

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

TECHNO VIEW IP, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 17-386-CFC-CJB
	)	
FACEBOOK TECHNOLOGIES, LLC and	)	
FACEBOOK, INC.,	)	
	)	
Defendants.	)	

**REPORT AND RECOMMENDATION**

In this action filed by Plaintiff Techno View IP, Inc. (“Plaintiff”) against Facebook Technologies, LLC and Facebook, Inc. (collectively, “Defendants”), Plaintiff alleges infringement of United States Patent Nos. 7,666,096 (the “096 patent”) and 8,206,218 (the “218 patent”). Presently before the Court is the matter of claim construction. The Court recommends that the District Court adopt the constructions as set forth below.

**I. BACKGROUND AND STANDARD OF REVIEW**

The Court hereby incorporates by reference the summary of the factual and procedural background of this matter set out in its August 15, 2018 Report and Recommendation (“August 15 R&R”). (D.I. 74 at 1-3) It additionally incorporates by reference the legal principles regarding claim construction set out in the August 15 R&R. (*Id.* at 3-5)

**II. DISCUSSION**

The parties had disputes regarding eight terms or sets of terms (hereafter, “terms”). The August 15 R&R addressed the first four terms. On August 30, 2018, the Court issued a Report and Recommendation that addressed terms five and six. (D.I. 76) The final two terms are addressed herein.

**A. The various “coordinates” terms**

Claims 1, 4, 5, 8, 12 and 16 of the '096 patent and claims 1, 3, 4, 5, 7, 9, 10, 13 and 14 of the '218 patent contain various “coordinates” terms—specifically, “spatial coordinates,” “spatial coordinates (x,y,x),” “position coordinates” and “coordinates of [a/the] . . . view position.”<sup>1</sup>

Claims 7 and 9 of the '218 patent are exemplary with respect to usage of these terms, reproduced below:

7. A method in a videogame system for displaying three-dimensional images, comprising the computer implemented steps of:  
providing first and second buffers;  
calculating first *position coordinates* of a first eye view;  
storing a first eye view image captured virtually from the calculated first position of the first eye view of a virtual object in the videogame into the first buffer;  
calculating, with a processor of the videogame system, second *spatial coordinates* of a second eye view of the virtual object in the videogame in three dimensional space by coordinate transformation equations using the calculated first *position coordinates* of the first eye view and the position of the virtual object in the videogame;  
determining a second eye view image of the virtual object based on the calculated second *spatial coordinates*;  
storing the second eye view image in the second buffer; and  
outputting the first eye view image from the first buffer and the second eye view image from the second buffer to a display to provide a three dimensional perspective of the virtual object from the videogame system to a user.

('218 patent, col. 14:18-38 (emphasis added))

9. The method according to claim 7, wherein calculating the second *spatial coordinates* comprises calculating the x and z coordinates only so that there is no deviation in the height of the second eye view of the virtual object with respect to the first eye view of the virtual object.

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<sup>1</sup> There are no coordinates terms found in the actual text of claims 8, 12 and 16 of the '096 patent, but both parties assert that the coordinates terms relate to those claims too. (D.I. 52 at ii; D.I. 53 at 11)

(*Id.*, col. 14:43-47 (emphasis added))

According to Defendants, in each of the claims at issue, the various coordinates terms are referring to the coordinates of the second camera. (D.I. 73 (hereinafter, “Tr.”) at 109) With respect to the '096 patent, that seems correct, as all of the claims at issue do appear focused on calculating the coordinates of a second camera view position (sometimes by calculating some other set of coordinates), as set out below:

Claim 1: “wherein when the image is in a three-dimensional format, calculating the coordinates of a second view position of the image[,]” ('096 patent, col. 13:47-49);

Claim 4: “wherein calculating the coordinates of the second view position comprises calculating the coordinates of a right eye camera view position[,]” (*id.*, col. 13:63-65);

Claim 5: “wherein calculating the coordinates of the second view position comprises obtaining spatial coordinates (x,y,z) by coordinate transformation[,]” (*id.*, cols. 13:66-14:2);

Claim 8: “calculating a second camera position view image from the videogame system[,]” (*id.*, col. 14:26-27);

Claim 12: “wherein calculating a second camera position view image comprises determining a first virtual camera position . . . .[,]” (*id.*, col. 14:44-45);

Claim 16: “calculating a second camera position view image from the videogame system[,]” (*id.*, col. 16:3-4).

