United States District Court,
N.D. California.

FAROUDJA LABORATORIES, INC., et al,
Plaintiffs.
v.
DWIN ELECTRONICS, INC,
Defendant.
Dwin Electronics, Inc,
Counterclaim Plaintiff.
v.
Faroudja Laboratories, Inc., et al,
Counterclaim Defendants.

No. CIV. 97-20010 SW

Nov. 8, 1999.

Owner of patent for video signal processing apparatus sued competitor for infringement. The District Court, Spencer Williams, J., construed claims.

Claims construed.

4,998,287. Construed.

Scott D. Baker, Adaline J. Hilgard, Crosby Heafey Roach & May, SA Francisco, CA, for General Instrument Corp.

Joseph F. Jennings, Stephen C. Jensen, Knobbe Martens Olson & Bear LLP, Newport Beach, CA, for Faroudja Laboratories, Inc.

James J. Elacqua, Daniel R. Hansen, Brobeck Phleger & Harrison, Palo Alto, CA, Edward R. Schwartz, Wesley W. Monroe, Christie Parker & Hale LLP, Irvine, Todd B. Serota, Brian W. Kasell, Troop Steuber Pasich Reddick & Tobey LLP, Los Angeles, CA, for Dwin Electronics, Inc.

CLAIM CONSTRUCTION ORDER

SPENCER WILLIAMS**, District Judge.**

I. INTRODUCTION

Plaintiffs Faroudja Laboratories, Inc. and General Instrument Corporation (collectively "Faroudja") initiated this action for patent infringement against Defendant Dwin Electronics, Inc. ("Dwin"). Faroudja alleges that Dwin is infringing five claims contained in U.S. Patent No. 4,998,287 (hereafter the " '287 patent" or " '287"). The '287 patent is an apparatus that detects whether a video signal was derived from film and creates a progressive-scan display from the video signal to increase resolution. Claims 1, 2, 3, 4, and 5 are at issue

in this litigation.

On September 13, 1999, the Court conducted a claims construction hearing for the patent claims at issue. During the hearing, the parties presented tutorials and made arguments for the purpose of aiding the Court in construing the disputed claims. Because the parties reached agreement on the interpretation of several claim elements after claim construction briefing and the hearing, the Court asked the parties to submit a revised claim construction chart indicating their final positions on the remaining disputed claim elements. The Court received a Final Joint Disputed Claim Element Chart on October 20, 1999 ("Final Chart") and now issues this Order.

II. BACKGROUND ON THE PATENTED TECHNOLOGY

Many video signal sources are derived from commercial motion picture film, which is filmed at 24 frames per second. The transfer of this information from 24 frames per second film to 60 fields per second video is accomplished in the United States most commonly using a method referred to as the "3:2 pull down method" whereby a single film frame is scanned to create a resulting signal comprised of two or three video fields. (For instance, when film frame 1 is scanned using the 3:2 pull down method, three video fields are created: fields 1 and 3 will represent the "even" lines of film frame 1, whereas field 2 will represent the "odd" lines. When film frame 2 is scanned, only two video fields are created: field 4 will represent the "odd" lines of film frame 2, while field 5 will represent the "even" lines.)

The 3:2 pull down method does not result in an even distribution of film frames to video field odd/even pairs. For conventional viewing, this does not matter because the even and odd video fields are displayed on a standard television screen in alternating even/odd/ format (known as "interlacing"). However, when interlacing is removed and all (odd and even) lines are displayed sequentially in a "progressive-scan" format using a line doubler, the resulting scene can contain "motion artifacts" because video lines from different film frames may end up displayed together.

The '287 patent discloses storing alternating odd and even video fields and recombining them into a single sequential (progressive-scan) video scene containing both the odd and even lines to eliminate the interlacing. To increase picture resolution, the '287 patent describes a means of comparing the video fields to determine if certain fields are "identical" (a term whose meaning is disputed by the parties). For video signals that were derived from film, a predetermined sequence of the fields will be deemed "identical." By comparing the results with this predetermined sequence, a determination of whether the video signal was derived from a film source can be made. The '287 patent also discloses a system that synchronizes these video fields to the film source frames. For a video source that was derived from film, the patented invention triggers a switching circuit that recombines odd and even video fields in an improved manner into a single sequential (progressive-scan) video. The patented system continues to compare and recombine video fields until the device no longer detects that the video signal was derived from a film source. The system then reverts into video mode until film is again detected.

