IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

KONINKLIJKE PHILIPS N.V. and U.S. PHILIPS CORPORATION, Plaintiffs, v. ASUSTeK COMPUTER INC. and ASUS COMPUTER INTERNATIONAL, Defendants.	)	C.A. No. 15-1125-GMS
KONINKLIJKE PHILIPS N.V. and U.S. PHILIPS CORPORATION, Plaintiffs, v. HTC CORP. and HTC AMERICA, INC. Defendants.	)	C.A. No. 15-1126-GMS
KONINKLIJKE PHILIPS N.V. and U.S. PHILIPS CORPORATION, Plaintiffs, v. VISUAL LAND, INC., Defendant.	)	C.A. No. 15-1127-GMS
U.S. PHILIPS CORPORATION, Plaintiffs, v. SOUTHERN TELECOM INC.,	)	C.A. No. 15-1128-GMS

Defendant.

KONINKLIJKE PHILIPS N.V. and
U.S. PHILIPS CORPORATION,

Plaintiffs,

v. C.A. No. 15-1130-GMS

DOUBLE POWER TECHNOLOGY, INC.,
ZOWEE MARKETING CO., LTD., and
SHENZEN ZOWEE TECH. CO., LTD.,

Defendants.

KONINKLIJKE PHILIPS N.V. and
U.S. PHILIPS CORPORATION,

Plaintiffs,

v. C.A. No. 15-1131-GMS

YIFANG USA, INC., d/b/a
E-FUN, INC.,

Defendant.

KONINKLIJKE PHILIPS N.V. and
U.S. PHILIPS CORPORATION,

Plaintiffs,

v. C.A. No. 15-1170-GMS

ACER INC. and
ACER AMERICA CORPORATION,

Defendants.

ORDER CONSTRUING THE TERMS OF U.S. PATENT NOs. RE44,913, 6,690,387, 7,184,064, 7,529,806, 5,910,797, 6,522,695, 8,543,819, 9,436,809, 6,772,114, RE43,564[1]

After having considered the submissions of the parties and hearing oral argument on the matter, IT IS HEREBY ORDERED, ADJUDGED, and DECREED that, as used in the asserted claims of U.S. Patent Nos. RE 44,913 ("the '913 patent"), 6,690,387 ("the '387 patent"), 7,184,064 ("the '064 patent"), 7,529,806 ("the '806 patent"), 5,910,797 ("the 797 patent"), 6,522,695 ("the '695 patent"), 8,543,819 ("the '819 patent"), 9,436,809 ("the '809 patent"), 6,772,114 ("the '114 patent"), & RE43,564 ("the '564 patent"):[2]

The '913 Patent

1. The court adopts the parties' proposed construction for the term **"display area"** to mean "region of an electronic screen."[3]

2. The term **"keypad"** is construed in accordance with its plain and ordinary meaning.[4]

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[1] All docket citations refer to Civil Action NO. 15-1125-GMS. The abbreviation "Tr." refers to the transcript from the *Markman* Hearing on May 3, 2017, D.I. 143.

[2] The court does not address indefiniteness contentions at this time.

[3] The parties' agreed upon the construction of the term "display area" in the Joint Claim Chart. (D.I. 111-2.) In the absence of a genuine dispute, the court will not construe this term. *See O2 Micro International Ltd. v. Beyond Innovation Technology Co., Ltd.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008); *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997).

[4] Defendants propose a construction that limits the claimed "keypad" to "a plurality of keys arranged to resemble a numeric entry or phone dialing interface." The Defendants' citations to the specification are not persuasive. (D.I. 118 at 11.) The patentee provided no definition of "keypad" in the specification and no disavowal of QWERTY or other non-numeric keypads. (D.I. 117 at 2.) Accordingly, the court will not limit the term to a particular embodiment disclosed in the specification. Instead, the court construes the term consistent with its plain and ordinary meaning.

3. The term **"means for switching to a second state responsive to a first key selection of the at least one key for a period longer than the predetermined time period"** is construed pursuant to 35 U.S.C § 112, ¶ 6. The claimed function is: "switching to a second state responsive to a first key selection of the at least one key for a period longer than the predetermined time period." The corresponding structure is: "a touchscreen and either: (1) a microprocessor in conjunction with a computer readable storage medium running a computer program to perform the function, such as the algorithm disclosed at 4:45-6:6, Figures 4, 5; or (2) dedicated logic circuits, PICmicro chips, or application specific integrated circuits (ASIC) that work with or without such a computer program to perform the function, such as the algorithm disclosed at 4:45-6:6, Figures 4, 5."[5]

4. The term **"means for returning the keypad to the default state"** is construed pursuant to 35 U.S.C. § 112, ¶ 6. The claimed function is: "returning the keypad to the default state." The corresponding structure is: "a touch a screen and either:

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[5] The parties agree that this phrase should be construed under 35 U.S.C § 112, ¶ 6, and agree as to the claimed function. The only remaining dispute is over what constitutes the adequate corresponding structure.

Defendants' proposed structure goes beyond what is necessary to perform this function. Specifically, Defendants propose a corresponding structure directed to "***displaying*** keys and characters in each state," when the disputed term function "[is] directed to ***changing*** states." (D.I. 117 at 4.) The Defendants' citations to the specification are not persuasive. (D.I. 118 at 13-14.) As Plaintiffs maintain, the "means for displaying in the second state each of the secondary characters" is a wholly distinct function. *Markman* Hr'g Tr. 22:16-22. Because other claim limitations relate to actual "display" in each state as a separate and distinct function, the doctrine of claim differentiation supports the conclusion that these limitations presumptively differ in scope. *See Wenger Mfg. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1234-35 (Fed. Cir. 2001).

Furthermore, the specification precisely teaches Plaintiffs' proposed corresponding structure. *See, e.g.*, '913 patent, col. 4 ll. 38-44 ("It is noted . . . that other suitable forms of processing means such as dedicated logic circuits, PICmicro chips, or application specific integrated circuits (ASIC) operating with or without a computer program can be employed in alternative embodiments."). The court therefore adopts Plaintiffs' proposed corresponding structure.