Defendants’ assertion appears mostly true for the claims at issue in the '218 patent as well, although some claims also include reference to calculating first position coordinates of a first eye view, and claim 13 is directed to “getting coordinates of a new perspective” of the virtual object.<sup>2</sup>

The pertinent portions of these claims from the '218 patent are set out below:

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<sup>2</sup> That said, claim 13 depends from claim 7, and thus one following the method of claim 13 would still be calculating first position coordinates of a first eye view and second

Claim 1: “calculating first position coordinates of a first eye view . . . calculating, with a processor of the videogame system, second position coordinates of a second eye view of the object in three dimensional space using the calculated first position coordinates of the first eye view[,]” (’218 patent, col. 13:48-55);

Claim 3: “wherein calculating the second position coordinates comprises calculating the x and z coordinates of the second eye view[,]” (*id.*, col. 14:1-3);

Claim 4: “wherein calculating the second position coordinates of the second view image comprises calculating the coordinates of a right eye camera view position[,]” (*id.*, col. 14:6-9);

Claim 5: “wherein calculating the second position coordinates of the second eye view comprises obtaining spatial coordinates by coordinate transformation equations given the location of a first virtual camera corresponding to the first eye view[,]” (*id.*, col. 14:10-14);

Claim 7: “calculating first position coordinates of a first eye view . . . calculating, with a processor of the videogame system, second spatial coordinates of a second eye view . . .[,]” (*id.*, col. 14:22-27);

Claim 9: “wherein calculating the second spatial coordinates comprises calculating the x and z coordinates . . .[,]” (*id.*, col. 14:43-45);

Claim 10: “wherein calculating the second spatial coordinates of the second view image of the virtual object comprises calculating the spatial coordinates of a right eye camera view position[,]” (*id.*, col. 14:48-51);

Claim 13: “[t]he method according to claim 7, further comprising . . . getting coordinates of a new perspective of the virtual object . . .[,]” (*id.*, col. 14:63-64);

Claim 14: “wherein the calculation of the second spatial coordinates of the second eye view comprises placing the second eye view at a virtual position that is 6.5 to 7.0 cm apart from the

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spatial coordinates of a second eye view of the virtual object. (’218 patent, col. 14:21, 27-28, 59, 63-64)

calculated portion coordinates of the first eye view[.]” (*id.*, cols. 14:66-15:3).

The Court now turns to the parties’ current competing proposed constructions for the various “coordinates” terms. They are as follows:

<b>Term</b>	<b>Plaintiff’s Construction</b>	<b>Defendants’ Construction</b>
coordinates terms	the set(s) of values calculated for each claimed coordinate type (“spatial,” “position,” “view position,” etc.)	the point(s) in space calculated for each claimed coordinate type (“spatial,” “position,” “view position,” etc.)

(June 18 e-mail) The parties’ dispute with respect to the “coordinates” terms boils down to whether each claimed coordinate type refers to set(s) of values, or to point(s) in space. (*See Tr.* at 108-09)

Defendants take the latter view. And while their original proposed construction reflected that the coordinate terms should be construed to mean “[p]oints in space *that are located by their positions in relation to intersecting x, y, and z axes*”—in other words, limiting the term to coordinates in a Cartesian coordinate system that take the form of (x, y) for two dimensions and (x, y, z) for 3 dimensions, (D.I. 53 at 11-12 (emphasis added))—their revised proposed construction is “not specifically tied to [C]artesian coordinates[.]” (*Tr.* at 110; *see also id.* at 109).<sup>3</sup>

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<sup>3</sup> Defendants explained the reason why they altered their proposed construction. They noted that Plaintiff’s originally proposed construction for the coordinates terms was “[c]oordinates are the set of values in an (x, y, z) coordinate system.” (D.I. 52 at 10-11; *see also* D.I. 53 at 12 (Defendants stating in their opening brief that as for the term “coordinates” itself, “the parties do not appear to have any material dispute. The term refers to Cartesian coordinates . . . .”)) But then, after seeing that Plaintiff thereafter seemed to have second thoughts about proffering a construction that included “strict[.]” reference to “cartesian coordinates[.]” Defendants simply left out “XYZ from [their own prior] proposal for a broader definition of points in space[.]” (*Tr.* at 109-10) Defendants suggest this new compromise should be

Plaintiff, for its part, asserts that the various coordinates terms represent a series of values, and not necessarily only just points in space. (D.I. 52 at 10-11; Tr. at 106) Plaintiff's problem with limiting the construction to just points in space flows from its assertion that the claims rely on the coordinates terms "to describe much more than a singular point in space, but a set of values . . . that may include . . . linear and rotational components as well." (Tr. at 104)

The decision here was difficult, as the material relating to the "coordinates" terms is complex and the parties' arguments were not always easy to understand. In the Court's view, however, Defendants' position seems the better one. It so concludes for a few reasons.