III. LEGAL STANDARD

[1] Adjudication of an infringement claim entails two steps: "First, the claim must be properly construed to determine its scope and meaning. Second, the claim as properly construed must be compared to the accused device or process." Nike Inc. v. Wolverine World Wide, Inc., 43 F.3d 644, 646 (Fed.Cir.1994)(quoting Carroll Touch, Inc. v. Electro Mechanical Sys., 15 F.3d 1573, 1576 (Fed.Cir.1993)). Claim construction is a matter of law to be determined by a court. *See* Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed.Cir.1995), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). The comparison between the properly construed claims and the device accused of infringing is a question of fact. *See* General Mills, Inc. v. Hunt-Wesson, Inc., 103 F.3d 978, 981 (Fed.Cir.1997).

A. Evidence

[2] [3] In construing the meaning of claims, courts first consider a patent's intrinsic evidence, which includes the claims, the specification, and the prosecution history. *See* Markman, 52 F.3d at 979. In addition to intrinsic evidence, the parties may offer extrinsic evidence which includes expert testimony, inventor testimony, dictionaries, and learned treatises. *See* id. at 980. Although a court may consider extrinsic evidence, it should look first to the intrinsic evidence of record. *See* Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996). In most situations, analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term. Id. at 1583.

To interpret the disputed language, a court first looks to the words of the claims themselves, both asserted and nonasserted, to define the scope of the patented invention. *See id*. Generally, the words in a claim are given their ordinary and customary meaning. *Id*. The scope of a particular claim can often be determined on inspection of other claims. *See* Specialty Composites v. Cabot Corp., 845 F.2d 981, 987 (Fed.Cir.1988). "Where some claims are broad and others narrow, the narrow claim limitations cannot be read into the broad whether to avoid invalidity or to escape infringement." Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1054-55 (Fed.Cir.1988) (citation and internal quotations omitted).

[4] [5] Although words in a claim are generally given their ordinary and customary meaning, "a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the specific definition of the term is clearly stated in the patent specification or file history." Vitronics, 90 F.3d at 1582. Thus, the specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication. *See id*. (citing Markman, 52 F.3d at 979). A court may not resort to statements in the specification to construe a claim unless there is a claim term with which to draw in those statements. *See* Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1248 (Fed.Cir.1998).

[6] Extraneous limitations appearing in the specifications should not be read into a claim. *See* Enercon GmbH v. International Trade Comm'n, 151 F.3d 1376, 1384 (Fed.Cir.1998)(citing Loctite Corp. v. Ultraseal Ltd., 781 F.2d 861, 867 (Fed.Cir.1985)("Generally, particular limitations or embodiments appearing in the specification will not be read into the claims."). "Extraneous" refers to a limitation read into a claim from the specification wholly apart from any need to interpret what the patentee meant by particular words or phrases in the claim. *See* E.I. du Pont de Nemours & Co. v. Phillips Petro., 849 F.2d 1430, 1433 (Fed.Cir.1988). "Where a specification does not *require* a limitation, that limitation should not be read from the specification into the claims." Specialty Composites, 845 F.2d at 987 (emphasis in original).

[7] [8] [9] "In most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence." Vitronics, 90 F.3d at 1583. Only when intrinsic evidence alone is insufficient may the court use extrinsic evidence, and then only to aid the court in "coming to the proper understanding of the claims" and the technology involved. Id. at 1584. Extrinsic evidence may not be used to vary or contradict the claim language. *See* Markman, 52 F.3d at 981. Expert testimony is to be eschewed and used only as a last resort. *See* Vitronics, 90 F.3d at 1584-85. There is a clear preference for other types of extrinsic evidence, such as dictionaries and prior art documents. *See* id. at 1585. The court may freely consult dictionaries and technical treatises at any time to better understand the technology and may rely on dictionary definitions when construing claims, so long as the dictionary definition does not contradict any definition found in the patent documents. *See* id. at 1584, n. 6.