(1) a microprocessor in conjunction with a computer readable storage medium running a computer program to perform the function, such as the algorithm disclosed at 4:45-5:14, 5:48-67, Figure 5; or (2) dedicated logic circuits, PICmicro chips, or application specific integrated circuits (ASIC) that work with or without such a computer program to perform the function, such as the algorithm disclosed at 4:45-5:15, 5:47-67, Figure 5."[6]

The '387 Patent

1. The term **"terminating said scrolling motion when one of the conditions comprising the following group of conditions is sensed: (a) a substantially stationary finger touch having a finite duration is sensed; (b) an end-of-scroll signal is sensed"** is construed in accordance with its plain and ordinary meaning.[7]

[6] The parties agree that this phrase should be construed under 35 U.S.C § 112, ¶ 6, and agree as to the claimed function. The only remaining dispute is what constitutes adequate corresponding structure. Plaintiffs propose "a touch a screen and either: (1) a microprocessor in conjunction with a computer readable storage medium running a computer program to perform the function, such as the algorithm disclosed at 4:45-5:14, 5:48-67, Figure 5; or (2) dedicated logic circuits, PICmicro chips, or application specific integrated circuits (ASIC) that works [sic] with or without such a computer program to perform the function, such as the algorithm disclosed at 4:45-5:15, 5:47-67, Figure 5" as the corresponding structure. The Plaintiffs' citations to the specification provide sufficient structure for this function. In contrast, Defendants' construction contains structure—related to displaying—that is not necessary for performing the function. (D.I. 131 at 4.) The court therefore adopts Plaintiffs' proposed corresponding structure.

[7] The parties primarily dispute is whether this term requires "sensing" for both conditions (a) and (b) of the claims, or simply one. *Markman* Hr'g Tr. 42:1-5; 63:3-5. Plaintiffs' proposed construction largely relies on claim 9, which discloses that the sensing is done for a "group of conditions" and that scrolling is terminated when of those conditions occurs. (D.I. 117 at 5.) Plaintiffs also rely on the language of dependent claim 10, which states "wherein said group of conditions to be sensed for terminating said scrolling motion." '387 patent, col. 8 ll. 45-46. Defendants contend that the plain language of this claim requires performance of only one of these conditions: "terminating said scrolling motion **when one** of the conditions comprising the following group of conditions **is sensed**." (D.I. 118 at 7) (emphasis added). In light of the intrinsic evidence, the court sees no reason to unnecessarily modify the scope of the claim by adding the extra step of "sensing for." Thus, the court adopts Defendants' proposed construction.

The '064 Patent

1. The term **"finger touch program instructions associated with said microprocessor for sensing speed, direction, and time duration of a finger touch contact with said display screen"** is construed in accordance with its plain and ordinary meaning.[8]

2. The term **"timer means associated with said microprocessor to provide timing capacity therefor"** is construed in accordance with its plain and ordinary meaning.[9]

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[8] The parties dispute whether this term should be construed pursuant to § 35 U.S.C. 112, ¶ 6. There is a presumption that a term falls outside §112, ¶ 6 where the claim does not employ the word "means." *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). While this presumption may be overcome when the claim fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function, the court does not believe that is the case here. *Id.*

Plaintiffs' expert, Dr. Douglass Schmidt, has supported their assertion that the claim limitation recites "program instructions associated with said microprocessor," and a person of ordinary skill in the art ("POSA") would understand this language to connote the structure of a software program that is executed by a microprocessor. (D.I. 117 at 6.) In his declaration, Dr. Schmidt explains: a POSA would understand that "finger touch" refers to a user's interaction with a touchscreen, and that "finger touch program instructions" are part of a software program executed by the microprocessor that operates on the information provided from a touchscreen." *Id.* at 6-7 (citing D.I. 122 ¶ 29).

Defendants offer no opposing evidence, either intrinsic or extrinsic. Rather, Defendants rely on arguments that the claim merely substitutes the word "instructions," that "could encompass any number of different software algorithms," for the word "means" and fail to disclose "how the software operates to achieve [the claimed] function." (D.I. 118 at 8.) Notably, Defendants seem to concede that the claim language connotes structure by indicating that "[t]his limitation describes a special-purpose software running on a microprocessor." (*Id.* at 8; D.I. 131 at 6.) Because Defendants failed to establish clear and convincing evidence that the claim limitation does not provide sufficient structure, they cannot overcome the presumption that the claim is not subject to § 112 ¶ 6.

[9] As noted, the court is aware that a term presumptively falls within 35 U.S.C. § 112, ¶ 6 when the claim employs the word "means," *Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1257 (Fed. Cir. 1999), but that presumption may be overcome when the claim recites sufficient structure for performing the function. *Id.* The court believes that is the case here.

Plaintiffs argue that the term connotes sufficient structure for a POSA to perform the claimed function of "providing timing capacity therefor," and therefore should be afforded its plain and ordinary meaning. (D.I. 117 at 9.) The court is convinced that a POSA would interpret a "timer means associated with said microprocessor" to refer to specific, well known structure for providing timing capacity for a microprocessor. (*Id.*) Although Defendants argue that patentee "as master of the claim" made a "deliberate choice" to use "timer means" language, *Markman* Hr'g Tr. 61:4-8, the court finds that the term should be given its plain and ordinary meaning. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) ("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.").