First, Defendants convincingly pointed out that every example disclosed in the specification regarding how the claimed "coordinates" are obtained make reference to the use of "XYZ-type of coordinates"—i.e., "points in space." (Tr. at 109; *see also id.* at 114; D.I. 57 at 9-10 & n.5 (Defendants contending that "the multitude of examples of coordinates set forth in the specification are provided in Cartesian (x, y, z) format")) For example, the Abstracts of the patents explain that "[t]he [claimed 3D videogame] system allows handling the information of data associated to the xyz coordinates of the object's image in real-time[.]" ('096 patent at Abstract; '218 patent at Abstract; *see also, e.g.*, '096 patent, FIG. 8; cols. 4:6-7; 4:40; 12:17-18; 12:49, 12:54-56; 12:57-59; 12:63-64; 13:16, 13:18-19)

Second, even though the coordinates terms use "slightly different terminology[.]" they do all seem to be referring to the same thing—a set of points within a coordinate system. (D.I. 53

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embraced by both sides, and they argue that Plaintiff's current proposal ("set(s) of values") is ambiguous and unhelpful. (*Id.* at 109 (Defendants' counsel asserting of Plaintiff's construction: "We don't actually know what that means."))

at 12-13; *see also* D.I. 57 at 10; Tr. at 108) And as Defendants noted, there *are* circumstances where a patentee can use differently-worded terms interchangeably. In *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322 (Fed. Cir. 2009), for example, the Federal Circuit concluded that the district court correctly construed the terms “graft,” “graft structure,” “bifurcated base structure,” and “bifurcated base graft structure” to have the same meaning, where they were “used interchangeably in the specification and the claims[.]” *Edwards Lifesciences*, 582 F.3d at 1328. By way of example, here Defendants point to claim 7 of the '218 patent (where the method for displaying three-dimensional images utilizes a computer to calculate the “first *position coordinates* of a first eye view” and “second *spatial coordinates* of a second eye view”) as an instance where slightly different terms seem to be used to refer to the same thing. ('218 patent, col. 14:18-38 (emphasis added) (*cited in* D.I. 53 at 12)) As Defendants asserted during oral argument, “[i]t’s like a big circle. They are all used to comprise the other thing, so they all seem to be used interchangeably.” (Tr. at 113-14)

Third, the Court did not find Plaintiff’s arguments to the contrary to be persuasive. The Court takes up those arguments in detail below.

One of Plaintiff’s arguments was that the following portion of the specification supports its construction, in that it shows how the intrinsic record calls out coordinate information that may not be encompassed by a point in space, (D.I. 59 at 18):

The *angle* between the axis and the vector joining the primary camera with the objective is created.  
The quadrant to which it belongs for the application of special considerations in the *angle’s calculation* is classified by an inverse tangent function.  
New *coordinates are obtained, rotating the whole coordinate system* from its axis in the same *angle between the axis and the vector*, a new coordinate system is obtained in which the object is

placed on the 'z' axis and the primary camera will remain at the origin of the new coordinate system.

('096 patent, col. 13:1-10 (emphasis added by Plaintiff)) According to Plaintiff, Defendants' proposed construction, in limiting the coordinates to being points in space, fails to supply "any angular or directional information" needed to identify the location of the object as well as the object's directional orientation. (D.I. 59 at 17-18) However, after re-reading this paragraph repeatedly, it just is not clear to the Court that the paragraph's use of the term "coordinate" or "coordinates" is necessarily meant to evoke the idea that those terms should include a reference to angular or directional information. And Plaintiff did not sufficiently explain to the Court why this was so. Moreover, immediately after the passage above, the specification continues:

The coordinates of the secondary camera are obtained by placing it in the human eyes' average distance position[.]  
These coordinates are rotated in the same initial angle[.]  
The "x" and "z" offsets are added, which were originally subtracted to take the primary camera to the origin[.]  
*Finally, these two new  $X_s$   $Y_s$   $Z_s$  coordinates* are assigned to the secondary camera and the  $y_p$  coordinate is maintained, which determines the height for the same value of a *final coordinates point* ( $X_s$ ,  $Y_p$ ,  $Z_s$ ) to be assigned to the secondary camera.

('096 patent, col. 13:11-20 (emphasis added)) This paragraph much more clearly does seem to associate the term "coordinates" with a point in space on the x, y, z axis. Thus, with the former paragraph not moving the ball much at all as to this issue, and the latter paragraph supporting Defendants' position, in the end, this portion of the specification was not helpful to Plaintiff.

Another of Plaintiff's arguments was that the specification referenced certain "vectorial coordinates" which may be used as the "coordinates of [a/the] . . . view position." (D.I. 52 at 13) Following the printing of code labeled "[m]odifications to xyz camera vector," the specification explains that:



Thus, a pair of buffers corresponding to the left eye and right eye are created, which, when evaluated in the game loop get the *vectorial coordinates* corresponding to the visualization of the right camera and the left camera (complement calculated with the SETXYZTDV function) by means of the usual coordinate transform equations.

