United States District Court,
D. Nevada.

SHUFFLE MASTER, INC,
Plaintiff.
v.
MP GAMES, LLC d/b/a Mindplay Games, Robert Mouchou, Alliance Gaming Corp. d/b/a Bally Gaming and Systems and Bally Gaming, Inc,
Defendants.

No. 3:04-CV-0407-ECR-RAM

Dec. 20, 2005.

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ORDER

EDWARD C. REED**, District Judge.**

I. Procedural Background

On October 22, 2004, Plaintiff Shuffle Master ("Plaintiff" or "Shuffle Master") filed an amended complaint (# 42) against Defendants Bally, Mindplay and Robert Mouchou ("Defendants" or "Bally") FN1 alleging patent infringement and trade secret misappropriation. In particular, Plaintiff alleged that Defendants' MP 21 System infringed on their patent, U.S. Patent No. 6,313,871 or the "'871", for which Oliver Schubert is the named inventor. Plaintiff also claimed that the MP 21 System was invented through misappropriation of Plaintiff's trade secrets. Defendants then brought a counterclaim (# 45) on October 28, 2004, against Plaintiff alleging that Shuffle Master misappropriated Defendants' trade secrets after viewing a demonstration of the MP 21 System while under a non-disclosure agreement.

FN1. We note that although Defendants were referred to in the briefings as "Mindplay," the parties now choose to refer to Defendants as "Bally" due to Bally's role in developing and marketing the allegedly infringing MP 21 System.

On January 27, 2005, the parties entered into a stipulation for a Markman hearing for claim construction of contested terms of Plaintiff's and Defendants' patents (# 125).

Plaintiff filed an opening claim construction brief (# 137) on February 25, 2005. Defendants responded to Plaintiff's opening brief (# 164) on March 25, 2005 and Plaintiff filed a reply (# 197) on April 11, 2005.

Defendants filed an opening claim construction brief (# 140) on February 25, 2005. Plaintiff responded to Defendants' opening claim construction brief (# 168) on March 25, 2005 and Defendants filed a reply (# 187) on April 11, 2005.

II. Factual Background

This litigation stems from both Defendants' and Plaintiff's patents which are used to survey gaming tables of casinos in monitoring game play and betting.

Before the invention of the current technology involved in this litigation, humans walking around casinos or video cameras or humans surveying from above were used to monitor gaming activity in casinos. ('871, Description of Related Art, 1:24-47). The automatic systems which use video cameras and computer programs to monitor play activity have reduced labor costs as well as the number of errors that human monitors used to make in surveying gaming tables. The technology described in this litigation is part of comprehensive systems for monitoring game play and analyzing betting on a gaming table. Both Defendants' and Plaintiff's technology concern collecting data on chips and other betting activities to analyze and monitor game play.

Bally and Shuffle Master are competitors in the business of game monitoring systems. These systems are used in casinos all over the United States and are employed in all types of casino games including blackjack, roulette, craps, and wheel of fortune.

Bally and Shuffle Master vary widely in their account of the facts leading to this litigation.

The Plaintiff Shuffle Master begins with the '871 patent's (entitled "Apparatus and Method for Monitoring Gambling Chips") filing on February 19, 1999. The patent was issued on November 20, 2002. The '871 was reduced to practice no later than 1996. Shuffle Master purchased the patent from Oliver Schubert in August 2002.

Plaintiff claims that its trade secrets were disclosed in July 1997 during a prototype demonstration given by Richard Schubert to Robert Mouchou and Gene Carano, who were at that time executives of the El Dorado Hotel and Casino. The meeting between Schubert, Moucho and Carano was part of a round of discussions to start a joint venture between Schubert and the El Dorado to create a fully integrated game table monitoring system. As part of these discussions, the El Dorado had tentatively agreed to purchase the invention which was the subject of the '871 patent as well as the chip recognition system ('647 patent) owned by Schubert. The agreement papers, Schubert claims, were sent to Mouchou and included the trade secrets of the invention.

Plaintiff claims that instead of striking a deal with Schubert, Mouchou disclosed the trade secrets given to him by Schubert to Mindplay which then created the MP 21 System.

Defendants have a different version of the history of this litigation. MP Games LLC ("Mindplay") is a limited liability company which was founded by Richard Soltys, Richard Huizinga and Creed Jones in 1998. Mindplay's assets were purchased by Alliance Gaming Corporation in early 2004. Bally, a subsidiary of Alliance Gaming, is currently marketing the MP 21 System which incorporates the Mindplay patents. Soltys and Huizinga began in 1998 developing and marketing a new technology that monitors play on a blackjack table. Soltys and Huizinga obtained patents for the technology in 2001, including the eight patents in question in this litigation.

In 2001, Shuffle Master inquired about Mindplay's proprietary technology when the MP 21 System was still in development. Defendants claim that following a demonstration by Mindplay, Shuffle Master approached Schubert desiring to create the same system for automatic game table monitoring. Schubert assisted in the development of SmartTable, a rival product of the MP 21 System, which Shuffle Master demonstrated at the Global Gaming Expo in Las Vegas in 2003. After this demonstration, Shuffle Master approached Mindplay about licensing Mindplay's patents for game table monitoring. When Mindplay refused, Bally argues, Shuffle Master filed this suit.

III. Applicable Law

There are two steps to a patent infringement case. Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454 (Fed.Cir.1998)(en banc). First, the court must engage in "claim construction": the defining of the meaning and scope of the claims of the patent. Markman v. Westview Instruments, Inc., 517 U.S. 370, 384 (1996). Second, infringement is determined by comparing the accused device to the properly construed claims. Cybor Corp., 138 F.3d at 1454. While claim construction is a question of law for the court, the second step of infringement analysis is a question of fact for the fact finder. *See N*. Am. Container, Inc. v. Plastipak Packaging, Inc., 415 F.3d 1335, 1344 (Fed.Cir.2005).

Plaintiff and Defendants in this case have asked the court to engage in claim construction concerning patents of both Plaintiff, '871 and '647, and Defendants, '436, '857, '271, '836, '837, '180, '181, '696.

Although construing a patent is much like construing a statute or contract, there are several important differences. Recently, the Federal Circuit clarified the principles and evidence (intrinsic and extrinsic) which district courts are to use in engaging in claim construction. *See* Phillips v. AWH Corp., 415 F.3d 1303 (Fed.Cir .2005). There were several important principles that emerged from this case that will be discussed below in order to instruct our claim construction process.

A. Intrinsic Evidence

First, *Phillips* emphasized that the *primary* sources for guidance in claim construction are the intrinsic sources: claim language, written description of the specification (including drawings and figures), as well as the prosecution history. *Id*. at 1312; Zodiac Pool Care, Inc. v. Hoffinger Indus., Inc., 206 F .3d 1408, 1414 (Fed.Cir.2000); *see also* Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1324-25 (Fed.Cir.2002)("the intrinsic evidence may provide context and clarification about the meaning of the claim terms"); Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582-83 (Fed.Cir.1996)("intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language"). These elements consist of the "public record" of the patent and are therefore more capable of putting the public on notice of what is protected by the patent. *See* Markman, 517 U.S., at 373. The importance of each of these intrinsic sources descends from the claim language, to the specifications, to the prosecution history. Phillips, 415 F.3d at 1312.

1. Claim Language

Examination of the claim language is the first matter for the court in construing claim terms from a patent. Telefex, 299 F.3d at 1324. The court is required to search for the "ordinary and customary" meaning of the term or "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." Phillips, 415 F.3d at 1303. However the ordinary meaning of the term is not taken in isolation. The ordinary meaning of the term cannot be discerned without examination of the context in which the term is used in the contested claims as well as in other relevant claims as claim terms are normally used consistently throughout the patent. Id., at 1314-15.

2. Written Description and Drawings of the Specification

The written description and drawings of the specification are especially important in the construction of the claims due to the fact that the specifications are required by patent law to be "a sort of dictionary which explains the invention and may define terms used in the claims." Markman v. Westview Instruments, Inc., 52 F.3d 967, 979-80 (Fed.Cir.1995).

Specifications are used in very explicit ways in claim construction. First, the specifications can be used to modify an ordinary meaning when the patentee has given the term a special meaning in the specifications. Phillips, 415 F.3d, at 1313. Such special meaning need not be expressly stated. Indeed, "when a patentee uses a claim term throughout the entire patent specification in a manner consistent with only one single meaning, he has defined that term by implication." Bell Atlantic Networks Servs., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1271 (Fed.Cir.2001).

Second, when there is no ordinary meaning that can be discerned from the claim itself, the specifications should be consulted to determine definite meaning. CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1367 (Fed.Cir.2002).

Third, a patentee might disavow a meaning in the specifications that should be eliminated from the claim construction. Teleflex, 299 F.3d at 1325-27. Finally, the construing court may deviate from the ordinary meaning if there are terms in the specifications that can be seen as important that change the ordinary meaning discerned from the claim terms. Toro Co. v. White Consol. Indus., 199 F.3d 1295, 1301 (Fed.Cir.1999).

Specifications should never be used to limit the scope of a claim but only to enlarge it. Teleflex, 299 F.3d at 1326. Because preferred embodiments are usually discussed in the specifications, such embodiments are not exclusive for purposes of claim construction. *Id*.

3. Prosecution History

The *Phillips* court also specified that the prosecution history, if any, is also highly relevant to claim construction. Phillips, 415 F.3d at 1317. Prosecution history is useful because, like the specifications, it was "created by the patentee in attempting to explain and obtain the patent." *Id*. Prosecution history can change the meaning of the claims in two ways: either the patentee discloses a preferred meaning of the terms or he disclaims a meaning of the terms. *Id*. However, the *Phillips* court cautioned that because the prosecution history involves negotiation between the patentee and the Patent and Trademark Office ("PTO"), the

prosecution history lacks clarity and finality. *Id*. at 1318. Therefore, the prosecution history is less important than the specifications and claim language in claim construction. *Id*..

B. Extrinsic Evidence

If after having analyzed all the intrinsic evidence, the claim terms remain ambiguous, the court may turn to extrinsic evidence in resolving the ambiguity. Phillips, 415 F.3d at 1318. However, extrinsic evidence is less reliable than the patent and its prosecution history and consulting such sources should be avoided. *Id*.

The court in *Phillips* authorized the use of technical dictionaries and treatises in aiding in determining the meaning of particular terminology used by those skilled in the art. *Id*. In addition, the court stated that expert witnesses could be helpful in providing background on the technology at issue, in understanding technical aspects of the field of invention as well as the invention itself, and in explaining a particular meaning that a term has in the particular field relevant to the patent. *Id*.

IT IS HEREBY ORDERED that the claims presented for construction in Plaintiff's Opening Claim Construction (# 137) and in Defendants' Joint Opening Claim Construction (# 140) are construed as set forth in Exhibit A attached hereto.

