IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

THINKOPTICS, INC.,	§	
	§	
Plaintiff,	§	
	§	
vs.	§	**CASE NO. 6:11-CV-455**
	§	
NINTENDO OF AMERICA, INC., ET AL.,	§	
	§	
Defendants.	§	
	§	

MEMORANDUM OPINION AND ORDER

This Memorandum Opinion construes the disputed claim terms in U.S. Patent Nos. 7,796,116 ("the '116 Patent"), 7,852,317 ("the '317 Patent"), and 7,864,159 ("the '159 Patent").

BACKGROUND

The Plaintiff ThinkOptics, Inc. ("ThinkOptics") sued the following defendants for infringement of the '116, '317, and '159 Patents: Nintendo of America, Inc.; Nintendo Co., Ltd.; Intec, Inc.; and Nyko Technologies, Inc. (collectively "Defendants"). The Patents share a common specification, and they are directed to a system for moving a cursor on a display screen using a handheld pointing device.

APPLICABLE LAW

"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) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). In claim construction, courts examine the patent's intrinsic evidence to define the patented invention's scope. *See id.*; *C.R. Bard, Inc. v. U.S.*

Surgical Corp., 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). This intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term's context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can also aid in determining the claim's meaning because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term's meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314–15.

"[C]laims 'must be read in view of the specification, of which they are a part.'" *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). "[T]he 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.'" *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *see also Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id.* Also, the specification may resolve ambiguous claim

terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex, Inc.*, 299 F.3d at 1325. But, "[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims." *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); *see also Phillips*, 415 F.3d at 1323. The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home Diagnostics, Inc., v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) ("As in the case of the specification, a patent applicant may define a term in prosecuting a patent.").

Although extrinsic evidence can be useful, it is "less significant than the intrinsic record in determining the legally operative meaning of claim language." *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc.*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition is entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id.*

CLAIM TERMS

"fixed locations" and "spatially fixed"

ThinkOptics proposes "site(s) or position(s) in a space that do not move appreciably during operation." Defendants propose "permanent locations" and "permanently located."

The parties debate whether the Claims allow: (1) inappreciable movement during operational periods; and (2) movement during non-operational periods. ThinkOptics believes the Claims allow movement in both scenarios. Docket No. 211 ("Brief") at 7. The specification states, in regards to a particular marker, "The exact location is not critical as long as the marker assembly does not move appreciably after calibration." '116 Patent, at 21:22–24. Thus, ThinkOptics contends the specification contemplates some inappreciable movement during operation. Brief at 8. Further, the specification teaches that appreciable movements require recalibration of the system, indicating that inappreciable moves do not require recalibration. *See* '116 Patent, at 28:2–8. Since inappreciable moves do not require recalibration, "fixed" must include some amount of movement. Brief at 8. Finally, ThinkOptics asserts that Defendants' construction is "unreasonable and unworkable." *See id*. at 9 ("Are Defendants proposing that the markers must be bolted to the floor or embedded in concrete?"). ThinkOptics argues there is no support in the specification for markers being located in permanent positions. *Id*.

Defendants argue "fixed" means "permanent" because the Claims recite two different types of "marker claims." Docket No. 214 ("Response") at 6. Claim 1 of the '159 Patent recites "spaced-apart fixed locations," while Claim 23 recites "spaced-apart locations." Defendants argue that under ThinkOptics's construction, there would be no difference between the two because the "fixed" locations could still change. Response at 6. Thus, Defendants believe their construction correctly clarifies that a "fixed" marker does not move. *Id*. Defendants also challenge the specification passage cited by ThinkOptics. *See* '116 Patent, at 28:2–8. Defendants

contend the passage distinguishes between fixed markers, where recalibration is unnecessary, and non-fixed markers, where recalibration is necessary. Response at 7.

At oral argument, the parties narrowed their disputes to one—whether or not the marker must remain stable during periods of non-operation.[1] The claim language indicates that the answer is no. All three patents' claims address a handheld device and system in *operational* mode. Consequently, there is no claim language regarding the system in non-operational or inactive modes. It would be improper to limit the claim language to require stability during periods of non-operation when the claim language only addresses operational periods.