('096 patent, col. 11:22-42 (emphasis added)) Plaintiff then argues that such vectorial coordinates are expressed “in one way as [a particular formula that must be distinguished from] the Cartesian coordinates (x, y, z).” (D.I. 52 at 13) However, in support of this assertion (i.e., that vectorial coordinates are not associated with points in space), Plaintiff cites only to Figure 3 of the '218 patent; Figure 3, in turn, shows three examples of x, y, z coordinates (and does not reference the particular equation cited by Plaintiff). (*Id.*; '218 patent, FIG. 3; D.I. 57 at 9 & n.4) Thus, this line of argument was not helpful for Plaintiff either.

Another of Plaintiff's arguments was that “spatial coordinates” utilize 3D characteristics that may include rotational components, and that may be computed from “coordinate transformation equations’ with angular components.” (Plaintiff's Markman Presentation, Slide 53) Plaintiff cites in support to a portion of the specification explaining that “[a]n additional 3D modeling and animation characteristic is added to the previous programs by means of the coordinate transformation equations, namely:

$$x=x' \cos \phi -y' \sin \phi$$

$$y=x' \sin \phi + y' \cos \phi[.]”$$

('096 patent, col. 12:29-34) As an initial matter, it is not clear to the Court how the cited portion of the patent supports Plaintiff's position (i.e., that spatial coordinates may include rotational components), and Plaintiff did not cite to any supporting materials that would help make this clear. Furthermore, as Defendants' counsel pointed out, the specification seems to go on to

explain that these coordinate transformation equations are used to determine an XYZ coordinate. (Tr. at 110-11) That is, after providing the equations, the patentee explains that the exact position is calculated for a second camera directly linked to the first camera, and that subsequently two simultaneous images are obtained from different perspectives which simulates a person's stereoscopic visual perspective. ('096 patent, col. 12:35-40) The coordinate transformation equations are used to reposition the first camera, second camera and object in the proper positions. (*Id.*, col. 12:35-47) The specification explains that seven parameters need to be known (xyz coordinates of the first camera, the equivalent distance to the average separation of the eyes, and the three coordinates of the object's position when observed by the cameras) and "[t]he output parameters will be coordinates of the secondary camera observing the same object[], i.e., (X<sub>s</sub>, Y<sub>s</sub>, Z<sub>s</sub>)," obtained following several steps set out in the patent. (*Id.*, col. 12:47-56; *see also id.*, col. 13:16-20)<sup>4</sup>

For these reasons, the Court recommends that the various coordinates terms be construed to mean "the point(s) in space calculated for each claimed coordinate type ('spatial,' 'position,' 'view position,' etc.)."

- B. "calculating, with a processor of the videogame system, second position coordinates of a second eye view of the object in three dimensional space using the calculated first position coordinates of the first eye view" and "calculating, with a processor of the videogame system, second spatial coordinates of a second eye view of the virtual object in the videogame in three dimensional space by coordinate transformation equations using the calculated first position coordinates of the first eye view and the position of the virtual object in the videogame"**

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<sup>4</sup> All this said, and though the Court's construction of these coordinates terms will be that they all refer to "point(s) in space," even Defendants' counsel noted the parties have not "fully briefed positions on the purported differences between these different" coordinates terms. (Tr. at 113) The Court leaves open the possibility that further clarifying constructions of some or all of the coordinates terms would be needed in the future.

These terms (the “with a processor” terms) are found in claims 1 and 7 of the '218 patent.

Claim 7 is reproduced above, and claim 1 is reproduced below:

1. A method in a videogame system for displaying three-dimensional images, comprising the computer implemented steps of:  
 providing left and right backbuffers;  
 calculating first position coordinates of a first eye view;  
 storing a first eye view image captured virtually from the calculated first position coordinates of the first eye view of an object in the videogame into the left backbuffer;  
*calculating, with a processor of the videogame system, second position coordinates of a second eye view of the object in three dimensional space using the calculated first position coordinates of the first eye view;*  
 determining a second eye view image of the object captured virtually from the calculated second position coordinates of the second eye view;  
 storing the second eye view image in the right backbuffer; and  
 displaying the first eye view image and the second eye view image to the user to provide a three dimensional perspective of the object from the videogame system to a user.

(’218 patent, col. 13:44-64 (emphasis added)) The parties’ disputes regarding these terms include: (1) whether the terms are means-plus-function limitations under 35 U.S.C. § 112, ¶ 6 (“Section 112, paragraph 6”); and (2) if they are, the appropriate construction for these terms. (D.I. 52 at 18-20; D.I. 53 at 15; D.I. 57 at 12) The parties’ current competing proposed constructions for the “with a processor” terms are set out in the chart below:

Term	Plaintiff’s Construction	Defendants’ Construction
“calculating, with a processor of the videogame system, second position coordinates of a second eye view of the object in three dimensional space using the calculated first position coordinates of the first eye view” (claim 1)	The claim limitations do not recite a “means plus function” claim limitation.  If the Court finds that a “means” limitation is invoked, Plaintiff proposes the following constructions: <u>Claim 1 — Structure</u>	The claim limitations are subject to means plus function under applicable law.  <u>Structure:</u> processor employing the algorithm ‘SETXYZTDV()’ as