Patent Language	**Claims Involved**	**Shuffle Master's Construction**	**Bally's Construction**	**Court's Construction**
Video Camera	'871 (SM) Claims 1-11, 13, 17, 19, 25, 31, 34, 36, 38, 39-45, 47, 48, 49, 50, 56, 67-71	a device for producing electrical impulses representing visual images spaced in time	a device for producing electrical impulses representing moving visual images spaced in time	*a device for producing electrical impulses representing moving visual images spaced in time*

The term "video camera" is one of the most hotly contested terms between the parties and appears in '871 Claims 1-11, 13, 17, 19, 25, 31, 34, 36, 38, 39-45, 47, 48, 49, 50, 56, 67-71. Of course, "this court interprets claims terms consistently through various claims of the same patent." Callicrate v. Wadsworth Mfg., 427 F.3d 1361, 2005 U.S.App. LEXIS 23531, at *25-26 (Fed.Cir.2005) (citing Rexnord Corp. V. Laitram Corp., 274 F.3d 1336, 1342 (Fed.Cir.2001).

As can be discerned from the differences between Shuffle Master's and Bally's construction, the debate over the construction of this claim term centers on whether video camera should limited to involve simply the production of moving visual images or whether it should be broadened to include not only moving images but still images as well.

Shufflemaster argues that video camera should be viewed in the old-fashioned sense-as in the camera that was invented by Thomas Edison. In 1892, Thomas Edison unveiled the Kinetoscope (in Greek, "kineto" meaning "movement" and "scopos" meaning "to watch") although the idea for the Kinetoscope had been patented by Edison in 1888. The Kinetoscope displayed a rapid series of apparently still frames and created the illusion of moving visual images. Although each frame was a "still" image, when viewed in rapid motion from the feed, the illusion of movement was created.

Great advances in technology have taken place since then. No longer do movie-makers need to rely on the

taking in rapid succession of still images that can be pieced together later. Video cameras now rely on electrical impulses to create movies and videos which display movement on the big, small and home video screens.

However, the essential "idea" of Edison's camera still remains true today-each electrical impulse is representative of one image and when played back in rapid succession each image comes together to represent moving visual images. The difference between a video camera of today and the still camera that Edison used to create the Kinetoscope is that a still camera is used singularly to take single images whereas the video camera is turned on or turned off to take the multiple images that will produce the illusion of movement. While a single picture from a still camera can never be used to take a picture that would, when looked at by itself create movement, a video camera can be used to produce electrical impulses that will represent moving visual images.

We are therefore inclined to rule that a video camera *should* include, in line with looking to the ordinary meaning of the term, moving visual images. However, the Federal Circuit recently held that "[courts] cannot look at the ordinary meaning of the term ... in a vacuum. Rather [courts] must look at the ordinary meaning in the context of the written description and the prosecution history." Medrad, Inc. v. MRI Devices Corp., 401 F.3d 1313, 1319 (Fed.Cir.2005). We therefore scourge the claim language and the specifications for support for the interpretation of this term to include "moving visual images."

As specified in *Phillips,* we necessarily begin with the language of the asserted claims. *Phillips,* 415 F.3d a 1312; Bell Commc'ns Research, Inc. v. Vitalink Commc'ns Corp., 55 F.3d 615, 619-20 (Fed.Cir.1995).

We note first that the term "video camera" is used to collect "video information" which is always referred to as relating to "activities on a gaming table." ('871, Claims 19-34, 10:56, 11:5, 11:8, 11:11, 11:16, 11:19, 11:22, 11:30, 11:34, 11:38, 11:43, 11:46, 11:50, 11:58, 11:62, 11:66, 12:6). The word "activities" corresponds to the actions taking place on the gaming table and therefore has a strong correlation to interpreting "video camera" and "video information" with the understanding "moving visual images." In order to capture "activities" the video camera should be disposed to view movement.

In the claims, the term "video camera" is used in several contexts. The first is placement. Claims 1-18 of the '871 patent deal directly with the physical placement of the video cameras-both below the chip tray and elsewhere around the gaming room to be positioned to take in gaming activities.

Claims 19, 34 and 36 discuss how the video camera is "activated" and "no longer activated" given certain signals from the sensors to the video camera. ('871 Claims 19, 34, 36, 10:67, 12:13, 12:31). In order for the terms "activate" and "no longer activate" to have any meaning, the video camera needs to be able to turn on and to turn off. Unlike a still image which is clicked once to capture one image, a video camera is turned on to start collecting the succession of images which can then represent movement and is turned off to stop collecting that succession of images.

Shuffle Master makes several arguments as to why we should not adopt "moving visual images" in the term "video camera."

First Shuffle Master argues that the video camera is set up to take a picture and cites claim language for such a proposition. We reject that argument noting that "picture" is used with respect to the video capture device and not the video camera. ('871 7:4).

Second, Shuffle Master argues that if we adopt the construction of "moving visual images," the claim will not capture a number of examples that the patentee may have wanted to include. For example, if "moving visual images" is included, the video camera would not be able to represent a still glass of water where it would be able to represent a glass of boiling water because the second scenario involves movement. We find that while this is an interesting example, it is not persuasive in construction of the terms. The question is not whether the electrical impulses *do actually* represent moving visual images but whether the video camera *would be capable of* representing moving visual images if such images were being taken in. Where a still camera cannot produce those moving images, the video camera would be able to do so.

We note that in order to interpret "video camera" away from including "moving visual images" in line with its ordinary meaning, Shuffle Master must be able to put forth special definitions clearly stated in the patent specification or file history. Boss Control, Inc. V. Bombardier, Inc., 410 F.3d 1372, 1377 (Fed.Cir.2005) (citing Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996)). Here, there is no evidence (and indeed such evidence would be contradicted by the claim language cited above which supports construing "video camera" in terms of "moving visual images") that the patentee included a separate and distinct definition of "video camera" that would differentiate it from its ordinary meaning of producing "moving visual images."

2. VIDEO INFORMATION

Patent Language	Claims Involved	Shuffle Master's Construction	Bally's Construction	Courts Construction
Video Information	'871 (SM) Claims 1-38, 43-66, 69-71	data representative of an image	data representative of moving visual images	*data representative of moving visual images*

"Video Information" is also one of the most hotly contest terms in this dispute. Here, "video information" appears in the '871 patent in Claims 1-38, 43-66, 69-71. Again, we interpret the claim terms consistently throughout the various claims of the same patent. Callicrate v. Wadsworth Mfg., 427 F.3d 1361, 2005 U.S.App. LEXIS 23531, at *25-26 (Fed.Cir.2005).

Because we have construed "video camera" as producing "moving visual images," the information the video camera captures ("video information") must relate to "moving visual images" as well. Since the terms are inextricably tied to one another, we find that "video information" to be construed as "data representative of moving visual images." Frank's Casing Crew & Rental Tools, Inc. v. Weatherford Int'l, Inc., 389 F.3d 1370, 1376 (Fed.Cir.2004) ("the principle of consistency within claims operates within the framework of related claims.") (citing *Epcon Gas Sys., Inc v. Bauer Compressors, Inc.,* 279 F.3d 1002, 1031 (Fed.Cir.2000)("the same term of phrase should be interpreted consistently where it appears in claims of common ancestry.")).

Claim Language	Claims Involved	Shuffle Master's Construction	Bally's Construction	Court's Construction
(3) *the sensor being adapted to sense an occurrence of an event on a*	'871 (SM)	No construction necessary. *i.e.:* sensors being adapted to sense an occurrence of an event on a surface of a	a device configured to recognize the presence or absence of a predetermined physical event or condition on a	*a device configured to recognize the presence or absence of a predetermined physical event or*

surface of the gaming table ...	gaming table and to respond with a change of state signal	surface of the gaming table and to respond with a change of state signal	*condition on a surface of the gaming table*

The term "sensor being adapted to sense an occurrence of an event on a surface of the gaming table and to output a change of state signal" is found in '871 Claim 19.

The debate surrounding this claim term centers on whether "predetermined event" should be included in the claim construction. While Bally argues that the events that are sensed by the sensors are predetermined, Shuffle Master argues that the language should not be construed and should be left up to a jury.

Shuffle Master argues that Bally's construction is limiting in that it adds the term "predetermined" into the claim language without any basis. Shuffle Master argues that the term "event" should include anything that the sensors could "sense" including a water glass toppling on top of the gaming table. However, as described later, while normally sensors can "sense" a variety of things (including light, pressure, noise) the sensors which are described in Claim 19 are limited to sensing predetermined events.

Shuffle Master also argues that we should not add "predetermined" as the patentee did not intend for it to be included in this claim term because he used the term "predetermined" in other claim terms and purposefully left it out of Claim 19. ('871 Claims 22, 26, 28, 32, 35, 37, 46, 51, 52, 57, 58, 59, 65, and 66, 11:13, 11:31, 11:40, 11:59, 12:23, 12:26, 12:44, 12:47, 14:37, 14:40, 15:15, 15:21, 15:41, 15:47, 15:53, 16:19, 16:23, 16:30, 16:33). Plaintiff cites no case law for the proposition that because the applicant included the term elsewhere in the claims that this demonstrates conclusive proof that the patentee meant to exclude it from being included in the claim construction elsewhere. It is true that in the absence of an applicant's intent to impart a novel meaning to claim terms, those words take on the ordinary and customary meaning attributed to them by those of ordinary skill in the art at the time of invention. Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1325 (Fed . Cir.2002). However, a patentee's use of the term elsewhere in the claims does not provide clear and convincing evidence that the term in question should not be interpreted to include the aforementioned word.

Shuffle Master finally argues that if the entire phrase were construed the way Bally has indicated, the phrase "and to output a change of state signal" would be redundant as the sensor is adapted, in the claim construction of Bally, to respond with a change of state signal.

While the plain and ordinary meaning should be used, as we noted above, it must be used in the context of the written description and the prosecution history. Medrad, 401 F.3d at 1319. Therefore we examine the written description and prosecution history to see if the ordinary meaning suggested by Shuffle Master would make sense given the term's context.

We find that, without each event that the sensor senses being *predetermined,* the system described by the patent in the claims and specifications would not make logical sense. The claims describe a system of sensors that are set up to generate a change of state signal. In order to know *which* change of state signal to send out, the sensor must be pre-programmed to match an event with a change of state signal. We observe that there are two change of state signals in the claims: to activate the video camera and to de-activate the video camera. ('871, Claims 34 and 36, 12:13, 12:31). In order for the sensor to produce these two different signals, the sensor must know which events activate the camera and which events deactivate the camera.

In addition, the specifications of the preferred embodiment clearly indicate that the events are predetermined. The preferred embodiment describes two different sensors: the hand sensor and the card sensor. ('871 5:59-65, 5:66-6:4). The embodiment clearly specifies that the microprocessor only reacts to certain events (a hand on the hand sensor and no card on the card sensor detected) in order to "eliminate false triggers." ('871 5:62-65). In order to "eliminate false triggers," these events would have to be predetermined. Each of the embodiments described goes through the microprocessor reacting to events related to the hand sensor and the card sensor (or both) and thereby suggests that the microprocessor is searching for certain preprogrammed events in order to send out the right change of state signal. ('871 5:39-50, 5:58-65, 6:15-35). The microprocessor only reacts to certain events and not to others suggesting that these events are predetermined. ('871 6:15-35).