The term "fixed location" appears in Claims 1 and 17 of the '159 Patent. Claim 1 is a method claim, and it describes steps when the device is in an operational state. '159 Patent, Claim 1, at 47:2–40. Every limitation applies to an operating system—there are no limitations addressing the system in non-operational form. Claim 17, a system claim, uses "fixed location" in a similar manner. *See id*. at 48:62. It defines markers according to their function when the handheld device is operational. Nothing in Claim 17 addresses marker location when the device is inactive. Thus, there is nothing in either Claim limiting the position of the marker when the device is operational.

Defendants' argument that this construction reads the word "fixed" out of the Claims fails for this reason. Claim 23 of the '159 Patent, relied upon by Defendants, is a method claim. *Id*. at 49:58. Similar to Claims 1 and 17, it describes a system in operational form. Any difference between a "spaced-apart fixed location" and a "spaced-apart location" is applicable to the system in operation.[2] However, applicability to operational form does not necessitate

[1] Both sides agreed the marker cannot move appreciably during operation.

[2] This construction does not render the word "fixed" in Claims 1 and 17 superfluous. *See, e.g., Haemonetics Corp. v. Baxter Healthcare Corp.*, 607 F.3d 776, 781 (Fed. Cir. 2010) (cautioning against constructions that render particular words redundant or superfluous). Rather, it recognizes that both Claims 1 and 17 ("spaced-apart fixed locations")

applicability to non-operational form. The Claims are silent on the marker's position while the system is not operating. Thus, there is nothing in the Claims to suggest that a location must be fixed during non-operational modes. Defendants' construction to the contrary is improper.

The analysis for "spatially fixed" is identical. "Spatially fixed" appears in Claims 1, 16, and 33 of the '116 Patent. Each is an apparatus claim directed at an "item of electronic equipment." *See, e.g.*, '116 Patent, Claim 1, at 46:53. However, each Claim includes executable program code or logic circuitry to perform a method. *Id*. at 46:56–57. The bodies of the Claims then specify method steps. *Id*. at 46:59. Like the '159 Patent, the Claims of the '116 Patent address a system in operation. These Claims do not address marker location when the handheld device is inactive. The same is true of Claims 1 and 23 of the '317 Patent. Both Claims describe the device in operational mode. *See* '317 Patent, Claim 1, at 46:60. Thus, there is no claim language limiting "spatially fixed" during periods of non-operation.

"Fixed locations" and "spatially fixed" are "site(s) or position(s) in a space that do not move appreciably during operation."

"separate images" limitations

ThinkOptics proposes "[producing/generating/adapted to form] images, within an image capture of a pixelated sensor, corresponding to respective ones of the markers." Defendants propose "a separate captured image for each of the at least two spaced-apart markers."

The parties debate Defendants' inclusion of the word "separate." ThinkOptics argues Defendants' construction is "overly restrictive" because it excludes the scenario where multiple images are captured within a single frame. Brief at 6. In support, it cites Figure 6, which it argues

---

and Claim 23 ("spaced-apart locations") address the system in operational mode. Both sides agree the markers cannot move appreciably during operation. Thus, the "superfluous" argument is not applicable to the system in non-operational mode.

discloses multiple markers captured in a single frame. *Id*. at 7. ThinkOptics believes Defendants' construction impermissibly requires a separate frame for each image. *Id*.

Defendants have a slightly different interpretation of "separate." At the outset, Defendants argue ThinkOptics misinterpreted their proposed construction. *See* Response at 10. Contrary to ThinkOptics's characterization, Defendants do not believe each marker requires "a separate photographic frame;" Defendants concede their construction does not require separate frames. *See id*. Rather, Defendants believe "the image data for the markers [must] be separately generated." *Id*. at 13. Thus, Defendants do not contend each separate image requires a separate photographic picture—they contend each marker must have a separately produced image, regardless of whether the separate images are captured in a single photographic frame. *Id*. at 10.

