IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

IRONBURG INVENTIONS LTD., Plaintiff, v. COLLECTIVE MINDS GAMING CO. LTD., a Canadian Limited Company, Defendant.	CIVIL ACTION FILE NO. 1:16-CV-4110-TWT

OPINION AND ORDER

This is a patent infringement action. It is before the Court for a Claims Construction Order regarding eight disputed claim terms in U.S. Patent Nos. 8,641,525 ("the '525 Patent"), 9,089,770 ("the '770 patent"), 9,289,688 ("the '688 Patent"), 9,352,229 ("the '229 Patent"), and 9,308,450 ("the '450 Patent").

I. Background

The Plaintiff, Ironburg Inventions LTD., is a British company that manufactures and sells custom video game equipment and accessories through its American partner Scuf Gaming International, LLC, which is based in Georgia. It is seeking to enforce its rights under a series of patents for a video game controller. In particular, Ironburg's patents describe controllers which have been modified from the standard gaming controller in two ways: through the addition of controls onto the back of the controller, and through the added

ability to adjust the throw of a trigger control. The Defendant, Collective Minds Gaming Co. Ltd., is a Canadian company that also manufactures and sells video game equipment, including video game controllers. Collective Minds now seeks construction of a number of terms in Ironburg's patents.

II. Legal Standard

The construction of claims in a patent case is a matter of law for the Court.[1] In construing patent claims, the Court looks first to the intrinsic evidence. The intrinsic evidence consists of the patent itself, the claim terms, the specification (or written description), and the patent prosecution history, if in evidence.[2] However, not all intrinsic evidence is equal.[3] First among intrinsic evidence is the claim language.[4] A "bedrock principle" of patent law is that the claims of the patent define the patentee's invention.[5] Thus, the Court's focus must "begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use to particularly point out and distinctly claim the subject matter which the patentee regards as his

---

[1] *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996).

[2] *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1346 (Fed. Cir. 2004).

[3] *Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1344 (Fed. Cir. 1998).

[4] *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999).

[5] *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc).

invention."[6] When reading claim language, terms are generally given their ordinary and customary meaning, which is the meaning that the term would have to a person of ordinary skill in the art at the time of the invention.[7]

As a result, an objective baseline from which to begin claims construction is to determine how a person of ordinary skill in the relevant art would understand the terms.[8] Although "the claims of the patent, not its specifications, measure the invention,"[9] the person of ordinary skill in the art is deemed to read the claim terms in the context of the entire patent, including the specification, rather than solely in the context of the particular claim in which the disputed term appears.[10] For instance, the patentee may act as his own lexicographer and set forth a special definition for a claim term.[11]

---

[6] *Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1370 (Fed. Cir. 2005) (*quoting Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001)); *see also Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) ("The written description part of the specification itself does not delimit the right to exclude. That is the function and purpose of claims.").

[7] *Phillips*, 415 F.3d at 1313-14.

[8] *Id.* at 1313.

[9] *Smith v. Snow*, 294 U.S. 1, 11 (1935).

[10] *Phillips*, 415 F.3d at 1313.

[11] *Id.* at 1316.

Claims are part of a "fully integrated written instrument" and, therefore, "must be read in view of the specification, of which they are a part."[12] In fact, the specification is "the single best guide to the meaning of a disputed term" and is often dispositive.[13] "It is therefore entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims."[14] Nevertheless, the Court must be careful not to read a limitation into a claim from the specification.[15] In particular, the Court cannot limit the invention to the specific examples or preferred embodiments found in the specification.[16] In addition to the specification, the prosecution history may be used to determine if the patentee limited the scope of the claims during the patent prosecution.[17] The prosecution history helps to demonstrate how the patentee and the Patent and Trademark Office

---

[12] *Id.* at 1315.

[13] *Id.* (*quoting Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

[14] *Id.* at 1317.

[15] *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 904 (Fed. Cir. 2004).

[16] *Phillips*, 415 F.3d at 1323; *see also Resonate Inc. v. Alteon Websystems, Inc.*, 338 F.3d 1360, 1364-65 (Fed. Cir. 2003) ("[A] particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.").

[17] *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995).