When examining the patent as a whole, therefore, we find that the terms should be construed to include predetermined events.

However, when examining the use of "and to respond with a change of state signal," we find that inclusion of such language would render the language following, "and to output a change of state signal", superfluous. *See* Elektra Instr. S.A. v. OUT Sci. Int'l Inc., 214 F.3d 1302, 1307 (Fed.Cir.2000). We decline to include such language in the construction.

4. COMPRISES A FIRST SENSOR THAT IS POSITIONED TO SENSE AN OCCURRENCE OF A FIRST EVENT ... FURTHER COMPRISES A SECOND SENSOR POSITIONED TO SENSE THE OCCURRENCE OF A SECOND EVENT

Claim Language	Claims Involved	Shuffle Master's Construction	Bally's Construction	Court's Construction
" *comprises a first sensor that is positioned to sense an occurrence of a first event ... further comprises a second sensor positioned to sense the occurrence of a second event* ..."	'871 (SM) Claim 34	no construction necessary *i.e.:* comprises a first sensor that is positioned to sense an occurrence of a first event ... further comprises a second sensor positioned to sense an occurrence of a second event	two different sensors are configured to recognize the presence or absence of two separate and distinct predetermined events on a surface of a gaming table and to respond	*two different sensors are configured to recognize the presence or absence of two separate and distinct predetermined events on a surface of a gaming table and to respond*

Shuffle Master and Bally dispute whether the two sensors described in Claim 34 are separate and distinct or whether they can possibly be the same sensor.

We note first that the term "comprises" has been interpreted by the Federal Circuit to not foreclose additional elements that might satisfy the claims. Sandisk Corp. V. Memorex Prods., 415 F.3d 1278, 1284 (Fed.Cir.2005). Therefore simply because the claim language specifies that a particular claim "comprises" does not limit it description therein.

Shuffle Master offers the same arguments in defense that it offered for "sensors adapted to sense ..." First, it argues that the terms do not need to be construed and they should be left to their plain and ordinary

meaning. "Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement." U.S. Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1568 (Fed.Cir.1997). Here, the meaning of the terms, ordinary or not, is contested by both sides and therefore construction is necessary.

Second, Shuffle Master offers evidence that the patentee knew how to use the word "separate" as it is used in the specifications. ('871 3:31, 5:36). However, as we noted above, evidence that the term is used elsewhere does not constitute a "clear disavowal" by the patentee that certain terms not be included in construction of a different claim term. Teleflex, 299 F.3d 1313, 1327 (Fed.Cir.2002).

Shuffle Master argues that Bally's construction is unnecessarily limiting and would lead to an improperly limited construction. While specification language and external evidence cannot limit the scope of a patent, the Federal Circuit has held that claim language can narrow the meaning of various terms. Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 904 (Fed.Cir.2004) ("it is improper to read a limitation from the specification into the claims") (citing Arlington Indus., Inc. v. Bridgeport Fittings, Inc., 345 F.3d 1318, 1327 (Fed.Cir.2003) and Gart v. Logitech, Inc., 254 F .3d 1334, 1343 (Fed Cir.2001)).

Shuffle Master further argues that the limitation that the two events be "separate and distinct" would create confusion within the patent. They state that "it is unclear from [Bally's] construction whether the placement of two stacks of chips could be 'separate and distinct' events. And how would different ways of using two different types of sensors sensing two different occurrences of events (e.g. a change in light and a change in pressure on the table) that are caused by the same action (e.g. the placement of a stack of trips) be treated?" (Shuffle Master's Opening Claim Construction Brief).

It is clear from the claim language in Claim 34 that the two events are separate and distinct. In Claim 34, three paragraphs discuss the function of the first and second sensor and how they work in relation to one another. ('871 Claim 34 12:1-18). In particular, these paragraphs discuss how the circuitry will activate the video camera upon the detection of the first *and* second signals from the first *and* second sensors. Since the circuitry is awaiting two different signals to react, the circuitry needs to be able to tell the difference between the first and the second signals coming from the first and second sensors.

The specifications (Detailed Description of the Presently Preferred Embodiments) also support this conclusion. While it is true that "reference to a preferred embodiment does not alone undermine the customary meaning and scope of claim language," the preferred embodiment can support a limitation discerned from the claim language itself. Home Diagnostics, Inc. V. LifeScan, Inc., 381 F.3d 1352 (Fed.Cir.2005)(citing Teleflex, 299 F.3d at 1327). In the specifications, the preferred embodiment discusses how the microprocessor reacts to various events. In particular, "[t]he passing of the dealer's hand over the hand sensor, in combination with no cards being detected by the card sensor, generally signals to the microprocessor that a round has started ..." ('871 6:39-41). Continuing, "[t]o eliminate false triggers, the microprocessor does not react to the card sensor until the hand sensor has triggered and all the images for the bet positions have been stored." ('871 6:45-48).

As can be discerned from this language in the specifications, the microprocessor is detecting two separate signals from two separate sensors-the hand sensor and the card sensor. This further supports the construction that the two events be separate and distinct.

5. CHANGE OF STATE SIGNAL

Claim Language	Claims Involved	Shuffle Master's Construction	Bally's Construction	Court's Construction
Change of State Signal	'871 (SM) Claims 19, 34, 36, 43, 44, 45, 46, 47, 48, 51,	no construction necessary *i.e.,* a signal that results from a change of state of a device	an electrical signal generated when a sensor detect(s) the occurrence of a predetermined physical event or condition on a surface of the gaming table, that causes a video camera to commence or stop recording moving visual images.	*a signal that results from a change of state of a device*

The term "change of state signal" is found in Claims 19, 34, 36, 43, 44-48, and 51 of the '871 patent. Shuffle Master and Bally dispute again over the inclusion of "predetermined" in the claim construction. In addition, Shuffle Master objects to the inclusion of "physical" within the construction.

Shuffle Master again argues that the "change of state signal" should be granted its plain and ordinary meaning-i.e. that a "change of state signal" is generated whenever a sensor senses an event. Shuffle Master argues that the patent *already* specifies where the signal has come from and where the change of state signal goes and therefore any effort to include more information on these subjects would render such claim language superfluous and redundant.

Shuffle Master objects to the use of "electrical signal" as well because it limits the change of state signal to *only* electric signals. It argues that the construction of "electric signal" would completely eliminate the circuitry limitation (where the change of state signal is sent to) and would fundamentally change the claim so that the change of state signal, rather than the circuitry, would activate the video cameras.

"A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so." Merck & Co. v. Teva Pharms. USA, Inc., 395 F.3d 1364, 1372 (Fed.Cir.2005). The Federal Circuit has held that constructions that make terms superfluous is to be disfavored. Elekta Instruments S.A. v. O.U.R. Sci. Int'l, Inc., 214 F.3d 1302, 1307 (Fed.Cir.2000)(construing claim to avoid rendering the 30 degree claim limitation superfluous); Gen. Am. Corp. v. Cryo-Trans., Inc., 93 F.3d 766, 770 (Fed.Cir.1996)(rejecting the district court's claim construction because it rendered superfluous the claim requirement for openings adjacent to the end walls); Inline Connection Corp. v.. AOL Time Warner, 347 F.Supp.2d 56, 72 (Fed.Cir.2005)(rejecting the construction of "high" to mean "frequency band" and the claim language already required "frequencies above the highest frequency of the telephone voice band" and therefore "high" would have been superfluous.).

Here, using Bally's construction would cause much of the language of the claims to be superfluous. The language describing how the change of state signal comes about and what happens when one is produced has already been described in the language before "change of state signal" and after: "sensor being adapted to sense an occurrence of an event on a surface of the gaming table and to ouput a change of state signal" and "to activate the at least one video camera to automatically collect video information upon the detection by the circuitry of the change of state signal from the senors." ('871, Claim 19, 10:51-11:3). If we were to adopt Bally's language, these descriptions would be unneccessary and we must prefer constructions that give all terms meaning.

We therefore examine, taking out Bally's superfluous language, whether the signal is "electric" or whether the language should be left as is. Bally argues that inasmuch as the patent dictates that the signal be transmitted from a sensor to a circuit or a microprocessor, it seems clear that the signal is electric. Bally

cites its own expert for this proposition as well as several dictionary definitions. However, it does not point to where in the internal claim language such a construction is necessary. Because we find that the signal might be converted in the circuitry to an electric signal and that the change-of-state-signal is not necessarily electric given the claim language and that Bally's construction using the specifications and extrinsic evidence is unnecessarily limiting, we adopt Shuffle Master's construction.

6. ACTIVATE/NO LONGER ACTIVATE THE AT LEAST ONE VIDEO CAMERA

Claim Term	Claims Involved	Shuffle Master's Proposal	Bally's Proposal	Court's Construction
activate/no longer activate at least one video camera	'871 (SM) Claims 34, 36, 47, 48	No construction is necessary, i.e. activate the at least one video camera	instruct the video camera to commence/stop collecting visual images	*instruct the video camera to commence/stop collecting visual images*

Consistent with our interpretation of "video camera," to "activate the at least one video camera" is to begin its operation which would include the collecting of visual images and "no longer activate the at least one video camera" is to stop the collection of visual images.

7. CONNECTED TO ...

Claim Terms	Claims Involved	Shuffle Master's Construction	Bally's Construction	Court's Construction
Wherein the sensor is connected to the gaming table	'871 (SM) Claim 54	no construction necessary i.e., wherein the sensor is joined or fastened to the gaming table	the sensor is fastened together or joined directly to the gaming table	*the sensor is fastened together or joined directly to the gaming table*

Shuffle Master and Bally again disagree, as they did with "physically connected to," as to whether the sensor needs to be fastened or joined *directly* to the gaming table or whether there can be intervening elements in between.

Shuffle Master argues that because the patentee used "physically" and "operatively" connected in other instances, that physically and operatively connected should be read differently from simply "connected." ('871 Claims 8, 12 10:6, 10:24). Shuffle Master therefore argues that the simple "connected to" should be differentiated from "physically" and "operatively" connected and therefore the terms "physically" or "operatively" should not be read into "connected" in this sense.

Bally too offers that other claims need to be differentiated but concludes that this mandates the inclusion of "directly." Bally argues that Claims 19, 54 and 55 require differentiation and that this differentiation would support the inclusion of "directly." These Claims read:

"... a sensor disposed in proximity to the gaming table ..."

('871 Claim 19, 10:57) "... the apparatus ... in Claim 19 wherein the sensor is connected to the gaming table ..." ('871 Claim 54, 15:30-31)

"... the apparatus ... in Claim 19 wherein the sensor is disposed in proximity to but does not contact the gaming table ..." ('871 Claim 55, 15:34-35)

Bally argues that all three Claims 19, 54, and 55 are dependent and that therefore, the only added limitation in Claim 55 is that the sensor *not* contact the gaming table. ('871 Claim 55, 15:30-31). Bally therefore concludes that in order for Claims 54 and 55 to be distinct, the sensor *must* contact the gaming table in Claim 54.