Defendants argue ThinkOptics's proposed construction ignores the word "separate" in the Claims. *Id*. at 9. Defendants contend the patentee intended two different forms of claims, one requiring "separate images" and another requiring only "images." *See id*. The Claims of the '159 Patent require "*separate* images of at least two of the spaced-apart markers." *See* '159 Patent, Claim 1, at 47:12–13 (emphasis added). In comparison, the '116 and '317 Claims do not contain the word "separate." For example, Claim 1 of the '116 Patent recites "one or more images appearing on a pixelated sensor." '116 Patent, Claim 1, at 46:61–62. However, ThinkOptics's proposed construction for both phrases is identical. Defendants contend identical constructions for each phrase would vitiate the word "separate." Response at 9.

Defendants also argue the file history indicates "separate" requires separately produced images. *Id*. at 10. During prosecution, Claim 1 of the '159 Patent was amended from "two or more spatially fixed, arbitrarily positioned markers" to "separate images of at least two of the spaced-apart markers." *Id*. The patentee stated it amended the Claim to "clearly specify that the

image data is generated for each of the images separately." *Id*. Thus, Defendants contend each marker must have a separately produced image. *See id*. at 11 ("The patentees added the separate-images limitation *because* image data is generated separately for each of the images.").

After a back-and-forth dialogue at the hearing, the parties agreed that no construction of the terms was necessary. As part of their agreement, the parties stipulated that this limitation referred to the images captured by the sensor. "[Producing/adapted to form] separate images of at least two of [the/said] spaced-apart markers," "generating a separate image for each of at least two spaced-apart markers," and "two or more marker images" require no further construction.

"one or more images appearing on a pixelated sensor"

ThinkOptics proposes "one or more respective images, within an image capture of a pixelated sensor, corresponding to respective one or more markers." Defendants propose "one or more images of one or more markers captured on the pixelated sensor."

ThinkOptics's arguments for this term are identical to its arguments for the previous term. In fact, its opening brief addressed both terms together because "the relevant issue between the proposed constructions for all of these terms is the same." *See* Brief at 10 n.3. Essentially, ThinkOptics contends Defendants' construction improperly requires each image to be captured by a different photographic frame. *Id*. at 11.

Because ThinkOptics did not separately address this term, Defendants stated in their briefing they were unsure exactly how the parties' constructions differ substantively. Response at 14. Nevertheless, Defendants contend their construction accurately reflects the term as is it used in the Patents. *Id*. Defendants argue the word "appearing" is only found in Claims, while the specification refers to images being "captured." *Id*. Thus, Defendants' construction replaces "appearing" with "captured" to clarify the phrase. *Id*.

After a back-and-forth dialogue at the hearing, the parties agreed that no construction of the terms was necessary. As part of their agreement, the parties stipulated that this limitation referred to the images captured by the sensor. "One or more images appearing on a pixelated sensor" requires no further construction.

"image data of one or more images appearing on a pixelated sensor" and "image data for each of the at least two separate images"

ThinkOptics proposes "a collection of information corresponding to pixels of respective images." Defendants propose "a collection of captured data for each marker image."

ThinkOptics argues Defendants' construction improperly excludes data regarding location. Brief at 12. ThinkOptics contends "image data" may include both intensity and location, but Defendants' construction only encompasses the intensity aspect. *See id*. (citing '116 Patent, at 15:41–43 ("Each pixel location has an associated intensity value that increases as the amount of radiation from a marker that illuminates the pixel location increases.")). Therefore, ThinkOptics believes Defendants' construction is too narrow. *Id*.

