of the two or more sets...." (*Id.* at 14:3-14).

Plaintiff's position is that neither the patent nor its claims exclude a "rigid" alignment. (D.I. 49 at 25). Plaintiff asserts that claim 1 is broader and can result in both rigid and non-rigid alignments. (*Id.* at 26). Plaintiff also argues that whereas the original claims of the '410 patent limited the claims to "a non-rigid spatial distortion," the claims were deliberately amended to delete the restriction that the spatial distortion be "non-rigid." (*Id.*; D.I. 46, Ex. H at 2).

Defendant argues that the applicant deleted the term "non-rigid" as a modifier for spatial distortion but pointed out that spatial distortion "is effectively a performance and/or generation of a non-rigid alignment." (D.I. 49 at 27). Defendant states, "Rigid alignment could also be treated as movement of points within the 3D data. For example, all the points would be moved rigidly, preserving their relative position to each other." (*Id.* at 25). "The distinction in the patent between rigid and non-rigid alignment should be preserved in claim construction." (*Id.*).

The specification describes a technique or means that can be used to achieve an alignment, rather than the alignment itself. I do not find support in the specification for a rigid or non-rigid limitation on the means of achieving this alignment. Thus, I find that the specification supports construction of the term "spatial distortion" as "a movement of points within the 3D data." This construction does not by itself limit whether the movement of points involves a rigid or non-rigid alignment process. Since "spatial distortion" refers to the means of achieving an alignment, any distinction between a rigid and non-rigid alignment process or end result as described in the patent claims (e.g., claims 10, 23, 25, 33) is maintained.

IV. CONCLUSION

Within five days the parties shall submit a proposed order consistent with this Memorandum Opinion suitable for submission to the jury.