We are therefore presented with two differentiations by both parties: one relating to "physically" and "operatively" and one relating to another description of the sensors in subordinate claims.

Claim differentiation presumes that each claim has a difference in scope. Free Motion Fitness, Inc. V. Cybex Int'l, 423 F.3d 1343, 1351 (Fed.Cir.2005) (quoting Comark Comm'ns, Inc. V. Harris Corp., 156 F.3d 1182, 1187 (Fed.Cir.1998)). "The difference in meaning and scope between claims is presumed to be significant 'to the extent that the absence of such difference in meaning and scope would make a claim superfluous.' " Free Motion Fitness, 423 F.3d at 1351 (quoting Tandon Corp. V. U.S. International Trade Com ., 831 F.2d 1017, 1023 (Fed.Cir.1987)).

We find Bally's argument that the claim differentiation based on the placement of sensors more persuasive. Shuffle Master's claim differentiation rests on other claims and to the connectedness of the video camera ("physically connected") and the multiplexer ("operatively connected"). If the language in Claim 55 describing the placement of the sensor is to be distinguished from the language of Claim 54 which also describes the placement of the sensor, then the difference between the two claims (the direct connectedness of the sensor to the table) would need to be taken out of Claim 55 to create Claim 54.

8. PHYSICALLY CONNECTED TO

Claim Term	Claims Involved	Shuffle Master's Construction	Bally's Construction	Court's Construction
The at least one video camera is physically connected to the gaming table	'871 (SM) Claim 2	no construction necessary i.e., the at least one video camera is physically joined or fastened to the gaming table	the at least one video camera is fastened together or joined directly to the gaming table	*the at least one video camera is fastened together or joined directly to the gaming table*

Shuffle Master and Bally disagree over the inclusion of "directly" to the connection to the gaming table. The parties have asked us to determine whether the video camera must be directly connected to the gaming table or whether there might be something physically in between the video camera and the gaming table.

Bally argues that the term "directly" must be included in the construction for several reasons. First, Bally points to the dictionary definition of "connected" as meaning "joined or fastened together." (Schuck Supp. Decl. Ex. B. American Heritage Dict.). We note that reliance solely on dictionary definitions has been discouraged by the Federal Circuit. Phillips, 415 F.3d at 1321.

Bally and Shuffle Master each offer their own legal support for the proposition that either "directly" belongs or does not belong in the claim construction.

Shuffle Master points to Sulfur-Tech Water Systems, Inc. v. Kohlenberg, 162 F.Supp.2d 743, 749 (N.D.Ohio 2001). In *Sulfur-Tech,* the district court held that the phrase "connected to" did not have to mean proximate or direct contact with the source of the air. Instead the source of air could be connected by an intermediate means of transmission. *Id.*

Bally points to Ethicon Endo-Surgery v. United States Surgical Corp., 93 F.3d 1572, 1578 (Fed.Cir.1996). In this case, the Federal Circuit held that "the term 'connected to' could, in other contexts, be broadly construed." Id. at 1578. In the context examined by the court in *Ethicon,* connected to had to be read narrowly because it made logical and technical sense.

What becomes clear from these two cases presented by Bally and Shuffle Master is that the determination of whether something is "connected to" is a case-by-case analysis and holdings from one case as to the meaning of a claim cannot be transferred to another. Therefore, we begin our own examination, in the context of the claim language, as to what constitutes "physically connected to." ('871 Claim 2, 9:43).

Here, when looking to the ordinary meaning of the term "physically connected to," we are inclined to exclude constructions which would negate the meaning of the term "physically." "Physically" is used in this claim language to limit the location of the video camera. If the video camera could be located anywhere and connected by a string indirectly, the term "physically" would be rendered meaningless. Such constructions should be avoided. Freedman Seating Co. v. Am. Seating Co., 420 F.3d 1350, 1359 (Fed.Cir.2005).

9. TRANSPARENT BARRIER/TRANSPARENT FRONT WALL

Claim Term	Claims Involved	Shuffle Master's Construction	Bally's Construction	Court's Construction
Transparent Barrier/Transparent Front Wall	'871 (SM) Claim 13 (transparent barrier) Claim 40 (transparent front wall)	a wall (barrier) through which at least a video camera can see objects with clarity	a wall (barrier) capable of transmitting light so that objects can be seen through it with clarity	*a wall (barrier) through which at least a video camera can see objects with clarity*

The claim term "transparent barrier" appears in Claims 13-18 and 41. The claim term "transparent front barrier" appears in Claims 40 and 41.

The dispute over the construction of these terms centers on whether the barrier should be construed broadly and include several things being able to see through the transparent barrier or front wall (including humans) or whether the claim should be limited to include only video cameras being able to see through the transparent barrier.

Bally argues that its construction is based on the plain meaning of the terms "transparent barrier" and "transparent front wall." It cites its expert, Dr. Schuck and several dictionaries (including Wordnet, New Oxford American Dictionary, American Heritage College Dictionary) for the proposition that all transparent objects are capable of transmitting light so that objects can be seen with clarity. This, Bally claims, is the "ordinary meaning" of the term.

While Bally is correct that we are constrained to find that claim terms follow their ordinary meaning, we must also be careful in adopting an ordinary meaning based on a dictionary definition and in making sure that an alleged ordinary meaning is consistent with the claims and specifications. Medrad, Inc. v. MRI Devices Corp., 401 F.3d 1313, 1319 (Fed.Cir.2005) (ordinary meaning must be construed in light of written description and prosecution history); *Pfizer, Inc. v. Teva Pharms. USA, Inc.,* 2005 U.S.App. LEXIS 25123, at (Fed.Cir.2005) ("judges may 'rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by reading of the patent documents.") (quoting Phillips, 415 F.3d at 1322-23) (internal citations omitted)).

Here, while the ordinary meaning points towards Bally's construction, there is an additional limitation within the claim terms which lends to the construction of "transparent barrier (front wall)" to include a video camera.

While the other claims discuss the placement of the transparent wall as well as the fact that the surface facing the players must be made non-reflective, Claim 17 discusses the placement of the video camera behind the transparent wall. The placement of the video camera behind the transparent wall indicates that the video camera is the thing that is required to see with clarity. In addition to the claim language, the specifications indicate that the materials used for the transparent barrier should be chosen in order to "maximize the optics of one or more video cameras." ('871, 4:65-66).

Thus, while the ordinary meaning lends itself to an interpretation where the claim would be broad enough to include multiple things, the claims specify that it is the video camera that must be able to see with clarity in order for the system to work. Whether a human could see through the barrier with clarity is irrelevant in light of our construction of this term. There is no indication that what the video camera can see with clarity is necessarily what a human can see with clarity. Therefore, Shuffle Master's construction is adopted.

10. FRAME

Claim Term	**Claims Involved**	**Shuffle Master's Construction**	**Bally's Construction**	**Court's Construction**
frame	'871 (SM) Claims 39, 40, 42, 67, 68	no construction necessary i.e., a structure for holding or supporting	an open structure or rim for encasing or holding	*an open structure or rim for encasing or holding*

Shuffle Master and Bally argue over the use of "open," "rim" and "encasing," which are not found in the claim, in the construction of "frame."

Shuffle Master argues that Bally is attempting to improperly limit the scope of the term "frame" and that such limitation is not supported by the claims and specification. Bally argues that the term "frame" should be limited to its ordinary meaning in accordance with the specifications and preferred embodiment.

Bally first offers the dictionary definition of "frame" for its ordinary meaning: "an open case or rim for encasing, holding, or bordering." (American Heritage Dictionary). Bally then points to the specifications for support that the frame is open and is used for encasing. Bally specifically points to the preferred embodiment which describes "the frame 24 is sized and constructed to accommodate the chip tray thereupon and to provide a chamber therein for placement of one or more video cameras." ('871 3:24-28, Fig. 1). In

addition, Claim 40 describes the frame as comprising of "two side walls, a back wall, and a transparent wall." ('871 13:1-2). The specification provides a more detailed description of Claim 40. In the preferred embodiment, the frame "comprises a left wall 29, a right wall 31, a back wall 33, and a transparent wall 35, extending between the left wall 29 and the right wall 31. The chip tray 20 is shown raised above the frame in FIG 1 for illustrative purposes. In the illustrated embodiment, the frame 24 elevates the chip tray 20 about 2 cm above the upper surface to accommodate the seven video cameras 27." ('871 3:38-44, Fig. 1).

Shuffle Master first argues that Claim 39 should not be limited as it includes the term "comprising." In accordance with Federal Circuit law, Shuffle Master suggests, "comprising" should be interpreted to be "inclusive" or "open-ended" and should not exclude other possible formulations of the term. CollegeNet, Inc. V. ApplyYourself, Inc., 418 F.3d 1225, 1235 (Fed.Cir.2000)(citing Georgia-Pacific Corp. v. United States Gypsum Co., 195 F.3d 1322, 1327-28 (Fed.Cir.1999)). The Federal Circuit has established that "[t]he transitional term 'comprising' ... is inclusive or open-ended and does not exclude additional, unrecited elements or methods or steps." Georgia-Pacific, 195 F.3d at 1327. Shuffle Master argues that this supports its argument that the "frame" *could* include a top and bottom and is not limited to being open and for encasing.

Shuffle Master then argues that Bally's arguments are unjustified as claims cannot be limited to specific embodiments. Indeed, the Federal Circuit has cautioned against limiting claims to the preferred embodiment. Eolas Tech., Inc. v. Microsoft Corp., 399 F.3d 1325, 1338 (Fed.Cir.2005). However, a preferred embodiment can support a limitation that is placed by the claim terms. Phillips, 415 F.3d at 1313.

Here, while we agree that since the patentee used "comprising" to describe the elements of the frame and that word cannot exclude other items which may comprise the frame, the other claims description of the frame point specifically to the frame being an open structure or rim for encasing or holding.

First, we examine the ordinary meaning of "frame." There are two types of frames: those that support and hold (like the frame of a house) and those that encase or rim (such as a picture frame). The frame described in the claims is more analogous to the picture frame as the "frame" described in the claims is meant to encase or hold the chip tray which is placed inside the frame. As Claim 42 describes, "the frame is adapted to elevate the chip tray about 2cm above the upper surface of the gaming table." ('871 Claim 42, 13:38-39). Nowhere in the claim language or in the specifications is there support for the proposition that the ordinary meaning of the term "frame" as "an open structure or rim for encasing or holding" should be altered especially in light of the purpose of the frame in holding up the chip tray as specified by the claim terms.

The embodiment and figures attached to the claims also support this construction. The frame is described as having side walls to hold up the chip tray that will be placed *in* the frame. ('871 3:38-44). The figure shows an open structure for holding the chip tray and the preferred embodiment describes an open structure with only side walls. ('871 3:38-42, Fig. 1). There is no support in the specifications that this is not an open structure and indeed the purpose of holding the chip tray would be foiled if the frame were not open. Therefore, we adopt Bally's construction of the claim.