("PTO") understood the patent.[18] However, because the prosecution history represents the ongoing negotiations between the PTO and the patentee, rather than a final product, it is not as useful as the specification for claim construction purposes.[19]

Extrinsic evidence – such as expert and inventor testimony, dictionaries, and learned treatises – is only considered when the claim language remains genuinely ambiguous after considering all of the patent's intrinsic evidence.[20] Although less reliable than the patent and prosecution history in determining construction of claim terms, extrinsic evidence may be used to help the Court understand the technology or educate itself about the invention.[21] In particular, because technical dictionaries collect accepted meanings for terms in various scientific and technical fields, they can be useful in claim construction by providing a better understanding of the underlying technology and the way in which one skilled in the art might use the claim terms.[22] But extrinsic evidence,

---

[18] *Phillips*, 415 F.3d at 1317.

[19] *Id.*

[20] *Tegal Corp. v. Tokyo Electron America, Inc.*, 257 F.3d 1331, 1342 (Fed. Cir. 2001).

[21] *Phillips*, 415 F.3d at 1317; *Vitronics Corp.*, 90 F.3d at 1584.

[22] *Phillips*, 415 F.3d at 1318.

including dictionary definitions, cannot be used to vary or contradict the terms of the patent claims.[23]

III. Discussion

A. Locations on the Controller

1. "top edge" and "front" - '525 Patent, Claims 5 and 17

The parties first dispute the meaning of the terms "top edge" and "front" in dependent Claim 5 of the '525 Patent, and "front" as used in dependent Claim 17 of the '525 Patent. Ironburg contends that no construction is necessary because "top edge" and "front" are terms with ordinary meanings that are easily understood in the context of the patent. Collective Minds contends that "top edge" should be construed as the "uppermost edge of the controller (i.e., the edge furthest from the user when the controller is held horizontally)," and that "front" should be construed to mean the "front face of the controller (if a curved surface, the measurement uses the tangent of the center point of the front face)."

Here, there is no reason to depart from the plain and ordinary meaning of "top edge" and "front." Both of these terms are clearly recited in the '525 Patent as referring to particular faces of the controller. While it perhaps may have been easier to label each face with generic terms that do not carry with them directional baggage (e.g., A, B, C, etc.), that does not mean that a person

---

[23] *Tegal Corp.*, 257 F.3d at 1342; *see also Vitronics Corp.*, 90 F.3d at 1584 n.6 (courts are free to consult dictionaries "so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents"); *Phillips*, 415 F.3d at 1322-23.

of ordinary skill in the art would be unable to understand what "top edge" and "front" mean in the context of the entire patent. Rather, a person of ordinary skill in the art would easily understand what was meant by "top edge" and "front" simply by looking to the rest of the patent. Claim 1 describes the controller as comprising four faces: "a front, a back, a top edge, and a bottom edge, wherein the back of the controller is opposite the front of the controller and the top edge is opposite the bottom edge."[24] Further, Claim 1 goes on to describe that the front of the controller has a control, and that the controller is shaped "such that the user's thumb is positioned to operate the front control."[25] This language alone provides enough context such that a person of ordinary skill in the art would be able to orient himself determine which face is which.

Collective Minds' proposed constructions, meanwhile, would unnecessarily limit both of these terms. For instance, while the "top edge" may be the "uppermost" edge, or may include the "uppermost" edge, it may also encompass more than just the "uppermost" part, such as when a controller has a curved "top edge." In such a situation, the clear intent of the patent is to refer to the entire curved face as the "top edge," but Collective Minds' definition would only consider the "uppermost" portion of this curved edge to be the "top edge."

---

[24] '525 Patent, at 7 [Doc. 1-1].

[25] *Id.*

Further, in the event the front face is a curved surface, Collective Minds wants to go so far as to specifically define the front face as the tangent of its center point. But Collective Minds comes up with this definition out of whole cloth. While it is true that one could not mathematically determine whether the top edge was exactly perpendicular to a curved front without choosing a tangent, nothing in the patent language requires exact mathematical perpendicularity. Instead, it merely requires that the top edge be "substantially perpendicular" to the front. And even if exact perpendicularity was required, nothing in the patent suggests that the tangent must necessarily be the center point of the front face. Rather than using Collective Minds' wholly novel construction of "front," the Court finds that its plain and ordinary meaning is both sufficient and more appropriate here.