3. The term **"stopping motion program instructions associated with said microprocessor for terminating scrolling displacement of the image on said screen upon first occurrence of any signal in the group of signals comprising: (a) a substantially stationary finger touch on the screen enduring for a period longer than a preset minimum time, and (b) an end-of-scroll signal received from said scroll format data source"** is construed in accordance with its plain and ordinary meaning.[10]

The '806 Patent

1. The court adopts the parties' proposed construction for the term **"alternative flies"** to mean "alternative files."

2. The court adopts the parties' proposed construction for the term **"give"** to mean "given.

3. The term **"media presentation"** is construed to mean "data having multiple segments."[11]

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[10] Like the claim limitation above, *supra* note 8, this claim limitation does not employ the word "means." Again, there is a presumption that 35 U.S.C. § 112, ¶ 6 does not apply. Plaintiffs, relying on the expert declaration of Dr. Schmidt, contend:

> the POSA would understand the term to connote structure by sufficiently describing how the claim limitation's operation (terminating scrolling displacement) is achieved in the context of the invention (through the execution of a software program by the microprocessor which stops the scrolling displacement of the images displayed on the screen in response to the first appropriate signal it receives from either the touchscreen or the scroll format data source).

(D.I. 117 at 7.) Defendants fail to effectively refute this contention. The court therefore adopts the plain and ordinary meaning.

[11] The court adopts, in part, Plaintiffs' proposed construction of this term. At oral argument, Plaintiffs identified two relevant questions: (1) must a "media presentation" have multiple segments and (2) is a "media presentation" video or audio data?

As to the first issue, the court finds that the intrinsic record supports the assertion that media presentation has multiple segments. Plaintiffs correctly point out that independent claims 1 and 12 refer to "a given segment of the media presentation," suggesting that the invention requires multiple segments. (D.I. 117 at 10.) The Title, Abstract, and Summary of The Invention support Plaintiffs' construction. *See, e.g.*, '806 patent, col. 1 ll. 65-66 ("To this end

4. The term **"wherein if the determined filed is one of a plurality of files required for the media presentation, the means for parsing comprises means for: concurrent with the media presentation, retrieving a next file; and using content of the next file to continue the media presentation"** is construed to mean "the means for parsing has the capability to: (1) retrieve a next file corresponding to a later segment of a media presentation while an earlier retrieved segment is presented and (2) to use the content of the next file to continue the media presentation."[12]

5. The term **"parsing [the/a] control information file"** is construed in accordance with its plain and ordinary meaning.[13]

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the content file is split into multiple parts. Each part or segment requires a relatively short download time."); *id.* col. 4 ll. 15-16 ("The segmentation of the content file into separately downloadable segments . . ."). Plaintiffs' construction—"multiple segments"—aligns with the patent's description of the invention. *See Reinshaw PLC Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998).

Second, the intrinsic record demonstrates that media presentation can be "video or audio data." Dependent claim 4 discloses "[t]he method of claim 1, wherein the media presentation comprises an audio presentation;" dependent claim 5 discloses "[t]he method of claim 1, wherein the media presentation comprises a video presentation." '806 patent, col. 6 ll. 7-10. The specific dispute, however, is whether media presentation should be ***limited*** to just those two types of data. Because limitations stated in dependent claims are typically not to be read into the independent claim from which they depend, the dependent claims 4-5 do not establish that the '806 patent requires the term "media presentation" to be exclusively audio or video data. *See AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1242 (Fed. Cir. 2003) ("Under the doctrine of claim differentiation, dependent claims are presumed to be of narrower scope than the independent claims from which they depend."). There is a strong implication that media presentation is not limited to audio and video data. As a result, the court believes construing the claim term as "data having multiple segments" aligns with the scope of the patent and does not divorce the construction from its claim language.

[12] The court adopts Plaintiffs' proposed construction. The specification provides support for this limitation in step 110 of Figure 1, labeled "Download Next File Segment & Buffer While Preceding Segment is Being Played Out." '806 patent at Fig. 1; *id.* col. 3 ll. 14-16 ("In step **110**, the next file segment is downloaded at the client and stored in a buffer while the previous file segment . . . is played out.").

[13] Plaintiffs argue that the term "parsing" is "a well-understood term in computer science . . . relat[ing] to the analysis of a computer file," and therefore should be afforded its plain meaning. (D.I. 117 at 11.) Plaintiffs also argue that the term "control information file" should be construed in accordance with its plain meaning, because the term is not given any specialized meaning in the intrinsic record. (*Id.*)

According to Defendants, the prosecution history establishes that the patentee intended "parsing [the/a] control information file" to have a specific meaning that distinguished the claimed invention from the prior art. (D.I.

6. The term **"means for parsing a control information file"** is construed pursuant to 35 U.S.C § 112, ¶ 6. The claimed function is: "parsing a control information file." The corresponding structure is: "single purpose media player or multipurpose computing device programmed with software to perform the function, such as the algorithm disclosed in Figure 1 and at 2:53-3:2."[14]

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118 at 17.) During the prosecution of the '806 patent, the examiner rejected claims based on the Cohen reference, which the examiner observed "taught the invention as claimed including . . . the client device parsing the control information file." (D.I. 138-1 at A116.) In response, the applicant distinguished Cohen as not "parsing" in the same way the term is used in the '806 patent, because Cohen "knows *a priori* the format of the connection file, which therefore need not be parsed." (*Id.* at A118.) Defendants claim that this segment of the prosecution history demonstrates the patentee intended "parsing [the/a] control information file" to mean interpreting a file of unknown format. (D.I. 118 at 17.)

The court disagrees. Tellingly, Defendants' overlook the applicant's statements informing the PTO that Cohen uses a "rigid and inflexible" system that renders parsing unnecessary, (D.I. 138-1 at A118), and distinguishing the present invention as "flexible," using "parseable control information file," such as an XML file. (*Id.* at A115.) Defendants' construction also contradicts dependent claims 7 and 13, which depend off claims 1 and 12 respectively and require that the control information file be of a known format (XML file). "Absent a clear disavowal or contrary definition in the specification or the prosecution history, the patentee is entitled to the full scope of its claim language." *Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1358 (Fed. Cir. 2004). Because the plain meaning of "parsing a control information file" is clear, and the specification and prosecution history do not reveal a clear intent by the patentee, the prosecution history does not delimit the term's scope.