Defendants present three arguments in support of their construction. First, they argue ThinkOptics "has already agreed" to their construction. *See* Response at 15. Prior to the *Markman* hearing, the parties agreed that "identifying pixels which have an intensity value about a specified threshold value" means "a collection of pixels that have an intensity value above a specified threshold value." *Id*. Defendants contend this limitation would not make sense unless image data is a "collection" of captured data. *Id*. Second, Defendants assert that the Patents refer to "image data" as "captured data" in the specification. *Id*. For example, the Patents state that "image data is repeatedly captured over time," and "the handheld device simply captures the marker images." *See* '116 Patent, at 8:60–61; 9:5–6. Thus, Defendants argue "image data" should be construed as "captured data." Response at 16. Finally, Defendants argue their

construction distinguishes between processed and unprocessed data. *Id*. Defendants contend that when data is initially captured, it is unprocessed. *Id*. After the data is captured, some embodiments teach processing to translate the image data into a pointed-to location. *See* '116 Patent, at 8:26–29. Therefore, Defendants contend "image data," when it is initially captured, is unprocessed. Response at 16. Defendants believe their construction appropriately distinguishes between unprocessed image data and data that is later processed by the system. *Id*.

At the hearing, the parties agreed to the following construction: "a distinguishable collection of data for each marker image."

"detects two or more marker images based on the intensity values"

ThinkOptics proposes "identifying two or more marker images derived from intensity values of pixels." Defendants propose "using the collection of the pixels having an intensity value above the specified threshold, further identifying the marker images based on the intensity of each pixels in that collection of pixels."

While ThinkOptics concedes the parties' constructions are "very similar," it argues Defendants' construction is improper in three respects: (1) "using the collection of pixels having an intensity value above the specified threshold" is redundant; (2) "further" adds ambiguity; and (3) "each pixel's" intensity value need not be used in detecting the marker images. Brief at 13–14. First, ThinkOptics believes the "using the collection of pixels" phrase is unnecessary because the Claim already refers to "a set of pixels that have intensity values above a specified threshold." *Id*. at 14. Since this limitation is already recited in the Claim, there is no reason to include it in the construction. *Id*.

Along the same lines, ThinkOptics believes "further" adds only ambiguity to the Claim. *Id*. ThinkOptics argues the Claim contains two distinct steps, an identifying step and a detecting

step, and Defendants use "further" to transition between the two. Docket No. 222 ("Reply") at 6. However, ThinkOptics contends this particular limitation only addresses the "detecting" step, so including "further" in the construction would only add ambiguity. *See id*. Thus, as ThinkOptics succinctly states, "further adds nothing." *Id*. Third, ThinkOptics argues the Claim does not require "each and every pixel's intensity value be used." Brief at 15. Instead, ThinkOptics asserts that fewer than all pixels may be sufficient to satisfy the "detecting" step. *Id*.

Defendants contend their construction highlights the two distinct steps embodied in the Claim. Response at 19. Accordingly, there is nothing inappropriate about their "using the collection of pixels" limitation or their use of "further." *Id*. Defendants contend "further" merely reflects the fact that there are two steps in the Claim. *Id*. Defendants also argue ThinkOptics's construction of the "each pixel" limitation attempts to rewrite the Claim. *Id*. Defendants contend there is no indication something less than the intensity values for each pixel satisfies the "detecting" step. *Id*.

Defendants' construction is very similar to the plain meaning of the Claim. However, it contains two unnecessary redundancies that render it improper. First, it recites a limitation previously articulated in the Claim. The limitation in question involves two distinct steps. In step one, the image processor "identifies a set of pixels that have intensity values above a specified threshold." '159 Patent, Claim 26, at 50:43–44. In step two, the processor "detects two or more marker images based on the intensity values." *Id*. at 50:45–46. These two steps are linked together by the phrase "and from which," indicating the detecting step must detect only from the set of pixels with intensity values above the specified threshold. *See id*. at 50:44–45. The particular phrase being construed only addresses the second step of this limitation. Thus, Defendants' inclusion of the phrase "using the collection of the pixels having an intensity value

above the specified threshold" is unnecessary; the Claim already requires the detecting step to use only the pixels with intensity values above the threshold. *See Linear Tech. Corp. v. Int'l Trade Comm'n*, 566 F.3d 1049, 1056 (Fed. Cir. 2009) (finding proposed claim language unnecessary because the claim already required the proposed functionality).