2. "located at/on the back of the controller" - '525 and '770 Patents

The parties next dispute the meaning of the terms referencing the location of the back controls. Claims 1 and 20 of the '525 Patent refer to the back controls as being "located on the back of the controller," while Claim 1 of the '770 Patent refers to the back controls as being "located at the back of the controller." Ironburg argues the plain meaning is sufficient here as well, while Collective Minds would like these terms to be construed to say that the rear controls are those which are "positioned to be engaged by the user at the back of the controller."

Once again, however, Collective Minds' construction is an unjustified rewriting of the claim language. Collective Minds claims that its construction is more true to the descriptions of the specification. While it may be true that the specification often uses language that describes its position as something able to be controlled by the user, the fact remains that the patentee chose to claim the positional relationship between the controls and the back of the controller, and not the relationship between the controls and the user. The plain language contained in the claim language is not confusing or ambiguous, and there is no reason to completely redefine the claim language.

3. "Medial portion" -'770 Patent, Claims 4 and 5

The parties next dispute the meaning of the term "medial portion" as used in Claims 4 and 5 of the '770 Patent. Those claims read in relevant part as follows:

> **Claim 4:** A controller "wherein the first distance is between the top edge and the medial portion and the second distance is between the top edge and the medial portion."
>
> **Claim 5:** A controller "wherein the medial portion is closer to the top edge than a distal end of each of the first handle and the second handle."

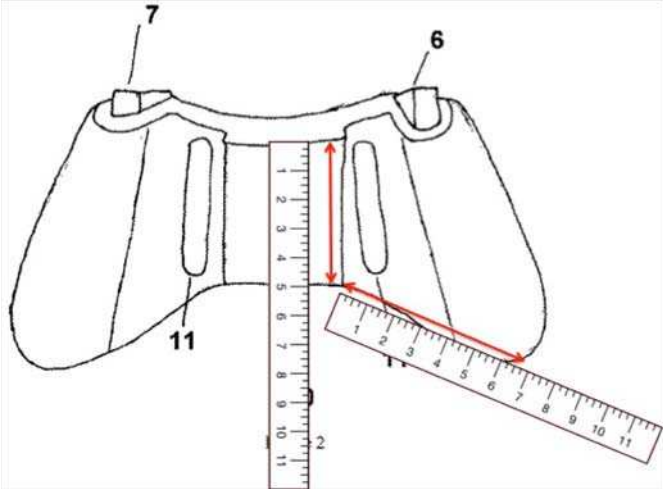
Collective Minds would define "medial portion" in Claim 4 as "the lowest edge of the controller (i.e., the edge closest to the user when the controller is held horizontally) between the handles." Ironburg, meanwhile, argues the ordinary language of the patent is sufficient. The Court agrees with Ironburg as to Claim

4. The patent itself defines what the medial portion is in Claim 5, and Collective Minds' definition does not clarify the term any further.

As for Claim 5, Collective Minds would have the Court construe the phrase to read "the medial portion is closer to the top edge *than the medial portion is* to a distal end of each of the first handle and the second handle." Ironburg once again argues that the plain language is sufficient. Ultimately, the dispute centers around some ambiguity in the claim language which could lead to one of two interpretations. Either (1) the medial portion is closer to the top edge than the distal ends are to the top edge, or (2) the medial portion is closer to the top edge than the medial portion is to the distal ends.

Collective Minds argues that the second interpretation is the correct one, and that the Court should construe the claim so as to make that clear. In particular, Collective Minds points to Claim 3, on which Claim 5 depends. Claim 3 defines the bottom edge of the controller as including "a first convex portion that defines the first handle; a second convex portion that defines the second handle; and a medial portion between the first convex portion and the second convex portion." In order for there to be two convex handles, Collective Minds argues that the medial portion must necessarily be closer to the top edge than the ends of the handles are to the top edge; otherwise, the handles would be concave. Thus, according to Collective Minds, Claim 3's requirement for two convex handles means that the first interpretation would render the claim language redundant.