[14] The parties dispute centers on whether there is adequate corresponding structure for this functional term. First, Plaintiffs observe that the specification discloses the physical structure, noting that the invention is either implemented as a "hardware-based single purpose device" or "a software application on a multi-purpose computing device." (D.I. 117 at 12; *see* '806 patent, col. 4 ll. 32-44.) Additionally, the specification provides an algorithm to perform the claimed function, as disclosed in Figure 1 and 2:53-3:61. In relevant part, the specification discloses that "[i]n step **104** the XML code is parsed," using an XML interpreter which is well known in the art:

> Parsing of XML is well known in the art. A person skilled in the art can Download an XML interpreter source code, from the Internet, see e.g.www.ibm.com/xml. Thus, the client is enabled to get information about the content information and the URLs of the first and subsequent file segments.

'806 patent, col. 2 ll. 64-col. 3 ll. 2.

Defendants note that the knowledge of a POSA cannot provide corresponding structure. *Williamson*, 792 F.3d at 1352 ("[T]he fact that one of skill in the art could program a computer to perform the recited functions cannot create structure where none otherwise is disclosed."). Contrary to Defendants' contention, the patent sets forth corresponding structure. *See Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1376 (Fed. Cir. 2001) ("Whether or not the specification adequately sets forth structure corresponding to the claimed function necessitates consideration of that disclosure from the viewpoint of one skilled in the art."). The court finds ample structure disclosed in the specification corresponding to the "parsing" function. The court therefore adopts Plaintiffs' proposed construction.

7. The term **"means for parsing, based on parsing of the control information file: identifying multiple alternative files corresponding to a given segment of the media presentation; determining which file of the multiple alternative files to retrieve based on system constraints; retrieving the determined file of the multiple alternative files to begin a media presentation"** is construed pursuant to 35 U.S.C § 112, ¶ 6. The claimed function is: "parsing, based on parsing of the control information file: identifying multiple alternative files corresponding to a given segment of the media presentation; determining which file of the multiple alternative files to retrieve based on system constraints; retrieving the determined file of the multiple alternative files to begin a media presentation." The corresponding structure is: "dedicated media player or multipurpose computing device programmed with software to perform the function, such as the algorithm in Figure 1, and at 2:53-3:61, 4:20-26."[15]

[15] The parties agree that this phrase should be construed under 35 U.S.C § 112, ¶ 6. The parties dispute the claimed function and corresponding structure.

First, the court adopts Defendants' proposed function. Plaintiffs present no plausible reason for the court to ignore the claim language by reading out the entire clause "parsing, based on parsing of the control information file." *See Generation II Orthotics Inc. v. Med. Tech. Inc.*, 263 F.3d 1356, 1363 (Fed. Cir. 2001) ("[§ 112, ¶ 6] does not permit limitation of means-plus-function claim by adopting a function different from that explicitly recited in the claim") (citation omitted). Notably, Plaintiffs claim construction briefing wholly ignores this issue, and Plaintiffs barely addressed the claimed function dispute during *Markman*. The explicit claim language reveals that there are two distinct parsing functions, and Defendants' proposed claim function gives effect to both. Second, the court adopts Plaintiffs' proposed corresponding structure. The court believes the identified structural support would allow a POSA to perform the claimed function.

The '797 Patent

1. The term **"gravitation-controlled sensor [means]"** is construed to mean "sensor responsive to gravity."[16]

2. The term **"acceleration based motion pattern"** is construed to mean "a pattern of motion which reflects acceleration."[17]

3. The term **"wherein said motion is nonuniform in time under control of a static said orientation of the screen means"** is construed to mean "wherein the

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[16] As an initial matter, the court notes that it is authorized to add the word "means" to the term "gravitation-controlled sensor [means] in order to resolve obvious antecedent basis informalities. *H-W Tech. L.C. v. Overstock.com, Inc.*, 758 F.3d 1329 (Fed. Cir. 2014); *Ultimax Cement Mfg. Corp. v. CTS Cement Mfg. Corp.*, 587 F.3d 1339 (Fed. Cir. 2009) ("[I]f the correction is not subject to reasonable debate to one of ordinary skill in the art, namely, through claim language and the specification, and the prosecution history does not suggest a different interpretation, then a court can correct an obvious typographical error."). The court agrees, as Plaintiffs urge, that the informalities in claim 1 of the '797 patent are evident on the face of the patent. First, a POSA would understand that "said sensing means" in claim 1 and "said gravitation-controlled sensor means" in claim 3 both refer to the same element and find antecedent basis in the "gravitation-controlled sensor" element of claim 1. Second, the specification provides further support for this conclusion, as it refers to a "gravitation-controlled sensor means" in the Background of the Invention. '797 patent, col. 1 l. 11. Finally, the prosecution history confirms that "gravitation-controlled sensor means" is precisely what the patentee claimed; it also refutes Defendants' contention that this informality in antecedent basis is "a material error." (D.I. 131 at 13.) The prosecution history, therefore, demonstrates that the PTO erred in issuing the claims without the patentee's requested amendments. Accordingly, the court can and will correct "gravitation-controlled sensor" to read "gravitation-controlled sensor means."

Next, the court turns to the parties' claim construction dispute. Defendants argue that the term should be construed as "sensor response to gravity." (D.I. 118 at 3.) The specification supports this conclusion. '797 patent, col. 2 l. 56-col. 3 l. 12; Fig. 1; *see also id.* at Abstract, Fig. 5, col. 1 ll. 1-5, col. 1 ll. 8-14, col. 1 ll. 62-64, col. 4 ll. 15-26. Plaintiffs' construction, "gravitation-controlled sensor that measures acceleration," flies in the face of the claim language which provides that "a gravitation-controlled sensor integrated with said screen means and feeding said data processing means for measuring an acceleration of said screen means." '797 patent, col. 4 ll. 44-46. Thus, the court adopts Defendants' proposed construction.