11. VIDEO CAMERAS SECURED TO THE FRAME

Claim Terms	Claims Involved	Shuffle Master's Construction	Bally's Construction	Court's Construction
a plurality of	'871	no construction necessary	the video cameras are	*a plurality of video*

video cameras secured to the frame	(SM) Claim 39	*i.e.*, a plurality of video cameras are fastened or attached to the frame	firmly fastened or attached directly to the frame	*cameras are fastened or attached to the frame*

Shuffle Master and Bally disagree over the inclusion of "firmly" and "directly" in relation to the connection to the frame and the video cameras. Again, the debate centers on whether there can be something which acts as an intermediary between the video camera and the gaming table (whether the video cameras can be placed anywhere and connected through something to the gaming table) or whether these video cameras must be attached directly to the gaming table.

Shuffle Master argues that Bally is attempting to add unnecessary limitations to this claim: "firmly" and "directly." Shuffle Master then offers case law showing that some courts have held that "secured" does not necessarily mean "directly connected." Shuffle Master cites *Foster v. Hallco Mfg. Co., Abbott Lab. v. Mead Johnson & Co.,* and *Bruno Indep. Living Aids, Inc. v. Acorn Mobility Servs.,* which all held that "secured" did not necessitate the inclusion of "directly." Foster, 1997 U.S.App. LEXIS 18989, at * 20, 119 F.3d 16, (Fed.Cir.1997)("As the district court correctly noted, the claim does not require "secured" to mean direct connection."); *Abbott Lab. v. Mead Johnson & Co.,* 1996 U.S. Dist. LEXIS 8299, at *14-15 (N.D.Ill.)("Mead Johnson asks this Court to interpret all of the claims of the patent to require the filter be secured directly to the bottom surface without an intervening structure. Neither the claims nor the specifications place this limitation."); Bruno Indep. Living Aids, Inc. v. Acorn Mobility Servs., 301 F.Supp.2d 914, 928 (D.Wis.2003)("As discussed earlier, the fact that arm 204 and seat assembly 106 do not touch directly does not mean that they are not ultimately secured to each other. A person's hand is secured to his or her body notwithstanding intermediaries such as the wrist, lower arm, elbow, upper arm and shoulder.").

As we have said before, while how other courts have interpreted the language "secured to" is instructive, it is not binding given the case-by-case nature of claim construction and the requirement that the ordinary meaning of a word also match the claim meaning. So while these cases are helpful in ascertaining how other courts have gone about interpreting the word "secured to," we will not hold that they mandate such a result.

Bally argues, additionally, that since the term "secured" appears no where else in the patent, the term must be given its ordinary meaning as it would be commonly understood by a person of ordinary skill in the art in the context. This meaning, Bally argues, is the dictionary definition: "firmly fastened"; "to make firm or tight, fasten." *American Heritage Dict.* Bally asks this Court to construe "secured" so that the video cameras in this patent could not be construed to encompass fastening the camera to, say, the chip tray, which is in turn connected to the frame. Bally also argues that the case law presented by Shuffle Master does not apply to this case-the claim terms debated in *Bruno* and *Abbott* relate to structures which are the means for securing. Bruno, 301 F.Supp.2d at 923-24 (a swivel bracket); *Abbott Lab.,* 1996 U.S. Dist. LEXIS 8299, at *14-15 (a housing assembly). We have already noted that case law pertaining to interpretation of particular terms is not binding although instructive and therefore choose not to address Bally's second argument.

We find no reason to limit the claim term to require "direct" connection or attachment with the gaming table. There is no indication from other claims that this term should be limited and therefore we refuse to read that term into the construction of the claim and we refuse to limit claims to the preferred embodiment. Callicrate v. Wadsworth Mfg., 427 F.3d 1361 (Fed.Cir.2005)(importation of limitation from the specifications was improper when it restricted the claims to coverage of one embodiment)(citing Phillips, 415 F.3d at 1312).

12. INDEFINITE CLAIMS OF '871 (SM)

Legal Standard

The requirement of definiteness stems from 35 U.S.C. s. 112, para. 2. A claim is not indefinite if "one skilled in the art would understand the bounds of the claim read in light of the specification." Personalized Media Communications, LLC v. ITC, 161 F.3d 696, 705 (Fed.Cir.1998). If reasonable efforts at claim construction result in an insolubly ambiguous construction and the claim cannot be narrowed to a definitive meaning, then the claim is indefinite. Exxon Research & Eng'g Co. v. United States, 265 F.3d 1371, 1375 (Fed.Cir.2001). The Federal Circuit has set the bar for indefiniteness very high. A claim is *not* indefinite if it simply poses a difficult question of claim construction. *Id*.. "If the meaning of the claim is discernable, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, we have held the claim sufficiently clear to avoid invalidity on indefiniteness grounds." *Id*. (citations omitted). It is important to note in these regards that the issued patent "is entitled to a statutory presumption of validity." Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1347 (Fed.Cir.2005),(citing 35 U.S.C. s. 272).

I. Lower Surface

Bally claims that the claim term "lower surface" located in Claim 1 renders the claim indefinite because although the position of the "lower surface" is central to the claim, there is no indication of where the lower surface is actually located. ('871 Claim 1, 9:34). Bally claims that although the "upper surface" is described in detail, the claims lack a description of how the lower surface is positioned and where it is located. Bally claims that although it is clear that the lower surface is below the upper surface, it could be anywhere including right next to the upper surface or on the floor. Since it is not clear where the lower surface is, and because the video camera located below the lower surface must be capable of viewing activities on the upper surface, Bally argues that the claim language does not provide enough information to permit a potential competitor to have notice on whether or not he is infringing and this renders the claims indefinite.

Shuffle Master argues that Bally's claim here is disingenuous. Shuffle Master argues that any person skilled in the art would know what the "lower surface" of a gaming table is. Shuffle Master also argues that the specifications clearly demonstrate what the patent means by the "lower surface."

We find that Bally's claims of indefiniteness concerning the lower surface are without merit. Indeed, every "gaming table" has two surfaces: a lower surface and an upper surface. More commonly, the lower surface is referred to as the underside. Therefore, construing the "lower surface" as meaning the "underside" of the table, the claim is narrowed and competitors should have notice as to how the patent operates and what is protected.

In addition, this construction is supported by the specifications. Figure 1 identifies **14** as being the lower surface of the gaming table. It is clear that the underside of the table is being indicated by the drawing and thus that the specification supports this construction.

We find, therefore, that the term "lower surface" is not indefinite.

II. "Wherein a plurality of lines can be defined along the perimeter of the game table, each of the plurality of lines being defined to extend normally to the upper surface and to intersect the perimeter

at a different point along the perimeter, the plurality of lines defining a surrounding wall of a volume of space above the upper surface, wherein the volume of space extends upwardly and normally above the upper surface, and wherein the volume of space is defined within the surrounding wall." AND "the line of sight of the video camera forms an angle with the plane of the upper surface that is less than about 45 degrees."

We will analyze the indefiniteness of these claims together because Bally's argument of indefiniteness incorporates both elements. Bally argues that this language is ambiguous and indefinite because the volume of space above and below the gaming table defined is indefinite. Bally argues that the only thing that might save the clause from indefiniteness is the line of sight of the camera as that determines the things videoed. This claim is especially important, Bally argues, because camera placement is at the heart of the disputed claims.

Therefore beginning with the line of sight of the camera, Bally argues that the angle defined between the video camera and the object is ambiguous. Bally argues that the language defining the position of the camera in relation to the object and the angle that creates is subject to two interpretations: either the angle is measured from the "video camera" end of the line of sight or the angle is measured from the "target" end of the line of sight.

We remind Bally that the standard of indefiniteness is high. And here, these claims are not insolubly ambiguous.

The purpose of the placement of the video cameras is to survey the gaming activities on the table. ('871 4:41-44)("so long as at a minimum the end result allows the video camera(s) to collect information of a target site of interest on the gaming table."). We fail to see how if the angle was measured from the "video camera" end of the line of sight how the video cameras would survey the gaming activities at all. Cards are flat objects which can only be seen from a downward perspective. ('871, 3:15-16). Therefore, with the ordinary meaning of the word and in line with the purpose of the invention and placement of the video cameras, we find that the angle can be read as requiring the angle to be measured from the "target" end of the line of sight and therefore the claims are not indefinite.

In addition, there are items in the claim language and specifications to support this proposition. For example, the Detailed Description of the Presently Preferred Embodiments describes that video cameras as elevated by the necks of the mounts "only slightly above the upper surface of the gaming table." ('871, 4:8-10). The preferred embodiment then describes other locations for the video cameras including suspended from the ceiling, on a raised rail or ridge, or within the card discard rack. ('871 4:23-29). All of these locations are above the table with the video camera's line of sight obviously pointing down at the target. The only restraint on where the video cameras can be located is that "[i]n order to ensure that the video cameras are not too high above the gaming table ... the line of sight of each video camera is set to form an angle with a line parallel to the upper surface that is less than about 45 degrees ..." ('871, 4:34-39).

Given the specifications and claim language used, we find that the angle is to be measured from the "target" end of the line of sight and that this renders this claim, therefore, not indefinite.

Bally admits that if the camera angle can be defined, then the volume of space specified in the patent can also be defined. The volume of space is defined by the location of the video camera in that it is the space that will be videoed and therefore is within the 45 degree angle measured by the "target" end of the line of

sight. Since this volume of space can be defined, the claims are not ambiguous and therefore not indefinite.

We find, therefore, that the claims "Wherein a plurality of lines can be defined along the perimeter of the game table, each of the plurality of lines being defined to extend normally to the upper surface and to intersect the perimeter at a different point along the perimeter, the plurality of lines defining a surrounding wall of a volume of space above the upper surface, wherein the volume of space extends upwardly and normally above the upper surface, and wherein the volume of space is defined within the surrounding wall" and "the line of sight of the video camera forms an angle with the plane of the upper surface that is less than about 45 degrees are not indefinite."

III. Glass Barrier

Bally argues that the term "glass barrier" in claims 14, 15, and 53 are indefinite as having no antecedent basis. ('871 Claims 14, 15, 41, 53, 10:33-34, 15:41, 13:16, 15:27). Bally argues that there is no antecedent because "glass barrier" is preceded by "the" making it seem like "glass barrier" has been defined before Claim 14. However, Bally argues that there is no description of "glass barrier" before Claim 14 and therefore contends this makes "glass barrier" indefinite.

Bally overlooks the fact that it is an established principle of the Federal Circuit that "failure to provide explicit antecedent basis for terms does not always render a claim indefinite. If the scope-of a claim would be reasonably ascertained by those skilled in the art, then the claim is not indefinite." Bose Corp. V. JBL, Inc., 274 F.3d 1354, 1359 (Fed.Cir.2001). Therefore, just because the patent did not include an antecedent basis does not render the claim indefinite although lacking an antecedent makes discerning the meaning of claim terms more difficult.