Further, Collective Minds points to the '770 Patent's Figure 2 as supporting the second interpretation. According to Collective Minds, Figure 2 illustrates a controller in which the distance between the top edge and medial portion is shorter than the distance between the medial portion and the handle ends. Collective Minds then annotated Figure 2 to show this relationship:



Ann. '770 Patent Fig. 2 from Def.'s Opening Claim Construction Brief, at 15 [Doc. 38].

Because Figure 2 shows a controller in which the medial portion is closer to the top edge than it is to the distal ends of the handles, Collective Minds argues that this must be the correct interpretation of Claim 5.

The Court finds that Collective Minds' proposed construction is best suited to the entire language of the patent, and is what a person of reasonable skill in the art would have understood the medial portion to be. As the Federal Circuit has stated, "interpretations that render some portion of the claim

language superfluous are disfavored."[26] Ironburg's proposed construction would merely be a rephrasing of Claim 3's statement that the controller includes convex handles.

In addition, Ironburg's proposed construction would make differentiating between the medial portion and the handles themselves very difficult. According to that construction, any point on the bottom edge that is closer to the top edge than the distal end of the handles is part of the medial portion. But as Figure 2 shows, when the handles are curved, every measurable point on the curve is closer to the top edge than the distal end is; that is what makes the end of the handle distal. Under Ironburg's proposed construction, the only part of the controller that would be part of the handle would be the distal end itself.

Collective Minds' proposed construction, meanwhile, provides a clear differentiation between the handles and the medial portion. As soon as a portion of the bottom edge is closer to the top edge than it is to the distal end of the handles, that is where the medial portion begins and a handle ends. It also encompasses the preferred embodiments, as noted above in Figure 2.

Ironburg responds by arguing that Collective Minds' method of measuring the distances between the medial portion and the distal ends is incorrect, and

---

[26] *Power Mosfet Techs., L.L.C. v. Siemens AG*, 378 F.3d 1396, 1410 (Fed. Cir. 2004).

that it should have done so along a vertical axis, rather than a diagonal one, as shown below.[27]

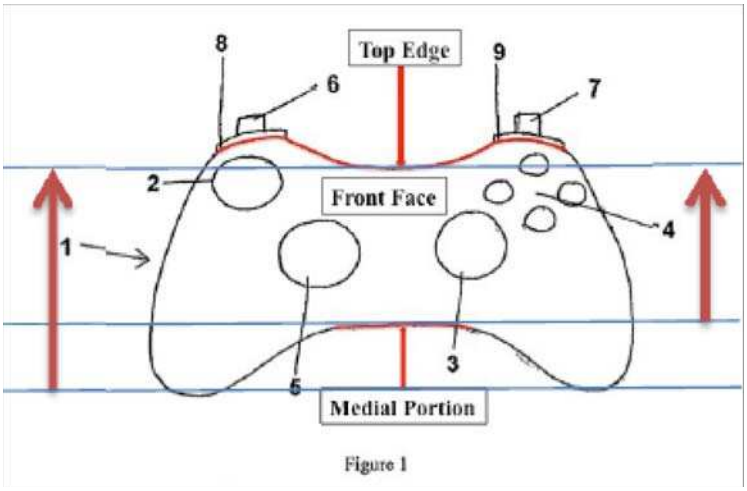


Figure 1

But this argument suffers from a lack of support in the patent language. Nowhere in the patent is there any indication of what method of measuring distance should be used. The most logical approach, then, would be to measure the shortest distance between the two points on a straight line, which is exactly what Collective Minds did in its annotations to Figure 2. Thus, the Court construes Claim 5 to read as "wherein the medial portion is closer to the top edge than *the medial portion is to* a distal end of each of the first handle and the second handle."

4. "Front end of the controller" - '525 Patent, Claim 13

The parties next dispute the meaning of "front end of the controller" as used in Claim 13 of the '525 Patent. Claim 1 of the '525 Patent describes a

---

[27] Ann. Figure 1 from Pl.'s Opposition Claim Construction Br., at 16 [Doc. 42].

controller having a "front," a "back," a "top edge," and a "bottom edge." The front of the controller contains the buttons and controls engaged by the user's thumbs, the top edge of the controller contains the triggers and buttons usually engaged by the user's index or middle fingers, and the back contains the controls engaged by the user's middle or ring fingers. Claim 13 describes the back controls as "converg[ing] towards the *front end* of the controller with respect to one another."[28]