[17] Defendants argue that the term should be construed as "motion proportional to the sensed screen motion, as if the user's manipulation of the screen were instead manipulating the objects." The court declines to adopt this proposed construction because Defendants improperly seek to import a limitation from the specification into the claim. (D.I. 117 at 6.) While the specification and prosecution history may suggest a relationship between the measured acceleration of the screen and the motion pattern imparted to the object, the claim language does not evince any particular type of acceleration. (*Id.*) The court therefore adopts Plaintiffs proposed construction

acceleration based motion is nonuniform in time under control of a static said orientation of the screen means."[18]

4. The term **"programmed calculating means for under control of a screen motion sensed by said sensing means imparting an acceleration based motion pattern to a predetermined selection among said objects"** is construed pursuant to 35 U.S.C § 112, ¶ 6. The claimed function is: "receiving screen motion information and imparting an acceleration based motion pattern to one or more or all displayed objects." The corresponding structure is: "a computer program that performs an algorithm for imparting an acceleration based motion patter, such as those disclosed in Figures 3-5 and at 3:332-4:39."[19]

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[18] The court adopts Plaintiffs' proposed construction, in part, because the parties do not dispute that "said motion" refers to "the acceleration based motion" and provides antecedent basis. (D.I. 132 at 5.) Defendants, however, contend that Plaintiffs' proposed construction, "wherein the acceleration based motion pattern changes over time while the screen means is stationary," changes the meaning and scope of the claim limitation in two aspects. (D.I. 118 at 6.)

First, Defendants argue the construction eliminates the requirement that the motion be "under control" of a static orientation, as required by the claim language and specification. (*Id.*) Second, Defendants argue that Plaintiffs' proposed construction would change the scope of the claim by construing "static orientation" as "stationary." The court declines to adopt Plaintiffs' construction because the plain meaning of "under control" is unambiguous. Plaintiffs' proposed construction eliminates the causal element required by the term "under control." '797 patent, col. 1, ll. 17-19 ("The inventor has found that various spatial orientations of an apparatus according to the preamble may control associated object motions on the screen . . . ."); *id.* col 1 ll. 27-29 ("[T]he orientation of the screen can be used to control various different types of motion depending on the actual spatial orientation.").

During *Markman*, Plaintiffs conceded that they did not see a substantive difference between using the term "stationary" rather than "static," so there does not appear to be a genuine dispute concerning that aspect of the claim term. *Markman* Hr'g Tr. 105:2-12. Accordingly, the court construes the term as "wherein the acceleration based motion is nonuniform in time under control of a static said orientation of the screen means."

[19] The parties rightly agree that this term should be construed under 35 U.S.C. § 112, ¶ 6. They also substantially agree as to the claimed function. The court agrees, as Plaintiffs contend, that the specification directly supports their proposed function. *See* '797, col. 1 ll. 54-56 ("The selection of the moving objects may encompass a single one or more displayed objects, or rather all of them.").

The only remaining dispute is whether "a computer program that performs an algorithm for imparting an acceleration based motion pattern, such as those disclosed in Figures 3-5 and at 3:32-4:39" represents adequate corresponding structure. In essence, Defendants contend that the proposed corresponding structure provides no disclosure of an algorithm to amend a motion pattern or impart an acceleration based motion pattern to a predetermined selection among said objects. (D.I. 118 at 5.) "An algorithm may be expressed in any understandable terms including

5. The term **"said sensing means"** is construed to mean "sensor responsive to gravity."[20]

The '695 Patent

1. The term **"decoding means for decoding at least one signal portion and for decoding a signal portion into a portion of the digital information signal and to supply the portion of a digital information signal depending on a control signal of a first type and to supply a digital information signal in a substantially unmodified form depending on a control signal of a second type"** is construed pursuant to 35 U.S.C. § 112, ¶ 6. The claimed function is: "decoding at least one signal portion by decoding a signal portion into a portion of a digital information signal and supplying the portion of the digital information signal depending on a control signal of a first type, and supply a signal portion as a portion of the digital information in a substantially unmodified form depending on a control signal of a second type." The corresponding structure is: "decoder and switch."[21]

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as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure." *Ergo Licensing LLC v. CareFusion 303, Inc.*, 673 F.3d 1361, 1365 (Fed. Cir. 2012). The court, therefore, is persuaded that Plaintiffs' identifications of structure are sufficient to perform the claimed function.

[20] Plaintiffs urge the court to adopt a construction of the term that refers to "gravitation-controlled sensor" in claim 1. Relying on *Engergizer Holdings, Inc. v. Int'l Trade Comm'n*, 435 F.3d 1366, 1370-71 (Fed. Cir. 2006), Plaintiffs assert that lack of explicit antecedent basis for a term does not render a claim indefinite, so long as the term has a "reasonably ascertainable meaning" to a POSA. As delineated above, *supra* note 16, the court finds that a POSA would readily understand that the term "gravitation-controlled sensor [means]," provides the proper antecedent basis for "said sensing means." (D.I. 117 at 16.) The court therefore construes "said sensing means" as "sensor responsive to gravity."

[21] The parties agree that this term should be construed under 35 U.S.C § 112, ¶ 6. The parties' constructions for the claimed function are almost identical. At *Markman*, the Defendants conceded that Plaintiffs' version corrects some inconsistencies. *Markman* Hr'g. Tr. 145:24-146:2. The court therefore applies Plaintiffs' proposed claimed function, which clarifies antecedent basis for "digital information signal" and corrects minor grammatical informalities in the claim language. The only dispute centers on the corresponding structure.

2. The term **"demultiplexing means for deriving at least one signal portion from the composite signal and for deriving a first identification signal of a first type and a second type from the composite signal"** is construed in accordance with its plain and ordinary meaning.[22]

3. The term **"means for generating the control signal for application to the decoding means including a control signal of the first type depending on the first identification signal of the first type"** is construed pursuant to 35 U.S.C. § 112, ¶ 6. The claimed function is: "generating the control signal for application to the decoding means including a control signal of the first type depending on the first identification signal of the first type." The corresponding structure is:

Defendants assert, relying on *HTC Corp. v. IPCom Gmbh & Co., KG*, 667 F.3d 1270, 1280 (Fed. Cir. 2012), that it is insufficient for the specification to simply state a function; it must outline the algorithm for performing the function. (D.I. 118 at 27.) Defendants contend that the '695 patent fails to disclose corresponding structure for the "decoding means." (D.I. 118 at 26.)