<p>“calculating, with a processor of the videogame system, second spatial coordinates of a second eye view of the virtual object in the videogame in three dimensional space by coordinate transformation equations using the calculated first position coordinates of the first eye view and the position of the virtual object in the videogame” (claim 7)</p>	<p>A videogame system for displaying three-dimensional images, with a processor of the videogame system that is capable of calculating coordinate equations at least by means of the usual coordinate transform equations. (See '218 patent, claim 1, col. 13:44-55; see also col. 11:46-47)</p> <p><u>Claim 1 — Function</u> Using a videogame system processor to calculate second position coordinates of a second eye view of an object in three-dimensional space using the calculated first position coordinates of the first eye view of the object in three-dimensional space.</p> <p><u>Claim 7 — Structure</u> A videogame system for displaying three-dimensional images, with a processor of the videogame system that is capable of calculating coordinate equations at least by means of the usual coordinate transform equations. (See '218 patent, claim 7, col. 14:18-31; see also col. 11:46-47)</p> <p><u>Claim 7 — Function</u> Using a videogame system processor to calculate second spatial coordinates of a second eye view of a virtual object in the videogame in three-dimensional space by coordinate transformation equations using the calculated</p>	<p>disclosed in columns 12:17-13:25.</p> <p><u>Function (claim 1):</u> calculating second position coordinates of a second eye view of the object in three dimensional space using the calculated first position coordinates of the first eye view</p> <p><u>Function (claim 7):</u> calculating second spatial coordinates of a second eye view of the virtual object in the videogame in three dimensional space by coordinate transformation equations using the calculated first position coordinates of the first eye view and the position of the virtual object in the videogame</p>
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	first position coordinates of the first eye view and the position of the virtual object in the videogame	
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(D.I. 52 at 17-18; D.I. 53 at 15; D.I. 59 at 20)

Claims 1 and 7 are both method claims. Section 112, paragraph 6 provided as follows:

An element in a claim for a combination may be expressed as a means or *step for performing a specified function without the recital of structure, material, or acts in support thereof*, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112, ¶ 6 (emphasis added). The Federal Circuit has found that this provision should be interpreted such that the word “step” applies for process claims and that the term “acts” refers to the implementation of the steps; the word “means,” on the other hand, refers to apparatus claims that are implemented by structures or materials. *O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576, 1582-83 (Fed. Cir. 1997). In other words, “means-plus-function limitations are found in apparatus claims, whereas step-plus-function limitations are found in method claims.” *Dynamic Dig. Depth Research Pty. Ltd. v. LG Elecs., Inc.*, Case No. CV 15-5578-GW(Ex), 2016 WL 7444569, at \*11 (C.D. Cal. Nov. 7, 2016); *see also Free Stream Media Corp. v. Alphonso Inc.*, Case No. 2:15-CV-1725-RWS, 2017 WL 1165578, at \*31 (E.D. Tex. Mar. 29, 2017) (“Claim 14 is a method claim, which requires step-plus-function analysis.”).

On the current record, the Court is not in a position to resolve the parties’ disputes with respect to this term. The Court’s difficulty in deciding the parties’ dispute is that Defendants argued that this term should be construed as a means-plus-function limitation with a corresponding structure set out in the specification—despite the fact that the term is included in method claims. Accordingly, it appears that the similar-and-yet-different step-plus-function

analysis should be employed. As the Court will explain below, the step-plus-function analysis is complex, and as a result, the Court would benefit from further guidance from the parties on the issue in order to sufficiently resolve the dispute.

The Court will first set out what it believes to be the state of the law regarding step-plus-function analysis. Then it will set out a process for obtaining additional argument from the parties.

### 1. Section 112, Paragraph 6's Application to Method Claims

For method claims, section 112, paragraph 6 is implicated only when a claim element in a method claim recites a step for performing a specified function without the recital of acts in support of the function. *O.I. Corp.*, 115 F.3d at 1583; *Epcon Gas Sys., Inc. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1028 (Fed. Cir. 2002). The Federal Circuit has explained that the term “steps” refers to the generic description of the elements of a process, whereas the “function” of a method claim element corresponds to “*what* that element ultimately accomplishes in relationship to what the other elements of the claim and the claim as a whole accomplish.” *Seal-Flex, Inc. v. Athletic Track & Court Constr.*, 172 F.3d 836, 849 (Fed. Cir. 1999) (Rader, J., concurring) (emphasis in original); *O.I. Corp.*, 115 F.3d at 1583. “Acts,” on the other hand, correspond to *how* the function is accomplished (i.e., to the implementation of the steps of the process). *O.I. Corp.*, 115 F.3d at 1583.<sup>5</sup> If Section 112, paragraph 6 is implicated, the limitation

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<sup>5</sup> In the context of the step-plus-function analysis, accused infringers have at times argued that a particular limitation lacks sufficient detail to serve as an act that would take the claim out of Section 112, paragraph 6 territory. In response, courts have explained that there is:

[A] subtle but critical difference between how a function is accomplished and how an act accomplishes a function. The former is an identify-the-act question, appropriate for deciding if [section 112, paragraph 6] applies in the first instance. The latter is an

must be construed “to cover the corresponding . . . acts described in the specification.” 35 U.S.C. § 112, ¶ 6; *Agere Sys. Inc. v. Atmel Corp.*, No. CIV.A 02-864, 2003 WL 21652264, at \*22 (E.D. Pa. May 27, 2003).