Collective Minds argues that because Claim 13 is dependent on Claim 1, which defines the "front" of the controller, the Court should construe "front end" to mean "front of the controller (as defined by Claim 1)." However, this construction would unnecessarily limit Claim 13. While "front" has clearly been defined by Claim 1, the "front" of the controller is not necessarily the same as the "front end." Indeed, the parties agree that "front" as used here is the same as it is used in Claim 1. The dispute is fundamentally about the meaning of "end." Under Collective Minds' proposed construction, "end" would merely be superfluous, and would make little sense in the context of the entire patent. That being said, leaving "end" as is would also be confusing, as the end of the

---

[28] Ironburg originally requested construction of "converge," but eventually agreed with Collective Minds that the plain and ordinary meaning should control. The parties now only dispute what "front end" of the controller means. *Compare* Pl.'s Opening Claim Construction Br., at 11 *with* Pl.'s Opposition Claim Construction Br., at 25.

front face could mean any of the four general sides of the controller, not just the top or bottom.

Despite the inadequacy of both parties' proposed constructions, however, the specification provides some guidance. It describes the paddles as "converg[ing] towards the *top edge* with respect to each other" in at least one of the embodiments.[29] Thus, it seems clear that the inventor intended Claim 13 to describe paddles that converged toward the top edge. Of course, as Collective Minds points out, it is black letter patent law that "[c]ourts cannot rewrite claim language."[30] Because Claim 13 is dependent on Claim 1, "front" must mean the front face of the controller as defined in Claim 1; it cannot mean "top edge," which is a different face of the controller altogether. The "end" must be some particular place on the front face. Given the language in the specification indicating a convergence towards the "top edge," the construction that makes the most sense is to read "front end" as the "corner or edge of the front face closest to the top edge."

---

[29] '525 Patent at 3:54-56.

[30] *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1383 (Fed. Cir. 2008).

B. "Surface disposed proximate an outer surface" - '688 Patent, Claims 1 and 30

The parties next dispute the use of the phrase "surface disposed proximate an outer surface" as it is used in Claims 1 and 30 of the '688 Patent. The relevant portions of those claims read as follows:

> **Claim 1**: "A games controller comprising. . . [a] first additional control comprising a first elongate member displaceable by the user to activate a control function, wherein the first elongate member comprises a first surface disposed proximate an outer surface of the case . . ."
>
> **Claim 30**: A controller actuator comprising "an elongate member . . . compris[ing] a first surface for being disposed proximate an outer surface of the base of the games controller . . ."

Ironburg argues that the plain and ordinary meaning of this language should control. Collective Minds argues that the language is confusing and should be construed to read as follows:

> **Claim 1**: "A games controller comprising. . . [a] first additional control comprising a first elongate member displaceable by the user to activate a control function, wherein the first elongate member comprises a first surface ~~disposed~~ proximate an outer surface of the case *along the length of the first surface* . . ."
>
> **Claim 30**: A controller actuator comprising "an elongate member . . . compris[ing] a first surface ~~for being disposed~~ proximate an outer surface of the base of the games controller *along the length of the first surface*. . ."

Essentially, Collective Minds is concerned that the existing claim language allows for ambiguity such that an elongate member which is proximate to the outer surface of the game controller at only one discreet point could be considered protected when that was not the patentee's intention.

Collective Minds' point is well taken. The claim language describes the first surface of the elongate member being proximate the outer surface of the controller case. It is clear that the patent contemplates the entirety of the first surface being proximate to the case, not simply a portion of it. Every one of the drawings contained in the patent shows back paddles that run along the length of the controller, rather than stick out from it. Indeed, this is part of the function of the controls; if they stuck out from the controller, they would be much more difficult to use comfortably.

For this reason, the Court finds that Collective Minds' proposed construction does not add a limitation to the claim language. Rather, it is helpful in clarifying what is already the manifest intention contained in the patent, namely, that the elongate members run along the back of the case. This construction does not mean that the elongate members must be exactly parallel, nor that their relationship to the outer surface of the controller necessarily needs to be consistent. That relationship between the first surface and the back of the controller can change (e.g., by curving), as long as the first surface is "proximate" the outer surface along its length. What the line is between proximate and not-proximate is a question for the jury. Thus, the Court construes Claims 1 and 30 of the '688 patent as describing a "first surface proximate an outer surface of the [case or base of the games controller] along the length of the first surface."