Second, Defendants' inclusion of the word "each" is unnecessary. Claim 26 teaches that a sensor detects infrared radiation and "produces *an* intensity value for *each* of a plurality of pixels." '159 Patent, Claim 26, at 50:38–40 (emphasis added). Based on this limitation, each pixel is assigned a single intensity value. Thus, when the Claim later refers to "the intensity values," it is referring to a single intensity value for each identified pixel. *See id*. at 50:46. It would be redundant to include "each" in the construction when one intensity value must of necessity correspond to one pixel. *Linear Tech.*, 566 F.3d at 1056.

"Detects two or more marker images based on the intensity values" is "identifying two or more marker images derived from the intensity value of pixels."

"information derived from said determining"

ThinkOptics proposes "data corresponding to or relative to a pointed to location." Defendants propose "information derived from the coordinate data."

ThinkOptics argues its construction is supported by the language of the Claims. Brief at 16. It contends the antecedent basis for "said determining" is "determining an intensity value for each pixel of the pixelated sensor." *Id*. Thus, information is derived from the determining of the intensity values, which includes data relative to a pointed-to location. *Id*. ThinkOptics also argues Defendants' construction is too narrow because it prevents coordinate data itself from being information. *Id*. Under Defendants' construction, information must be *derived* from the coordinate data, which means coordinate data itself is not information. *Id*. Lastly, ThinkOptics

contends Defendants' construction is too narrow because it would exclude the embodiment disclosed in Figure 7B. *Id*. at 17

Defendants make three arguments in support of their construction. First, Defendants argue it is mandated by the prosecution history. Response at 20. Defendants contend a previous version of the Claims recited "for each of said images, determining its coordinates and/or signal strength on said sensor with said handheld devices electronic circuitry; and transmitting information derived from said determining." *Id*. Thus, under the original version of the Claims, "said determining" referred to a determination of the marker's coordinate data. *Id*. Defendants assert that a narrowing amendment "obscured" the meaning of "said determining," so the Court should construe it according to its original meaning. *Id*. at 21.

Second, Defendants' contend ThinkOptics's construction adds ambiguity. *Id*. The Claims do not mention a "pointed-to" location, and there is no indication what "relative to" means. *Id*. Third, Defendants argue their construction could be correct even if it does not cover every disclosed embodiment. *Id*. at 22. Defendants assert that the Claim covers the embodiment disclosed in Figure 7A, so it is irrelevant whether their construction would exclude Figure 7B. *Id*.

The dispute essentially boils down to what "information" must be transmitted—either information derived from coordinate data, as Defendants contend, or information corresponding to a pointed to location, as ThinkOptics contends. Neither side's construction is accurate.

ThinkOptics's construction is improper because it unnecessarily limits "information" to information corresponding to or relative to a pointed to location. Independent Claim 1 recites "transmitting information derived from said determining." '317 Patent, Claim 1, at 47:21. Dependent Claim 4, which depends from Claim 1, discloses that "said transmitted information includes data describing said pointed to location." '317 Patent, Claim 4, at 47:29–30. Thus, the

"transmitted information" in Claim 1 must include "data describing said pointed to location." However, based on the doctrine of claim differentiation, the "transmitted information" is not limited to data corresponding to a pointed to location. *See Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006) ("Claim differentiation refers to the presumption that an independent claim should not be construed as requiring a limitation added by a dependent claim."). In fact, the phrase "pointed to location" does not even appear in independent Claim 1. Accordingly, it would be improper to limit transmitted information in Claim 1 to information corresponding to a pointed to location.

Defendants' construction is improper because it does not reflect the Claim as it was issued. Defendants contend "it is clear" that said determining refers to the result of all the processing steps added by the examiner, not just the first step.[3] Response at 21. However, that conclusion is not evident from the Claim in its current form. The only restriction on "information" is that it must be "derived from said determining." *See* '317 Patent, Claim 1, at 47:21. The "determining" limitation discloses "determining an intensity value for each pixel of the pixelated sensor." *Id*. at 47:8–9. Thus, "information derived from said determining" is limited to pixel intensity value; it is not further limited to information derived from coordinate data.