However, we find that "glass barrier" does have an antecedent in Claim 13: transparent barrier. It is clear that the "glass barrier" is the "transparent barrier" because of the language of Claim 13/14 and the language of the preferred embodiment. Claim 14 reads: "the transparent barrier comprises a planar surface that is oriented to eliminate a possibility of a player at the gaming table seeing an underside of a card in a reflection of the glass barrier." ('871 Claim 14, 10:31-35). The transparent barrier is clearly identified as the glass barrier in this claim.

In addition, the preferred embodiment describes the transparent barrier as being a "glass pane." ('871 4:53, 5:59). The preferred embodiment also specifies that "other transparent walls, such as curved transparent walls (barriers) made of glass, plastic, or one of more other materials, may be implemented ..." ('871 59-62). This demonstrates that the transparent barrier can be made of glass.

Bally argues that if the glass barrier has its antecedent in transparent barrier, then transparent barrier must be construed as meaning "transparent barrier of glass." We find this argument unpersuasive because the patentee intended to broaden the materials the transparent walls/barriers could be made of by describing in the specifications that the transparent walls/barriers could be made of "glass, plastic or one of more other materials ..." ('871 59-62).

We find, therefore, that the term "glass barrier" is not indefinite.

IV. "[t]he apparatus for collecting video information relating to activities on a gaming table as set forth in claim 45 ..."

Bally claims that Claim 47 is indefinite because there is a typographical error making the claim indefinite. Shuffle Master claims that even though there is a typographical error, it is clear what the words was supposed to be given that Claim 47 is a dependent claim.

District Courts have the ability to correct typographical errors in patents in limited circumstances. The Federal Circuit has held that a district court "can correct a patent only if (1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the claims." Novo Indus., L.P. v. Micro Molds Corp., 350 F.3d 1348, 1357 (Fed.Cir.2003).

Shuffle Master argues that there was a typographical error in Claim 47: that the word "apparatus" should actually have been "method." Shuffle Master claims that this is a reasonable correction for the court to make since it is dependent on Claim 45 and recites direct language from Claim 45 which is also a method claim and since Claim 47 discusses a "step" making it clear that it intended to be describing a method.

Bally does not offer any arguments that would put the correction of this error to "reasonable debate." *Id*. Bally argues that apparatus might be referring to one of the other apparatus claims from Claim 19. However, this argument is without merit as it is clear that Claim 47 is dependent on Claim 45-not on Claim 19. Bally more relies on strong language from the Federal Circuit cautioning district courts against correcting too many typographical errors. Southwest Software, Inc. V. Harlequin, Inc., 226 F.3d 1280, 1296 (Fed.Cir.2000)("it does not seem to us to be asking too must to expect a patentee to check a patent when it is issued in order to determine whether it contains any errors that require the issuance of a certificate of correction."). Regardless of whether patentees indeed have the duty to check over their patents, the Federal Circuits *have* permitted district courts to make typographical corrections under certain circumstances which have been satisfied here. Novo Indus., 350 F.3d at 1356-57.

We find that the typographical error "the apparatus" should be altered to read "the method."

V. "wherein the at least one video camera comprises a line-of-sight, which comprises an axis of the video camera defined between a focal point on a lens of the video camera and a focal point on a target at which the video camera is aimed."

Bally argues that this claim (taken from Claim 1) is indefinite because when the camera is located on the lower surface, there is no *single* line of sight. We see no reason why the line of sight could not consist of two connecting lines-one from the camera to the prism and then from the prism to the target. The pertinent one for purposes of the patent is surely from the prism to the target but there is no indication that the line of sight has to be directly one straight line from the lens to the target. Therefore, Bally's claim of indefiniteness is without merit.

We find that the claim terms "wherein the at least one video camera comprises a line-of-sight, which comprises an axis of the video camera defined between a focal point on a lens of the video camera and a focal point on a target at which the video camera is aimed" is not indefinite.

13. AGREED TERMS FROM SHUFFLE MASTER PATENT '647

We note that Shuffle Master and Bally have agreed on the construction of the following terms in the '647 patent:

"**chip edges**" to mean: the transition between a chip and something that is not that chip

"**edges of each chip and edges of each individual chip**" to mean: a dividing line between a chip and something that is not a chip

"**edge detection filter**" to mean: a software program or algorithm that detects an edge

"**pixel**" to mean: the smallest unit of a digital image

14. IMAGE CONVERTER/FRAME GRABBER

Claim Terms	Claims Involved	Shuffle Master's Construction	Bally's Construction	Court's Construction
Image Converter	'647 (SM) Claims 2, 3	a device capable of converting a video image to a digital image or representation	a device for converting an analog video image to a digital image	*a device capable of converting a video image to a digital image or representation*
Frame Grabber	'647 (SM) Claim 7	a device capable of converting a video image to a digital image or representation	a device for converting an analog video image to a digital still image	*a device capable of converting a video image to a digital image or representation*

Given that Shuffle Master and Bally have agreed on most of the other disputed terms of the '647 patent, there are only two claims left for claim construction. The central debate in these two terms (which are very similar and for that reason are grouped together in the discussion) is whether "image converter" and "frame grabber" should have included in the claim construction the limitation that the device takes *analog* images and converts them into *digital* images.

Bally, arguing for the inclusion of the limitation of "analog images," claims that we must examine what a person of ordinary skill at the time of invention would have thought a "frame grabber" and "image converter" to be. Bally offers several reasons for this proposition.

First it points to the claim language. Both Claims 2 and 3 point to a conversion *from* a video image *into* a digital image. ('647 Claims 2, 3, 7:34-35, 7:38-39). In order for "digital" to have any meaning, Bally argues, the video image must not be digital.

Second, Bally points to the fact that although the specifications do not refer to an image converter, they do refer to a "digitizer" which should assume the role of the image converter. ('647 3:8, 3:11, 3:14, 3:52, 3:53, 3:58, 3:66, 4:19, 4:21, 5:21). Bally argues that a person of ordinary skill in the art would understand a "digitizer" to mean a device for converting an analog signal to a digital signal and cites its expert, Dr. Lynn Abbott, for such a proposition.

Third, Bally argues that at the time of the invention, a person of ordinary skill in the art would understand that the "image converter" was transforming an analog signal, as analog imagers were most commonly used. In 1995, the relevant date for the purposes of the construction of the '647 patent, *most* video cameras were analog and not digital. (Declaration of Dr. Lynn Abbott, pg. 4-5). Since the video cameras in use at the time and described in the patent were analog, the image converter, Bally argues, must be converting analog

images into digital images.

Bally makes the same arguments with respect to "frame grabber." Bally argues that "frame grabber" refers to conversion *to* a digital image which requires that the image be something other than digital when it started. In addition, Bally points to the fact that the frame grabber is referred in the specifications as "frame digitizer" and that persons of ordinary skill would understand digitizer to mean a device for converting analog images to digital images.

Shuffle Master argues that Bally's attempt to add "analog" to the construction is an improper limitation.

Shuffle Master argues that the patentee knew how to distinguish between digital and analog devices and therefore, since there was no "analog" included in the description of what an image converter does, that "analog" should not be included. However, as we have demonstrated before, just because it is clear that the patentee knew how to use such a word does not militate against inclusion of the word in claim construction of a different claim term.

Here, we find Bally's argument unavailing. Claim specifications, we have noted, are never used to limit the scope of the claim which is what Bally's construction of image converter and frame grabber would have us do. Since "image converter" and "frame grabber" have been left purposefully open and the ordinary meaning of these terms does not require the insertion of "analog," we find the construction that they convert "video" into "digital still images" a perfectly reasonable construction.

15. AGREED TERMS FROM BALLY'S PATENTS

We note that the parties have agreed to the construction of the following claim terms:

"**approximately 180 degrees accumulated field-of-view**" to mean: a field of view of about 180 degrees

"**automatically**" to mean: with minimal human intervention

"**wager**" to mean: a bet

"**successful outcome**" to mean: a winning bet

16. IMAGER

Claim Term	Claims Involved	Shuffle Master's Construction	Bally's Construction	Court's Construction
"*imager*"	'436 (BA) Claims 8-14 '857 (BA) Claims 1, 3-7, 10-13 '836 (BA) Claims 1-2, 9-10 '180 (BA) Claim 1 '696 (BA) Claims 1, 6-8, 11-12, 14	an apparatus for generating an image	an apparatus including one or more devices that captures an image possibly including, but not limited to, color sensors, still cameras or video cameras.	*An apparatus including one or more devices that captures an image*.

As an opening note concerning the construction of Bally's patents, we note that the parties do not dispute that, although the claims terms are contained in several different patents, that the claim terms should be

construed consistently across patents as they stem from the same patent, the same specifications and the same prosecution history.

Shuffle Master and Bally dispute whether "imager" is capturing an image, whether an imager consists of one device or several devices and whether Bally should be permitted to include examples of what an imager might consist of.

We reject Bally's attempt to provide examples of what an "imager" might be. This is an attempt to turn this term into a means-plus-function limitation-i.e. naming what the function the object performs (recording or capturing an image) and then providing the means or devices that can complete the task (color sensors, still cameras, or video cameras). *See* below and Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1321 (Fed.Cir.2003)(in determining a means-plus-function limitation, the court determines the claimed function and then identifies the corresponding structure in the written description that performs the identified function). Since the construction of the claim term "imagers" does not require the inclusion of a means-plus-function analysis, we reject the attempts to include examples in the construction. Indeed, Bally cites no authority for the proposition of allowing examples to be included in claim construction.

Shuffle Master urges us to look no further than the dictionary definition to determine the construction of the claim. The definition from the dictionary of imager is "an electronic or other device that records images of something." (*New Oxford American Dictionary*). Due to the fact that the dictionary references "a" meaning a single device, Shuffle Master argues that the claim term imager should not include multiple devices. Shuffle Master also submits the opinion of its expert, Kenneth A. Castleman, in support of the proposition that someone skilled in the art at the time of filing would have understood imager to mean a single device. We caution Shuffle Master that the dictionary is *not* the first place to be consulted in determining meaning of a term and is only to be used in cases where intrinsic evidence creates ambiguity of the meaning of a term. *Daiichi Pharm. Co. v. Apotex, Inc.,* 380 F.Supp. 478, 487 (D.N.J., 2005)("the Court of Appeals for the Federal Circuit ... issued a strongly worded caution against the blind use of dictionary definitions in claim construction analysis ...").

Shuffle Master also presents evidence from the prosecution history demonstrating that the imager was intended to encompass only one device. Shuffle Master argues that the provisional patent application shows a picture of a gaming table with nine camera positions, with a label "chip tray with nine integrated imagers." This, it argues, clearly demonstrates that the imager is only *one* camera and not several devices.

Continuing on this line of argument, Shuffle Master argues that the patentee used the word "imagers" and therefore the word "imager" can constitute only one device. Such an argument is weak. A car is made up of several parts. If a person has several cars, this does not mean that each car only has one part. We reject such an argument as inapposite.