The court believes, however, that Plaintiffs have identified adequate corresponding structure. According to Plaintiffs, a decoder and switch—like decoder 77 and switch 79 of Fig. 2—are well-known structural elements that can be implemented in hardware or software. (D.I. 117 at 19; D.I. 131 at 18.) Nonetheless, the '695 patent discloses specific algorithmic language linking the decoder and switch to the claimed functions. *See* '695 patent, col. 6 ll. 29-48. Thus, Defendants' arguments are unavailing, and the court adopts Plaintiffs' corresponding structure.

[22] The parties dispute whether this term should be construed pursuant to 35 U.S.C. § 112, ¶ 6. As already noted several times, there is a presumption that a term falls within § 112, ¶ 6 where the claim employs the word "means." *Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1257 (Fed. Cir. 1999). This presumption may be overcome when the claim recites sufficient structure for performing the function. *Id.* The court believes that is the case here.

Plaintiffs seek plain and ordinary meaning. The court accepts this definition for two reasons. First, as Plaintiffs' expert Dr. Nathaniel Polish notes, a demultiplexer was a well-known element in the electronic arts as of the filing date of the '695 patent and refers to a particular structure. (D.I. 121 ¶ 76.) Second, Plaintiffs submit that multiplexing is "[a] technique used in communications and input/output operations for transmitting a number of separate signals simultaneously over a single channel or line . . . [by] separat[ing] the signals by time, space, or frequency." MicroSoft Press Computer Dictionary (3d. ed. 1997). Relying on Dr. Polish's declaration and the claim language, Plaintiffs contend that a demultiplexer undoes "multiplexing" by receiving, over a single channel or line, the simultaneously transmitted signals and separating the signals by time, space, or frequency. As demultiplexer connotes structure that undoes the operation of a multiplexer, the court need not apply the means-plus-function analysis.

"identifier that performs the function, such as the algorithm disclosed at 6:16-7:6."[23]

4. The term **"device for reading out a signal"** is construed pursuant to 35 U.S.C. § 112, ¶ 6. The claimed function is: "reading out a signal recorded on a record carrier." The corresponding structure is: "reader."[24]

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[23] The parties rightly agree that this term should be construed pursuant to 35 U.S.C. § 112, ¶ 6 and correctly identify the claimed function. The only dispute is over the corresponding structure.

The corresponding structure is disclosed in the specification: an identifier (see, *e.g.*, identifier 70 of Figure 2) and the algorithms it performs at 6:16-26 and at 6:56-7:6. Plaintiffs submit, citing Dr. Polish's expert declaration, that a POSA would recognize this as adequate structural support for the claimed function. (D.I. 117 at 20.) The court agrees with Plaintiffs.

[24] The parties rightly agree that this term should be construed pursuant to 35 U.S.C. § 112, ¶ 6. They also correctly agree as to the claimed function and that reader 402 from Figure 4 represents corresponding structure. The only remaining dispute is whether the structure should be limited to a reader hardware with magnetic and/or optical read heads or whether it should be broader. *Markman* Hr'g Tr. 142:1-4.

Plaintiffs propose a generic "reader" as adequate structure. Defendants argue that the specification states plainly that the function is performed by reader hardware with magnetic or optical read heads. The specification teaches:

> The reproducing receiver further includes a reader . . . The reader **402** reads the signal recorded on the record carrier **402***b* and supplies the signal thus read to a channel decoder **406**. The record carrier **402***b* can be of the magnetic type. In the present case, the reader **402** includes one or several magnetic read heads **402***a* for reading the information from a track on the record carrier **402***b*. In another embodiment, the record carrier **402***b* is an optical information carrier **402***b*'. In this case, the reader **402** includes an optical read head **402***a* for reading the information from a track on the record carrier **402***b*'.

'695 patent, col. 7 ll. 28-42; Fig. 4. Thus, there is a "clear[] link[]" between the Plaintiffs' proposed structure and the claimed function. *See Omega Eng'g, Inc, v. Raytek Corp.*, 334 F.3d 1314, 1328 (Fed. Cir. 2003).

Defendants' reliance on *Mettler-Toledo, Inc. v. B-Tek Scales, LLC*, 671 F.3d 1291, 1296 (Fed. Cir. 2012) is misplaced. Here, the patent neither expressly teaches a single embodiment, nor does it imply that the corresponding structure is limited to a magnetic read head or an optical read head. Rather, the disclosed magnetic and optical read heads are merely specific embodiments of a reader that are not necessary to perform the claimed function. (D.I. 117 at 21.) Because a broad construction of "reader" aligns with the specification and provides structural support to perform the claimed function, (D.I. 131 at 19), the court adopts Plaintiffs' construction.

The '819 Patent

1. The term **"certificate"** is construed to mean "information containing at least the entity's distinguishing identifier and public key, and signed by a certification authority to guard against forgery."[25]

2. The term **"securely [shares/sharing] the common secret with the second device according to a key management protocol"** is construed to mean "securely [transmits/transmitting] the common secret with the second device according to a key transport protocol or a key agreement protocol."[26]

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[25] Plaintiffs argue their proposed construction should be adopted because it is taken from the International Organization for Standardization ("ISO") standards which were incorporated by reference in the '819 patent. (D.I. 117 at 22.) Defendants argue that their proposed construction is consistent with the specification and the claims. (D.I. 118 at 23.) Defendants further argue that Plaintiffs' proposed construction improperly narrows the claim by importing "public key" and "certification authority" limitations not found in the specification into the claims. (*Id.*) In response, Plaintiffs assert that Defendants' construction conflicts with the definitions in the incorporated ISO standards and merely parrots the subsequent claim limitation's requirement of verifying that the second device complies with a set of rules. *See, e.g.*, '819 patent, col. 6 ll. 65-67 ("verifying that the certificate of said second device identifies said second device as complying with a set of predefined compliance rules.").