The Claim, as written, does not require the transmitted information to have any particular content, as the parties seem to believe. The only requirement is that the information transmitted, whatever its content, must be derived from the determined pixel intensity values. As such, no further construction is required.

[3] Defendants did not cite any language from the prosecution history addressing the reasoning behind the narrowing amendment or the examiner's understanding of "information derived from said determining." *See* Response, Ex. 10.

"actively controlling" limitations

ThinkOptics proposes "moving the cursor to or relative to a position corresponding to a pointed to location." Defendants propose "moving the cursor to the pointed-to location."

The parties agree the disputed limitations require taking some action in relation to a pointed-to location. However, the parties disagree over where that action takes place. ThinkOptics proposes a broader reading of the phrase. *See* Brief at 18. ThinkOptics argues "relative to" a pointed-to location is appropriate because it encompasses an embodiment where the cursor rotates relative to the pointed-to location. *Id*. at 19. ThinkOptics contends the "virtual dial" embodiment disclosed in Figures 10A and 10B would not be included within Defendants' construction. *Id*. ThinkOptics also argues "corresponding to" gives needed flexibility to the system. *Id*. In support, it cites a passage from the specification that teaches "determining a location proximate to a display where the handheld device is being pointed." *See* '116 Patent, at 3:37–41. ThinkOptics contends the word "proximate" indicates there is some imprecision in the system. Brief at 19.

Defendants argue ThinkOptics's construction should be rejected because it is ambiguous. Response at 23. Defendants contend there is no way to determine what "relative to" a pointed-to location means or how close a position must be to "correspond" to the pointed-to location. *Id*. at 24. Instead, Defendants contend the action referred to in the Claims takes place "at the pointed-to location and nowhere else." *Id*. Defendants also argue the "virtual dial" embodiment cited by ThinkOptics is inapplicable. *Id*. Defendants contend several claims are written specifically to cover the virtual dial embodiment, but the asserted Claims are not. *Id*. at 25.

At the hearing, the parties agreed to the following construction: "controlling a cursor at the pointed to location."

"pointed-to location" limitations

ThinkOptics proposes "a position at or near the display corresponding to the position to which the handheld device points." Defendants propose "a position at or near a display that is pointed to by a handheld device."

Similar to the "actively controlling" limitations, the parties debate the level of precision required of a "pointed-to location." Much like with "actively controlling," ThinkOptics proposes a position "corresponding to" the position where the handheld device points. Brief at 20. ThinkOptics argues the specification teaches that a pointed-to location is "proximate to" or "corresponds to" a position to which the handheld device actually points. *Id*. Thus, it believes Defendants' construction requires an unnecessary level of exactness. *Id*.

Defendants argue ThinkOptics's construction ambiguously adds the word "corresponding" to the Claim. Response at 26. Defendants contend "corresponding to" adds ambiguity to the Claims without providing any clarity. *Id*. at 27. Defendants also argue ThinkOptics's reliance on the specification is misplaced. *Id*. Defendants assert that the specification uses "proximate to" only in regard to the display—it does not use "proximate" to mean the "pointed-to" location can be proximate to the actual pointed to location. *Id*.

Construction of these terms involves two different pointed to locations. The first pointed to location is the "pointed to location" referenced in the Claims. *See, e.g.*, '116 Patent, Claim 1, at 46:57–59. This is the term being construed. The second pointed to location is the actual location pointed to by the handheld device. This second pointed to location is the precise physical location at which the handheld device is aimed. The dispute over these terms involves the relationship between the two pointed to locations—i.e., how close the "pointed to location" must be to the actual, physical pointed to location.