Bally argues that the intrinsic evidence demonstrates that an imager can include several devices. We are convinced by Bally's proposition. Examining the specifications and Description of the Invention, we are convinced that the term "imager" was meant to include several devices. Evidence of such a conclusion is apparent in the description of what an "imager" consists of. Although in the claim language, the sensor is meant to encompass " *a sensor,* " the patentee has made it clear in the specifications that the imager *can possibly* consist of multiple devices thereby expanding the scope of the claim term: "... the playing surface imager consists of nine area CMOS color sensors although the playing surface imager can employ a lesser or greater number of sensors." ('436, 9:35-38). In addition, in the figures, the "table imager" is shown as

including color sensors C1-C9. ('436, Fig.16). Although it is possible that the imager can consist of one sensor given that it can consist of a lesser number than nine sensors, it is evident that the word "imager" was meant to be able to encompass several sensors. Although Shuffle Master argues that this only applies to the "playing surface imager" it would be improper to exclude a meaning of the term "imager" that would apply to one of the imagers needed for the patent. Indeed, in limiting the imager to be *one single* device, we would be limiting the claim language to exclude proper meanings that have been described in the specifications.

In addition, in examining the claim language and proposed function of the invention, we are convinced that each imager can consist of several devices. Because each imager is meant to have a "field of view," in order to have a view that encompasses more than one straight line view of an object, it might be necessary to have more than one device creating the "field-of-view." ('436, Claims 10, 26:42-44, '857, Claim 10, 26:16-21, '271, Claim 5, 25:33-35, Claim 15, 26:35-36). In addition, claim language from '836 suggests that each imager is capturing image data from a "portion" of the gaming table. This "portion" might include several different lines of sight providing for the need for several devices. ('836, Claim 1, 25:17, Claim 2, 25:26).

Therefore, we refuse to limit the claim term "imager" to mean only *one* device since it is clear from the patent that imager was supposed to include the possibility of being comprised of more than one device.

17. Imaging Camera

Claim Term	Claims Involved	Shuffle Master's Construction	Bally's Construction	Court's Construction
imaging camera	'436 (BA) Claims 1, 3-5, 7 '271 (BA) Claims 13, 18 '696 (BA) Claims 17-19	an apparatus for generating an image	an apparatus for generating an image, including, but not limited to, video cameras, still cameras and/or sensors	*an apparatus for generating an image*

Shuffle Master and Bally again dispute the inclusion of examples ("including, but not limited to, video cameras, still cameras and/or sensors") into the construction of the claim. As we concluded earlier with respect to "imager," the use of examples in claim construction has no basis in the law and is an improper attempt by Bally to create a means-plus-function limitation.

18. CHIP TRAY IMAGER

Claim Language	Claims Involved	Shuffle Master's Construction	Bally's Construction	Court's Construction
chip tray imager	'180 (BA) Claim 1	an imager located in a chip tray	an imager for generating images of a chip tray	*an imager for generating images of a chip tray*

Shuffle Master and Bally dispute over the location of the chip tray imager. While Shuffle Master argues that the chip tray imager must be located *in* the chip tray, Bally argues that the chip tray imager *does not* necessarily have to be located in the chip tray but can gather images related to items in the chip tray.

Bally argues that the chip tray imager is constructed to take an image of the chip tray and this does not support the conclusion that the chip tray imager is in the chip tray. For this proposition, Bally cites to the

claim language: "... a chip tray imager having a field of view encompassing at least a portion of a chip tray and coupled to provide chip tray information to the computer." ('180, Claim 1, 25:8-10). This claim language does *not,* Bally argues, limit the location of the chip tray imager to the chip tray but instead describes the function of the chip tray imager: to generate images of the chip tray.FN1

FN1. We note that Shuffle Master's argument that Bally's claim language is superfluous is now moot due to Bally's change in claim term language at the Markman Hearing, Nov. 21, 2005.

We find Bally's construction persuasive and Shuffle Master's arguments to the contrary unavailing. Shuffle Master argues that the specifications demonstrate that the chip tray imager is located *in* the chip tray. We find that Shuffle Master's cites to such propositions do not demonstrate the unequivocal location of the chip tray imager to be *in* the chip tray. ('180, 8:24-9:22). In addition, Shuffle Master's argument that the "chip imaging camera" is the device that takes inventory of the chip tray is not supported by the evidence in the patent. Shuffle Master also argues that the "chip imaging camera" is the device for examining the contents of the chip tray-not the chip tray imager. Shuffle Master fails to understand that the "chip tray imager" varies from the "chip imaging camera" in that the "chip imaging camera" *specifically* states that it is located *inside* the chip tray whereas the "chip tray imager" does not. ('696, Claim 17, 27:27-30). Whereas the "chip imaging camera" can be construed as being located *in* the chip tray due to the language of the claim, the "chip tray imager" has no such limitation. We refuse to take limitations from the specifications and read them into the claim language when the ordinary meaning of the term "chip tray imager" can be discerned from the claim language itself. 3M Innovative Properties Co. v. Avery Dennison Corp., 350 F.3d 1365, 1371 (Fed.Cir.2005) ("... limitations in the specification must not be routinely imported into the claims because a patentee need not describe all embodiments of his invention ...").

19. PARTIALLY OVERLAPPING FIELDS OF VIEW

Claim Language	Claims Involved	Shuffle Master's Construction	Bally's Construction	Court's Construction
partially overlapping fields-of-view	'**436 (BA) Claims 12, 16, 17 '857 (BA) Claims 7, 13, 15, 16**	fields-of-view which encompass at least some common area on the gaming table	fields-of-view which encompass at least some common area	*fields-of-view which encompass at least some common area on the gaming table*

Shuffle Master and Bally dispute whether the overlap should be on the gaming table or whether it could be located anywhere in space. Given the claim language and the specifications, we find that the overlap must be located on the gaming table.

Claim 17 of '436 provides that the sensors are to be positioned in a way as to "have partially overlapping fields-of-view to provide an approximately 180 degree accumulated field-of-view of the surface *of the gaming table*." ('436, Claim 12, 16, 17)(emphasis added). Indeed, except in one instance, "partially overlapping fields of view" are only described as combining together to provide a 180 degree field of view *of the surface of the gaming table*.FN2 Nothing else is described as being captured by the sensors but activities on the gaming table.

FN2. The exception to the pairing of "partially overlapping field-of-view" with the surface of the gaming

table is in '857, Claim 5 where the field of view from the second sensor is "partially overlapping" with the field-of-view from the first sensor. We note that the language used in this claim, contrary to Bally's argument, is *not* the same. ("the field of view of the second imager partially overlapping *the* field of view of the first imager."). This claim discusses the overlap of specific sensors and has different language and therefore is not to be construed the same as the other claims named above.

In addition, this is consistent with the figures in the specifications which show lines beginning at each imager and ending at the end of the gaming table capturing activities on the top of the gaming surface. ('436, Fig.13).

Bally's argument that neither the phrase "partially overlapping fields-of-view" nor the claim language makes any representation about where the overlapping must occur is inaccurate. It is clear that the partially overlapping fields of view combine to provide a 180 degree field-of-view *of the gaming table*. The claim language is very clear as to what the fields of view encompass and any argument to be contrary is inapposite.

20. MEANS FOR IMAGING AT LEAST A PORTION ...

Claim Term	**Claims Involved**	**Shuffle Master's Construction**	Bally's Construction	**Court's Construction**
Means for Imaging at least a portion of the playing surface of a gaming table/imaging means	'857 (BA) Claim 14	function: imaging at least a portion of the playing surface of a gaming table structure: CMOS color sensor(s)	function: imaging at least a portion of the playing surface of a gaming table structure: CMOS color sensor or sensors or other image capture devices	*function: imaging at least a portion of the playing surface of a gaming table* *structure: CMOS color sensor(s) or other image capture devices*.

We find the same analysis used in the construction "means for table imaging" applies in determining whether "other image capture devices" should be included in the means for the specified function of "table imaging" is applicable here and therefore "other image capture devices" should be included in the means.

21. MEANS FOR TABLE IMAGING

Parties do not dispute that the following is a means-plus-function term governed by 35 U.S.C. s. 112, para. 6**: (sometimes referred to below as section 112, paragraph 6)**

Claim Language	**Claims Involved**	**Shuffle Master's Construction**	**Bally's Construction**	**Court's Construction**
Means for table imaging, table imaging means,	'436 (BA) Claims 15, 16, 18	function: table imaging	function: table imaging	*function: table imaging*

imaging means

structure: CMOS color sensor(s)	structure: CMOS color sensor or sensors or other *image capture devices*	*structure: CMOS color sensor(s) or other image capture devices.*

As we noted above, the claim construction of a means-plus-function limitation involved two steps: first, determination of the function and second determination of the corresponding structure which performs that function. JVW Enterprises, Inc. v. Interact Accessories, Inc., 424 F.3d 1324, 1371 (Fed.Cir.2005) (citing Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1321 (Fed.Cir.2003)).

The parties do not dispute the function of the claim terms. And they do not dispute that CMOS color sensor(s) are the means for performing the function. What they do dispute is whether Bally should be able to include "other image capture devices" into their means-plus-function limitation as one of the means that can perform the function.

The Federal Circuit law on this issue is very clear: a structure is corresponding "only if the specification or the prosecution history clearly links or associates that structure to the function recited in the claim." Omega Eng'g, 334 F.3d at 1321 (citing B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed.Cir.1997)). The Circuit has also held that "structure supporting a means-plus-function claim under s. 112, para. 6 *must* appear in the specification." Atmel Corp. v. Information Storage Devices, Inc., 198 F.3d 1374, 1381 (Fed.Cir.1999) (emphasis added).

Bally argues that "other image capture devices" should be allowed in as a class of devices disclosed in the specification is appropriately considered a corresponding structure and because "other image capture devices" is paired consistently with CMOS color sensors and would be identified by one skilled in the art as a structure that performs the designated structure. It relies on the specification language from '436: "The playing surface imager can employ other image capture devices, although area CMOS color sensors C1-C9 are particular (sic) suitable ..." ('439, 9:33-35).

Shuffle Master argues that use of the word "device" creates an inadequate disclosure of a structure that is prohibited by section 112, paragraph 6. However, the cases that Shuffle Master cites are inapposite. In, *ASM America, Inc. v. Genus, Inc.,* the district court held that " 'Apparatus,' *without more,* is just a synonym for 'device' and just as inadequate to provide the requisite structure." 260 F.Supp.2d 827, 857 (N.D.Cal.2002) (emphasis added). And in *Personalized Media Communications, LLC v. International Trade Com'n,* the court held "the term 'detector' is a sufficient recitation of structure. 'Detector' is not a generic structural term such as 'means,' 'element,' or 'device'..." 161 F.3d 696, 704 (Fed.Cir.1998). What becomes apparent from these two cases that Shuffle Master cites is that use of the word device *without more description* is not sufficient to provide adequate disclosure of the structure. However, this is not the case concerning the words in Bally's patents. Here, the words "other image capture devices" is used demonstrating use of the word device with description of which devices are to be used. We find, therefore, that the cases Shuffle Master cites do not dictate the result that Bally's use of the words "other image capture devices" is an inadequate disclosure of structure.