Plaintiffs' proposed construction is taken directly from the technical standards which the patent incorporated by reference and clarifies what the term "certificate" would have meant to a POSA at the time of the invention. Contrary to Defendants' assertion, documents that are incorporated by reference are considered part of a patent's specification. *See Chalumeau Power Sys. LLC v. Alcatel-Lucent*, No. 11-11715-RGA, 2013 WL 5913849, at *3 (D. Del. Oct. 30, 2013) (adopting the definition found in a standard incorporated by reference). As such, the definition of "certificate" found in the ISO standards is properly considered. On the on hand, Defendants' proposed construction is functionally no construction at all. On the other hand, Plaintiffs' construction is taken directly form the ISO 9798 and ISO 1170 standards, which were incorporated by reference in the patent, and clarifies what "certificate" would have meant to a POSA. Accordingly, the court adopts Plaintiffs' construction.

[26] The first issue is whether "securely sharing" requires "transmitting." *Markman* Hr'g Tr. 168:12-15. Plaintiffs contend that the prosecution history supports its conclusion that "securely sharing the common secret" requires a secure transmission of the common secret from the first device to the second device. (D.I. 117 at 25.) The court agrees. During the prosecution of the '819 patent, Plaintiffs argued that the Diffie-Hellman algorithm disclosed in the Willey reference does not teach "securely sharing the common secret" because it does not require secure transmission of a common secret: "Willey fails to disclose securely transmitting the common secret. Rather Willey teaches publicly transmitting data that may be used to determine a common secret." (*Id.* at 25; D.I. 138-2 at A260.) In response, the Examiner acknowledged that this claim language requires securely transmitting the common secret, and cited other portions of Willey that purportedly disclose secure transmission. (D.I. 138-2 at A261.) In light of the prosecution history, Plaintiffs' construction of "securely sharing" is correct. *See Philips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) ("[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.")

3. The term **"means for securely sharing a common secret with the second communication device after the second communication device is authenticated"** is construed pursuant to 35 U.S.C. § 112, ¶ 6. The claimed function is: "securely transmitting a common secret with the second communication device after the second communication device is authenticated." The corresponding structure is: "transmitter and microprocessor programmed with software to perform the function, such as the algorithms disclosed at 4:64-5:3, 5:28-59, and all key management protocols that require the secure transmission of a secret that are disclosed in ISO 9798 and ISO 1170."[27]

As to the second issue, Defendants assert that Plaintiffs' construction "according to a key management protocol" would render the dependent claims broader than their parent claims, in violation of 35 U.S.C. § 112, ¶ 4. (D.I. 118 at 22.) For example, Defendants point to claim 5 of the '819 patent which recites that the key management protocol of claim 1, by which the secret is shared, "comprises one of a key transport protocol and a key agreement protocol." '819 patent, col. 7 ll. 19-21. Defendants therefore argue that the sharing of the common secret encompasses sharing through key transport ***and*** agreement protocols. (D.I. 118 at 22.) The court agrees. In addition to the strong support provided by the claim language, the specification also supports Defendants' construction. *See e.g.*, '819 patent, col. 3 ll. 24-27 ("The secret could be shared using e.g. key transport mechanisms as described in ISO 11770-3. Alternatively, a key agreement protocol could be used, which e.g. is also described in ISO 11770-3."); *id.* at col.5 ll. 52-59 (same).

[27] The parties agree that this term is subject to 35 U.S.C. § 112, ¶ 6, but disagree over the function and structure. The claimed function comes straight from the claim language: "securely sharing a common secret with the second communication device after the second communication device is authenticated." '819 patent, col. 7 ll. 49-51.

Defendants, citing *Pressure Prods. Med. Supplies, Inc. v. Greatbatch Ltd.*, 599 F.3d 1308, 1317 (Fed. Cir. 2010), assert that Plaintiffs cannot refer to prior art documents to provide corresponding structure for a means-plus-function claim element. A specification's reference to a document, however, can by itself, provide the corresponding structure if the reference is "sufficient to indicate to one skilled in the art the precise structure." *See Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1382 (Fed. Cir. 1999) (holding that the title of a document sufficiently described corresponding structure); *AllVoice Computing PLC v. Nuance Commc'ns, Inc.*, 504 F.3d 1236, 1241-42 (Fed. Cir. 2007) (holding that a reference to the "DDE protocol" sufficiently described corresponding structure); *Intellectual Ventures I LLC v. AT&T Mobility LLC*, No. 12-193, 2015 WL 1393386, at *10-13 (D. Del. Mar. 24, 2015) (holding that references to GSM and IP protocols sufficiently described corresponding structure). The specification discloses:

> Then in **207**, the first device **201** exchanges a secret with the second device **203**, which e.g. could be performed by transmitting a random generated bit word to **203**. The secret should be shared securely, e.g. according to some key management protocol as described in e.g. ISO 1170.

'819 patent, col. 4 l.65-col. 5 l. 3. The specification further discloses that "the authentication 205 and exchange of secret **207** could be performed using the protocols described in some known ISO standards ISO 9798 and ISO 1170."

4. The term **"means for generating a third signal using said common secret"** is construed pursuant to 35 U.S.C. § 112, ¶ 6. The claimed function is: "generating a third signal using said common secret." The corresponding structure is: "microprocessor programmed with software to perform the function, such as the algorithm disclosed in Figure 3 and at 5:63-6:13."[28]

5. The term **"predefined interval"** is construed to mean "a time interval selected to ensure that the first and second communication devices are sufficiently near one another to permit access to the protected content."[29]

The '809 Patent

1. The term **"certificate"** is construed to mean "information containing at least the entity's distinguishing identifier and public key, and signed by a certification authority to guard against forgery."[30]

Id. at col. 5 ll. 28-30. As the references to the specification connote structure, the court finds a sufficient link between the claimed function and Plaintiffs' proposed corresponding structure.