How does one determine whether Section 112, paragraph 6 is implicated? As an initial matter, merely claiming a step by itself, or a series of steps—without recital of a function—does not implicate Section 112, paragraph 6. *O.I. Corp.*, 115 F.3d at 1583; *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 381 F.3d 1371, 1382 (Fed. Cir. 2004) (A method claim “necessarily recite[s] the steps of the method.”); *Masco Corp. v. United States*, 303 F.3d 1316, 1327 (Fed. Cir. 2002) (“Method claims are commonly drafted, as in this case, by reciting the phrase ‘steps of’ followed by a list of actions comprising the method claimed.”). As the Federal Circuit has explained: “[i]f we were to construe every process claim containing steps described by an ‘ing’ verb, such as passing, heating, reacting, transferring, etc. into a step-plus-function limitation, we would be limiting process claims in a manner never intended by Congress.” *O.I. Corp.*, 115 F.3d at 1583.<sup>6</sup> If, however, a claim element recites a step that is individually associated with a

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analyze-the-act question, appropriate for determining if a claim element is valid under the enablement, written description, and definiteness inquiries under [section 112, paragraphs 1 and 2]. Identifying an act to see if [Section 112, paragraph 6] applies (step-plus-function identification) is an inherently less searching inquiry than analyzing the same act under [the statutes relevant to enablement, written description and definiteness inquiries].

*Neurografix v. Regents of Univ. of Cal.*, No. 2:11-cv-07591-MRP-RZ, 2012 WL 8281409, at \*6 (C.D. Cal. June 13, 2012) (internal quotation marks omitted); *Word to Info Inc. v. Facebook Inc.*, Case No. 15-cv-03485-WHO, 2016 WL 3690577, at \*26 (N.D. Cal. July 12, 2012).

<sup>6</sup> An example of merely claiming a step alone came in *EBS Dealing Resources, Inc. v. Intercontinental Exchange, Inc.*, 379 F. Supp. 2d 521 (S.D.N.Y. 2005). There, the Court concluded that the disputed limitations of the method claim at issue (“automatically administering credit on a unilateral basis” and “automatically deriving a respective dealable price

specified function, Section 112, paragraph 6 will be implicated, *if* that element does not also recite the act necessary to perform the step and achieve the function. *Epcon Gas*, 279 F.3d at 1028; *O.I. Corp.*, 115 F.3d at 1582-83. In other words, if a claim element recites a step for performing a specified function *as well as* an act in support of the function, Section 112, paragraph 6 will not apply to that claim element. *See Neurografix v. Regents of Univ. of Cal.*, No. 2:11-cv-07591-MRP-RZ, 2012 WL 8281409, at \*6 (C.D. Cal. June 13, 2012) (“Next, the Court moves to the critical task of locating an act in the claim language. If the Court does find an act [in the claim element], then . . . [Section 112, paragraph 6] does not apply.”).<sup>7</sup> But, on the other hand, if a claim element recites a step for performing a specified function without reciting an act necessary to achieve the function, Section 112, paragraph 6 will apply to that claim element. *O.I. Corp.*, 115 F.3d at 1583.<sup>8</sup> In such circumstances, as noted above, the Court must

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message”) recited steps without functions where these limitations “do not state ‘what’ is accomplished, but rather state steps as to ‘how’ the ultimate function of Claim 17 [is] accomplish[ed], the ‘trading of financial instruments between traders.’” *EBS Dealing Resources*, 379 F. Supp. 2d at 529. Also noting that the claim did not contain the language “step for,” the Court held that these limitations were not subject to Section 112, paragraph 6. *Id.*; *see also, e.g., Cardiac Pacemakers, Inc.*, 381 F.3d at 1381-82 (agreeing with the plaintiff that where the term “determining a condition of the heart from among a plurality of conditions of the heart” simply recited a step that was part of the claimed method, Section 112, paragraph 6 was not implicated); *O.I. Corp.*, 115 F.3d at 1583 (finding that Section 112, paragraph 6 did not apply to the method at issue, where the method simply recited a series of steps that together accomplished the claimed method, and the steps at issue were not individually associated with specified functions).