ThinkOptic's reliance on the specification to support its inclusion of "corresponding to" is misplaced. The passage cited by ThinkOptics reads:

> Absolute pointing from a handheld device may also, or by itself, involve: 1) determining a location proximate to a display where the handheld device is being pointed (e.g., the location of specific electronic equipment placed proximate to the display);

'116 Patent, at 3:37–41. This section does not address the relationship between the "pointed to" location, as recited in the Claims, and the actual location at which the controller is pointing. Rather, it merely clarifies that a "pointed to" location may be "off of" or "proximate to" the display. Thus, this passage alone does not resolve the parties' dispute.

There is no other evidence in the Claims or specification requiring any further construction of "pointed to" location. The Claims themselves do not contain any limiting language but merely recite "a location…that is pointed to by a handheld device." '116 Patent, Claim 1, at 46:57–59. There is no identifiable measure of precision in this sentence. Nothing from the Claims indicates the extent to which a "pointed to" location may deviate from the actual pointed to location before it ceases to be the "pointed to" location referenced by the Claims. Because the Claims do not provide any physical limit on the "pointed to" location, it would be improper for the Court to construe the term with objective preciseness.

"A pointed to location on a display, or proximate to said display" and "location on a display[,] or proximate to said display[,] that is pointed to by a handheld device" mean "a position on the display representing where the handheld device is aimed."

"signal strength/level"

ThinkOptics proposes "indication of a degree of intensity." Defendants propose "peak intensity."

The parties agree signal strength refers to the intensity of the signal. However, they differ over the word "peak." The specification never refers to "signal strength" alone. Instead, it references "peak signal strength." The parties take contrasting positions on what that means. ThinkOptics argues it indicates "signal strength" does not mean "peak signal strength." Brief at 21. If it did, the word "peak" in the specification would be redundant. *Id*. ThinkOptics also contends the Patents do not use "signal strength" and "peak signal strength" interchangeably. Reply at 10. ThinkOptics asserts that peak signal strength refers to a portion of the larger signal (e.g., a signal pixel with the highest intensity). *Id*. "Signal strength," when used alone, refers to the entire signal. *Id*. Thus, "signal strength" does not mean "peak signal strength." *Id*.

Defendants contend "signal strength" means *peak* signal strength. Response at 27 (emphasis added). Defendants argue the Claims use "signal strength" to determine the handheld device's viewing angle. *Id*. at 28. To determine the viewing angle, the peak signal strength is necessary. *Id*. Defendants also contend the Patents use signal strength and peak signal strength interchangeably. *See id*. (citing '116 Patent, at 15:6–19).

At the hearing, the parties agreed that signal strength referred to intensity and that no further construction was required. Accordingly, "signal strength" and "signal level" require no construction.

CONCLUSION

For the foregoing reasons, the Court interprets the claim language in this case in the manner set forth above. For ease of reference, the Court's claim interpretations are set forth in a table in Appendix A.

So ORDERED and SIGNED this 22nd day of July, 2013.



LEONARD DAVIS
UNITED STATES DISTRICT JUDGE

Appendix A

Claim Term	Court's Construction
Fixed locations; spatially fixed	Site(s) or position(s) in a space that do not move appreciably during operation
[producing/adapted to form] separate images of at least two of [the/said] spaced-apart markers; generating a separate image for each of at least two spaced-apart markers; two or more marker images	No construction necessary
One or more images appearing on a pixelated sensor [of respective one or more spatially fixed markers]	No construction necessary
Image data of one or more images appearing on a pixelated sensor	A distinguishable collection of data for each marker image
Image data for each of the at least two separate images	A distinguishable collection of data for each marker image
Detects two or more marker images based on the intensity values	Identifying two or more marker images derived from the intensity values of pixels
Information derived from said determining	No construction necessary
Actively controlling movement of [a/the] cursor displayed on [the/a] display; controls the movement of the cursor on the display screen	Controlling a cursor at the pointed to location
A pointed to location on a display, or proximate to said display; location on a display[,] or proximate to said display[,] that is pointed to by a handheld device	A position on the display representing where the handheld device is aimed
Signal strength; signal level	No construction necessary