[28] The parties correctly identify the claimed function of this mean-plus-function term as "generating a third signal using said common secret." They disagree on whether "microprocessor programmed with software to perform the function, such as the algorithm disclosed in Figure 3 and at 5:63-6:13" constitutes adequate corresponding structure. The court agrees, as Plaintiffs contend, that the specification discloses a microprocessor with software and a "category of algorithms" for performing the claimed function. (D.I. 117 at 27.)

[29] The court adopts Plaintiffs' construction. First, the court is persuaded, as Plaintiffs assert, that the specification reveals, and a POSA would recognize, that the round trip is tracked to ensure that the two devices are within an acceptable distance. (D.I. 117 at 23.) The specification discloses references to distance measurement: "determining the distance . . . according to a time difference"; "[t]he time difference . . . can then be used for determining the physical distance"; "measuring distance by measuring the time difference"; "a signal for distance measurement is transmitted to the second device . . . [t]he first device measures the round trip time"; and "the distance is calculated . . . performed by measuring the time." '819 patent, col. 2 ll. 43-48, col 4 ll. 14-16, col. 5 ll. 4-10; col. 6 ll. 19-26. Second, the specification establishes that distance is used to ensure that the two devices are sufficiently close. *See e.g.*, *id.* col. 2 ll. 10-12 ("It is an object of the invention to obtain a solution to the problem of performing a secure transfer of content within a limited distance."); *id.* col. 4 ll. 37-44, Fig. 1 ("only devices within a predefined distance . . . are allowed to receive the content (When read in light of the entire specification, the term "predefined interval" is selected to ensure the two devices are sufficiently close to each other.

[30] *See supra* note 25.

2. The term **"[provide/providing] the secret to the second device"** is construed to mean "securely [transmits/transmitting] the common secret with the second device according to a key transport protocol or a key agreement protocol."[31]

3. The term **"predetermined time"** is construed to mean "a time interval selected to ensure that the first and second communication devices are sufficiently near one another to permit access to the protected content."[32]

The '114 Patent

1. The term **"sequentially applying a narrow-band decoder, an up-sampler and a low-pass filter to the first coded signal"** is construed to mean "applying a narrow-band decoder, an up-sampler and a low-pass filter one at a time."[33]

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[31] The parties collapse their discussion of this term together with "securely [shares/sharing] the common secret with the second device according to a key management protocol." *See supra* note 26.

[32] The parties collapse their discussion of this term together with "predefined interval." *See supra* note 29.

[33] The parties' dispute centers on whether "sequentially" means that the steps are applied in order defined by the claim, or that the steps may be in any order. (D.I. 118 at 29.) Plaintiffs urge that the term be construed as "applying a narrow-band decoder, an up-sampler and low-pass filter to the first coded signal one at a time." (D.I. 117 at 27.) The court adopts this construction.

Contrary to the Defendants' contentions, the '114 patent does not require a particular order. Absent a clear indication by the patentee or disavowal of scope, the embodiment referenced by Defendants do not narrow the claim. *See Epos Techs. Ltd. V. Pegasus Techs. Ltd.*, 766 F.3d 1338, 1341 (Fed. Cir. 2014) ("[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.") (internal quotation marks omitted). Additionally, the specification provides that "various changes and modifications can be made" to the preferred embodiment "without departing from the spirit and scope of the invention." '114 patent, col. 6 ll. 28-31. Accordingly, the court finds no reason to import an ordering limitation to the construction of the term.

2. The term **"sequentially applies a high-pass filter, a LPC synthesis filter and an amplifier to a noise signal"** is construed to mean "sequentially applies a high-pass filter, a LPC synthesis filter and an amplifier to a noise signal one at a time."[34]

The '564 Patent

1. The term **"facilitating a selection of a feature"** is construed to mean "enabling selection of a feature to occur while it is displayed at the second scale."[35]

2. The term **"feature"** is construed to mean "a selectable item comprising data received from the wireless modem."[36]

Dated: July 11, 2017

UNITED STATES DISTRICT JUDGE

[34] The parties collapse their discussion of this term together with "sequentially applying a narrow-band decoder, an up-sampler and a low-pass filter to the first coded signal." *See Supra* note 33.

[35] Defendants propose construing the term in accordance with its plain and ordinary meaning, because neither the specification nor the prosecution history provides any special definition. (D.I. 118 at 15.) In contrast, Plaintiffs argue that a POSA would understand that the claimed term refers to the functionality disclosed in the '564 patent that enables a user to select a feature while that feature is displayed at the second (or zoomed-in) scale. (D.I. 117 at 29.) The court agrees with Plaintiffs. The claim language and specification support Plaintiffs' construction. First, the claim term modifies the clause "for rendering the selected portion on the display at a second scale larger than the first scale," and the word "thereby" expressly links zooming at a second scale to feature selection. ('564 patent, claim 1; D.I. 131 at 29.) Second, the specification confirms that feature selection may happen while zooming is occurring: "[w]hen the user touches the screen, the portion of the image underneath the touched location is enlarged and displayed so that hyperlinks can be individually be selected, possibly after a next, similar zoom-in process." *See* '564 at col. 3 ll. 53-56. The court therefore adopts Plaintiffs' construction.

[36] Defendants propose construing the term in accordance with its plain and ordinary meaning. The court, however, will construe this term given the likely dispute over the plain meaning of "feature." *See O2 Micro International Ltd. v. Beyond Innovation Technology Co., Ltd.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008). Plaintiffs propose construing "feature" as "a selectable item comprising data received from the wireless modem" for two reasons. First, Plaintiffs point to the claim language, which requires "facilitating **selection of a feature**." '564 patent, col. 6 ll.11-12 (emphasis added). Second, the court is convinced by the Plaintiffs' argument that the claim language establishes that the feature must comprise data received from the wireless modem:

> [T]his is confirmed by the claim language itself, which first claims an "image" corresponding to data received from the wireless modem. The claim then states that a portion of this image is displayed at a zoomed-in second scale, to enable selection of a feature. The plain language of the claim requires that the feature is a selectable part of the image, where the image is comprised of data received from the wireless modem.

(D.I. 117 at 30.) Accordingly, the court adopts Plaintiffs' construction.