<sup>7</sup> In *Neurografix v. Regents of Univ. of Cal.*, No. 2:11-cv-07591-MRP-RZ, 2012 WL 8281409 (C.D. Cal. June 13, 2012), the court found that the claim element “processing said outputs to generate data representative of the diffusion anisotropy of the selected structure” recited a specified function (“to generate data . . .”), and that it also recited an act corresponding to how the function is accomplished (“processing”) such that Section 112, paragraph 6 did not apply. *Neurografix*, 2012 WL 8281409, at \*5-6.

<sup>8</sup> For instance, in *Agere Sys. Inc. v. Atmel Corp.*, No. CIV.A 02-864, 2003 WL 21652264, (E.D. Pa. May 27, 2003), the court found that the claim limitation “wherein said deposition temperature and environment is controlled such that said interaction is self-limiting



then construe the limitation to cover the corresponding acts described in the patent specification. *O.I. Corp.*, 115 F.3d at 1583; *Agere Sys.*, 2003 WL 21652264, at \*22.

Step-plus-function limitations implicate a similar presumption to that of means-plus-function limitations. That is, if a claim element recites the phrase “steps for,” there is a presumption that it is a step-plus-function limitation. *Masco Corp.*, 303 F.3d at 1326. On the other hand, if the claim element does not recite “steps for” and instead recites, for instance, “steps of,” there is no presumption that the limitation is in step-plus-function format. *Id.*; *Cardiac Pacemakers, Inc.*, 381 F.3d at 1382. If (as here) the claim does not recite “steps for,” the defendant must make a showing that the limitation contains nothing that can be construed as an act in order for Section 112, paragraph 6 to be implicated. *Masco Corp.*, 303 F.3d at 1327.

In a concurring opinion analyzing the “crucial” issue of whether a particular claim element was a “means-plus-function element, a step-plus-function element, or neither,” Judge Rader explained that “[a]lthough similar, means and step-plus-function claim elements are not identical and require distinct analyses.” *Seal-Flex*, 172 F.3d at 847-48; *see also In re Neurografix ('360) Patent Litig.*, 201 F. Supp. 3d 206, 216 (D. Mass. 2016) (noting that the

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with a self-limiting thickness less than said junction depth” was subject to Section 112, paragraph 6. *Agere Sys.*, 2003 WL 21652264, at \*16, \*21-22 (emphasis omitted). The Court framed the issue as “whether the language in this combination process claim sets forth an element that is recited as a step for performing a specified function without the recital of acts in support of the function.” *Id.* at \*21. The Court found that it did—the claim recites a step (controlling the deposition temperature and environment) for performing a specified function (such that said interaction is self-limiting with a self-limiting thickness less than said junction depth) without reciting the acts necessary to perform this step and achieve this function. *Id.* at \*22. Accordingly, the Court went on to examine the written description of the patent to find the acts that correspond to the step of controlling the deposition temperature and environment “such that said interaction is self-limiting with a self-limiting thickness less than said junction depth.” *Id.*

Federal Circuit “has not applied an identical analysis” to means-plus-function and step-plus-function limitations). To that end, Judge Rader noted that “[t]he difficulty of distinguishing acts from functions in step-plus-function claim elements [] makes identifying step-plus-function claims inherently more problematic.” *Seal-Flex*, 172 F.3d at 848-49; *see also id.* at 852 (Bryson, J., concurring) (noting that “the question [of] whether the claim at issue is a step-plus-function claim is a difficult one”). That difficulty stems from the fact that both acts and functions are frequently recited using verbs ending in “ing.” *Id.* at 849.

The Federal Circuit has stressed that when assessing whether Section 112, paragraph 6 is implicated by the claims of a patent, “[e]ach claim must be independently reviewed in order to determine if it is subject to the requirements of [Section 112, paragraph 6].” *O.I. Corp.*, 115 F.3d at 1583. To that end, for example, even if a patent recites an apparatus claim that contains means-plus-function limitations, as well as a method claim that includes nearly identical language to the apparatus claim, that does not mean that the patentee also intended the method claim to be governed by Section 112, paragraph 6. *Id.* at 1583-84 (“Interpretation of claims would be confusing indeed if claims that are not means- or step-plus-function claims were to be interpreted as if they were, only because they use language similar to that used in other claims that are subject to this provision.”); *Dynamic Dig. Depth Research*, 2016 WL 7444569, at \*12. And courts have noted that step-plus-function limitations are “not . . . often used[.]” *Dynamic Dig. Depth Research*, 2016 WL 7444569, at \*11; *see also Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015) (noting the “unusual circumstance[.]” in which Section 112, paragraph 6 is invoked regarding the functional language of a method claim); *Seal-Flex, Inc.*, 172 F.3d at 848 (Rader, J., concurring) (“This court has rarely examined step-plus-function claim elements[.]”).