We find the dichotomy of the two cases *Atmel Corp. v. Information Storage Devices, Inc.* and *Budde v. Harley Davidson, Inc.* to provide the answer to whether generic terms, as long as they describe a particular class of means to be used, are sufficient to provide an adequate disclosure of structure for the purposes of

section 112, paragraph 6. 198 F.3d 1374 (Fed.Cir.1999); 250 F.3d 1369 (Fed.Cir.2001).

In *Atmel,* the Federal Circuit held that reference in the specifications to a journal that recited specific devices to be used as an inadequate disclosure as the patentee cannot "incorporate the disclosure of the cited article by reference to fulfill the definiteness requirement of section 112, paragraph 2. In other words, the content of the article could not be used to discern sufficient structure in the specification that corresponded to the claimed function." Budde, 250 F.3d at 1381 (citing Atmel, 198 F.3d at 1382). *Budde* then differentiated its case from *Atmel* in that *Budde* concerned "whether the characterization, in the patent specification, of the vacuum sensor as a 'commercially available unit' would be understood by one skilled in the art as structure capable of performing the function recited in the claim limitation." *Id.*

Here, as in *Budde,* the question is whether "other image capture devices" would be understood by one skilled in the art as a structure capable of performing the function of "table imaging" as recited in the patent-the question is not whether outside materials can be incorporated by reference as in *Atmel*. "Other image capture devices" is identified *in* the patent thereby satisfying the requirements of section 112, paragraph 6 as defined by the Federal Circuit.

Here, while Bally has presented evidence from its expert Dr. A. Lynn Abbott demonstrating that one skilled in the art would be able to understand that "other image capture devices" would be capable of performing the function of "table imaging," Shuffle Master has presented no evidence to the contrary.

Because we find that Bally has sufficiently shown that "other image capture devices" can be understood by one skilled in the art as a means for performing the specified function and because we find that "other image capture devices" is sufficiently specified within the patent, we find that "other image capture devices" should be included in the means for the specified functions.

22. INDEFINITE CLAIMS OF BALLY PATENTS

Legal Standard

The requirement of definiteness stems from 35 U.S.C. s. 112, para. 2. A claim is not indefinite if "one skilled in the art would understand the bounds of the claim read in light of the specification." Personalized Media Communications, LLC v. ITC, 161 F.3d 696, 705 (Fed.Cir.1998). If reasonable efforts at claim construction result in an insolubly ambiguous construction and the claim cannot be narrowed to a definite meaning, then the claim is indefinite. Exxon Research & Eng'g Co. v. United States, 265 F.3d 1371, 1375 (Fed.Cir.2001). The Federal Circuit has set the bar for indefiniteness very high. A claim is *not* indefinite if it simply poses a difficult question of claim construction. *Id.*. "If the meaning of the claim is discernable, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, we have held the claim sufficiently clear to avoid invalidity on indefiniteness grounds." *Id.* (citations omitted). It is important to note in these regards that the issued patent "is entitled to a statutory presumption of validity." Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1347 (Fed.Cir.2005) (citing 35 U.S.C. s. 282).

I. Gaming Piece

Shuffle Master claims that the term "gaming piece" is indefinite because "the gaming piece" does not refer to the *specific* gaming piece and instead leaves the public unknowing of to which "gaming piece" the patent refers. In addition Shuffle Master argues that the term "the gaming piece" lacks antecedent basis which

creates indefiniteness.

We note that the meaning of the term "the gaming piece" is easily discernable by consulting the claim language as well as the specifications. The figures included in the patent specifically describe that:

FIG. 31 is an isometric view of a pair of die, forming *the gaming pieces* for the gaming table.

FIG. 32 is an isometric view of a roulette wheel forming *the gaming piece* for the gaming table.

FIG. 33 is an isometric view of a wheel of fortune, forming *the gaming piece* for the gaming table.

'836, 4:7-12.

Given that there is evidence in the specifications identifying what the gaming piece may consist of given *what game is being monitored,* we find that Shuffle Master has not presented clear and convincing evidence that the claim term "gaming piece" is indefinite.

We find, therefore, that the term "the gaming piece" is not indefinite.

II. Statistically Predictable/Statistical Aberration/Statistically Meaningful

Shuffle Master claims that the terms "statistically predictable" and all claim terms related to "statistics" are indefinite as they have no antecedent and are not described in the specifications. Shuffle Master claims that the efforts of Bally's expert to explain these claim terms are futile and do not result in a definite construction. Although Bally's expert explains that "knowing the strategy employer, combined with knowledge of the game, a person of ordinary skill in the art can calculate a number of expected successful outcomes for a player employing that strategy," Shuffle Master argues that such an explanation "does not disclose (a) what strategies are employed; (b) what knowledge of what game is needed; or (c) how a person of ordinary skill in the art can calculate a number of expected successful outcomes for a player employing that strategy." (Shuffle Master Oral Argument Slides, No. 207).

Bally argues to the contrary that it's expert Dr. Hannum has shown sufficiently that one skill in the art would understand the claim terms to mean "an anticipated (or projected) number of successful outcome for a player, an average value statistically generated based on knowledge of the rules of the game, the cards in play, and some predefined strategy, such as 'basic strategy.' " (Declaration of Dr. Robert C. Hannum, pg. 3).

The closest case, we find, that mirrors the situation we are presented with-where the casino owner is intended to put in values in order to provide values for comparison-is the case of Datamize LLC v. Plumtree Software, Inc. 417 F.3d 1342, 1348 (Fed.Cir.2005)

In *Datamize,* at issue was the '137 Patent entitled "Electronic Kiosk Authoring System." The patent disclosed a software program that would allow a person to create user interfaces for kiosk systems. One of the values that was put into creating a user interface was the claim term "aesthetically pleasing." *Id.* at 1345. The district court examined the claim term for indefiniteness construing "aesthetically pleasing" to have the ordinary and plain meaning "having beauty that gives pleasure or enjoyment" which, the district court determined was "quite subjective." *Id.* at 1346. Being subjective, the district court determined that the claim was indefinite and searched the specifications for objective limiting terms. The district court found no

limiting terms in the specifications and it additionally found that even the challenged patent's expert admitted that "no objective measure of aesthetics is disclosed in the specification or any of various references." *Id*. at 1346. The district court determined that its holding that "aesthetically pleasing" was subjective (meaning could not be measured in any definite standards and was therefore indefinite) was in line with holdings from other district courts and the Federal Circuit.

The Federal Circuit affirmed the district court's conclusions of the indefiniteness of "aesthetically pleasing." *Id*. at 1350. The Federal Circuit held "the scope of the claim language cannot depend solely on the unrestrained subjective opinion of a particular individual purportedly practicing the invention ... Some objective standard must be provided in order to allow the public to determine the scope of the claimed invention." *Id*. Therefore, if the claim term definiteness depends on the subjective view of the individual practicing the invention, we search the claim language, specifications and extrinsic evidence for some "objective anchor." *Id*.

Here, Bally relies solely on it's expert's opinion to offer objective standards by which to judge "statistically predictable", "statistical aberration" and "statistically meaningful." While we note that expert testimony is disfavored in claim construction, we also note that there is a presumption in favor of definiteness of a claim. Indeed Shuffle Master must put forth clear and convincing evidence that the claim terms are indefinite.

In *Datamize,* the problem with the challenged patent expert's opinion regarding the indefiniteness of the claim, the Federal Circuit found, was that while the expert had identified some parameters for determining "aesthetically pleasing," the expert could not answer how those parameters would be weighed or evaluated to "reach the conclusion that an interface screen is 'aesthetically pleasing.' " *Id*. at 1354. The expert failed even himself to determine if a particular interface would be considered "aesthetically pleasing" given the parameters he described. *Id*.

Here, Dr. Hannum's declaration (1) identifies objective parameters which will be used to determine the statistical terms and (2) how those parameters are weighed in order to determine the statistical terms. Therefore, the patent escapes indefiniteness as described below.

Turning first to "statistically predicable number of successful outcomes," Dr. Hannum asserts that such a term would have the meaning to one of ordinary skill in the art to mean "an anticipated (or projected) number of successful outcomes, an average value statistically generated based on knowledge of the rules of the game, the cards in play, and some predefined strategy, such as 'basic strategy.' " (Decl.Dr.Hannum, pg.3). This gives the person the "expected value" of return given these objective parameters used. By plugging in values for each of these parameters, one should be able to determine the expected value of return for a given game. Dr. Hannum then defines different strategies to give the parameters more objective definition.

With regard to "identifying a statistical aberration in the number of successful outcomes," Dr. Hannum avers that this refers to "comparing the statistically predicted (or expected number of successful outcomes) to the actual number of successful outcomes to identify any statistically meaningful difference between the actual and expected outcomes." (Decl.Dr.Hannum, pg.4). "Statistically meaningful," Dr. Hannum argues, simply means a "confidence interval" whose normal value is 95 but can vary based on the desires of the person employing the invention. So when the number of successful outcomes varies from the number of expected successful outcomes determined by using values for knowledge of the game, cards in play, and strategy employed by a number greater than five, this falls outside the "normal" confidence interval and would be

seen as a statistical aberration since the difference is statistically meaningful.

Since, in this case, Dr. Hannum's declaration describes objective parameters and how they are used in determining each claim term challenged, we find that Bally's claim terms do not suffer from the same indefiniteness that was found in *Datamize*.

Because Dr. Hannum has testified to the metes and bounds of the invention described in the claim terms for '836, we find that the claim terms challenged by Shuffle Master are not indefinite.

23. TYPOGRAPHICAL ERRORS IN BALLY'S PATENTS

Claim(s)	Claim Language	Court's Correction
'436 (BA) claims 5, 7	second table imaging field-of-view different from and the first table imaging field-of-view	*second table imaging field-of-view different from the first table imaging field-of-view (delete and)*
'837 (BA) claim 17	each the determined outcomes that are successful for the player	*each of the determined outcomes that are successful for the player*
'837 (BA) Patent claim 18	statistically probable amount win amount	*statistically probable win amount (delete amount)*

As has been stated before, a court can correct typographical errors during claim construction where:

(1) the correction is not subject to the reasonable debate based on consideration of the claim language and specification, and

(2) the prosecution history does not suggest a different interpretation of the claims.

Novo Indus., L.P. v. Micro Molds Corp., 350 F.3d 1348, 1354 (Fed.Cir.2003).

While Plaintiff has brought to the attention of this court that these claims do have typographical errors in them, it has not shown that the correction Bally suggests is the subject of reasonable debate as is required by the Federal Circuit in *Novo*. *Id*. Therefore, we will correct the typographical errors above as described.

D.Nev.,2005.
Shuffle Master, Inc. v. MP Games, LLC

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