C. "Engaging surface" - '688 Patent, Claim 24

The next language the parties dispute comes from Claim 24 of the '688 Patent, which reads in relevant part: a controller "wherein a switch mechanism is mounted to a rear panel of the case wherein the switch mechanism comprises an engaging surface, the engaging surface being disposed in an aperture in an outer surface of the rear panel and arranged flush with the outer surface of the rear panel." Ironburg argues that the plain and ordinary meaning of the term "engaging surface" should control, while Collective Minds argues it should be construed to read as a "surface contacted to engage switch." Collective Minds expressly says that the reason it wants this construction is to make clear that it is not infringing.[31] That is not a sufficient reason to re-construe a claim. The Court does not believe "surface contacted to engage switch" adds any more clarity than "engaging surface." The plain and ordinary meaning here should control.

D. "Command initiation point" - '450 Patent, Claim 1

The parties next dispute the construction of "command initiation point" as used in Claim 1 of the '450 patent. The '450 patent covers a game controller that has a "trigger" control located on the top of it. It also describes a particular feature of the claimed controller that allows the user to tighten or loosen a screw, thereby adjusting the throw of the controller. This means a user can

---

[31] Def.'s Opening Claim Construction Br., at 19.

adjust how much the trigger must be pushed in order to initiate a command in the game, giving the user the ability to change the sensitivity of the trigger depending on what best fits the game being played. For example, in a car racing game in which the trigger controls the throttle, a user may want a longer throw to be able to ease on or off the gas. By contrast, in a first person shooter game in which the trigger controls the gun's trigger in the game, a user may desire to have a short throw to be able to quickly take a shot. Put another way, a longer throw may be more desirable for game commands that occur on a spectrum (e.g., a throttle), whereas a shorter throw may be desirable for binary commands (e.g., shoot or don't shoot).

The controller claimed by the '450 patent allows the user to adjust that function to his desired "command initiation point." Claim 1 specifically describes the game controller as comprising "a screw . . . [that is] configured to contact the strike plate to adjustably define a command initiation point; and wherein the command initiation point defines one end of a range of motion of the actuator body." The parties dispute the meaning of the command initiation point. Collective Minds would have the Court construe the command initiation point to read as a "point in the throw of the actuator body at which a command is initiated." In other words, the point at which the game being played recognized a command. Ironburg argues that the plain and ordinary meaning of the claim language is sufficient.

The Court agrees with Ironburg. Collective Minds' interpretation of the patent language ignores the actual language itself. Claim 1 defines the command initiation point as "one end of a range of motion" determined by the position of the adjustable screw, and Claim 2 further defines it as "a start position." Under this language, therefore, the command initiation point is not the point at which the game registers a command, which could be at different points along the throw depending on the game being played. Rather, it is the point at which the user begins to engage the trigger control. Collective Minds' proposed construction finds no support in the language of the patent itself, and the Court finds that the plain and ordinary meaning of the language is sufficient and should control.

IV. Conclusion

For the reasons set forth above, the Court construes the disputed terms as follows:

Term	Construction
1. Top edge - '525 Patent	Plain and ordinary
2. Front - '525 Patent	Plain and ordinary
3. Located at/on the back of the controller - '525 and '770 Patents	Plain and ordinary
4. Medial portion - '770 Patent	Claim 4: plain and ordinary; Claim 5: "wherein the medial portion is closer to the top edge than *the medial portion is to* a distal end of each of the first handle and the second handle."

5. Front end - '525 Patent	"corner or edge of the front face closest to the top edge."
6. Surface disposed proximate an outer surface - '688 Patent	Claim 1: "first surface proximate an outer surface of the case along the length of the first surface" Claim 30: first surface proximate an outer surface of the base of the games controller along the length of the first surface
7. Engaging surface - '688 Patent	Plain and ordinary
8. Command initiation point - '450 Patent	Plain and ordinary

SO ORDERED, this 14 day of June, 2018.

/s/Thomas W. Thrash
THOMAS W. THRASH, JR.
United States District Judge