## 2. Additional Process Regarding the “With a Processor” Terms

Here, as noted above, Defendants did not engage in a step-plus-function analysis, but instead argued that the term should be construed as a means-plus-function limitation with a corresponding structure set out in the specification. In similar circumstances, some courts have ended the inquiry, simply concluding that the defendant necessarily failed to overcome the presumption that Section 112, paragraph 6 did not apply to the limitation. *See Uniloc USA, Inc. v. Autodesk, Inc.*, No. 2:15-cv-1187-JRG-RSP, 2016 WL 3647977, at \*19 (E.D. Tex. July 7, 2016); *Evicam Int’l, Inc. v. Enforcement Video, LLC*, No. 4:16-CV-105, 2016 WL 6470967, at \*20 (E.D. Tex. Nov. 2, 2016) (rejecting defendant’s argument that a limitation in a method claim was a means-plus-function term that was indefinite due to a lack of corresponding structure, where the term “is a method step[,]” and where defendant failed to argue that the term was written in “step-plus-function” format, such that the defendant did not show how Section 112, paragraph 6 could apply).

The Court will not take that path here, however, largely because the back-and-forth in the briefing on this issue was not great. It was not until Plaintiff’s answering brief that it forcefully asserted that Defendants “fail[ed] to identify that claims 1 and 7 are method claims” and thus “failed to apply the correct legal standard” by arguing that the term was a means-plus-function limitation.<sup>9</sup> (D.I. 59 at 19; *see also id.* at 20 (“Defendants have not shown, or even argued, that

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<sup>9</sup> Plaintiff’s opening brief, in contrast, simply stated that “since both claims are explicitly identified as method claims, Defendants are presumed to argue that the claims inherently invoke step-plus-function (a step for performing a specified function)” pursuant to Section 112, paragraph 6. (D.I. 52 at 18) From there, Plaintiff’s brief largely proceeded to argue why, if Defendants’ position that these terms are *means-plus-function terms* is adopted, the function and structure that Defendants identified was wrong. (*Id.* at 19-20)

any limitation in Claims 1 and 7 have ‘steps plus function without acts.’”); Tr. at 119-20 (Plaintiff’s counsel asserting that “[D]efendants wish to construe steps and method claims as means-plus-function. Not step-plus-function, but means-plus-function.”))<sup>10</sup> In light of the lack of argument on this difficult issue, the Court will benefit from a short, further briefing process.

In that regard, by no later than **October 25, 2018**, Defendants shall file a letter brief of no more than 3 single-spaced pages that further addresses this issue discussed above. By no later than **November 1, 2018**, Plaintiff shall file a responsive letter brief of no more than 3 single-spaced pages. Shortly thereafter, the Court will issue a Report and Recommendation that further addresses the “with a processor” terms.

### III. CONCLUSION

For the foregoing reasons, the Court recommends that the District Court adopt the following construction:

1. the various coordinates terms should be construed to mean “the point(s) in space calculated for each claimed coordinate type (‘spatial,’ ‘position,’ ‘view position,’ etc.)”

This Report and Recommendation is filed pursuant to 28 U.S.C. § 636(b)(1)(B), Fed. R.

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<sup>10</sup> In their opening brief, for their part, Defendants made only the briefest acknowledgment of this issue by citing to *Media Rights Techs., Inc. v. Cap. One Fin. Corp.*, 800 F.3d 1366, 1371-74 (Fed. Cir. 2015), which Defendants stated “rel[ied] on [*Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015)] to invoke [Section 112, paragraph 6] with respect to a method claim[.]” (D.I. 53 at 16) And *Media Rights* does appear to perform a means-plus-function analysis on a limitation found in a method claim. But *Media Rights* does so without addressing the fact that prior caselaw has recognized a difference between the statute’s applicability to apparatus claims and method claims (a distinction that *Williamson* itself recognized). To the extent that Defendants believe that *Media Rights* stands for the proposition that method claims may now undergo a means-plus-function analysis instead of a step-plus-function analysis, it would be helpful to hear a more robust explanation as to why they think that is so.

Civ. P. 72(b)(1), and D. Del. LR 72.1. The parties may serve and file specific written objections within fourteen (14) days after being served with a copy of this Report and Recommendation.

Fed. R. Civ. P. 72(b)(2). The failure of a party to object to legal conclusions may result in the loss of the right to de novo review in the district court. *See Henderson v. Carlson*, 812 F.2d 874, 878-79 (3d Cir. 1987); *Sincavage v. Barnhart*, 171 F. App'x 924, 925 n.1 (3d Cir. 2006).

The parties are directed to the Court's Standing Order for Objections Filed Under Fed. R. Civ. P. 72, dated October 9, 2013, a copy of which is available on the District Court's website, located at <http://www.ded.uscourts.gov>.

Dated: October 18, 2018



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Christopher J. Burke  
UNITED STATES MAGISTRATE JUDGE