B. Means-plus-function Claim Elements

[10] [11] As a general principle of claim construction, limitations found in the specification of a patent should not be read into a claim. *See* In re Donaldson Co., 16 F.3d 1189, 1195 (Fed.Cir.1994). However, claim elements expressed as a means or step for performing a specified function are construed to cover the corresponding "structure, material or acts described in the patent specification" and their "equivalents." 35 U.S.C. s. 112, para. 6. Under a means-plus-function analysis, if the specification mentions specific alternative structures, those structures are included in the scope of the patent. *See* Serrano v. Telular Corp., 111 F.3d 1578, 1583 (Fed.Cir.1997). A specification that merely mentions the possibility of alternative structures without specifically identifying them is not sufficient to expand the scope of the claim beyond the example used. *See* Fonar Corp. v. General Electric Co., 107 F.3d 1543, 1551 (Fed.Cir.), *cert. denied,* 522 U.S. 908, 118 S.Ct. 266, 139 L.Ed.2d 192 (1997).

"In determining whether to apply the statutory procedure of section 112, para. 6, the use of the word 'means' triggers a presumption that the inventor used this term advisedly to invoke the statutory mandates for means-plus-function clauses." York Prods., Inc. v. Central Tractor, 99 F.3d 1568, 1574 (Fed.Cir.1996). However, "[t]o invoke this statute, the alleged means-plus-function claim element must not recite a definite structure which performs the described function." Cole v. Kimberly-Clark Corp., 102 F.3d 524, 41 U.S.P.Q.2d 1001, 1006 (Fed.Cir.1996). "An element with ... a detailed recitation of structure, as opposed to its function, cannot meet the requirements of the statute." *Id*. Whether the procedure of s. 112 para. 6 applies should be decided "on an element-by-element basis, based upon the patent and its prosecution history." *Id*.

IV. SUMMARY OF DISPUTED CLAIM TERMS AND CONSTRUCTION

The following table summarizes the disputed claim terms, along with the Court's construction of those terms. The parties agree that all claims at issue are expressed in means-plus-function form as permitted by 35 U.S.C. s. 112, paragraph 6. *See* Defendant's Claim Construction Brief at 1:14-15; Plaintiff's Opening Claim Construction Brief at 5:26-27.

CLAIM 1: DISPUTED TERMS	**CONSTRUCTION**
"repetitive sequentially varying relationship"	The Court adopts Dwin's proposed construction that "repetitive sequentially varying relationship" refers to a video signal produced such that the ratio of video fields to film frames changes between different ratios within the video signal in a predetermined pattern. *See* Defendant's Claim Construction Brief at 6:4-9.
"identical"	The Court adopts Faroudja's position that "identical" means "being the same" or "having such close resemblance as to be essentially the same." *See* Plaintiff's Opening Claim Construction Brief at 9:9-11.
Claim 1, element [b]: means for comparing each received video field with a video field that has been delayed by the duration of said given number of video fields	The function is comparing each received video field with a video field that has been delayed by the duration of said given number of video fields. *See* Plaintiff's Opening Claim Construction Brief at 12:13-17. The structure disclosed in the specification is the field comparator which includes an arithmetic processor (57), first, second, third, and fourth threshold detectors (58, 59,

	60, 61), first, second, third and fourth counters (62, 63, 64, 65) and an OR gate 66 as shown in Figure 3, and its equivalents. 4:3-4; [FN1] 4:50-51; 5:24-43; Figs. 2, 3.
Claim 1, element [c]: means for comparing the results of a successive number of said comparisons with the predetermined sequence to determine when identical fields are located in only said predetermined positions in a sequence of the compared video fields	The function is comparing the results of a successive number of video field comparisons to determine whether the results are consistent with the sequence that would be expected in a video signal derived from film, wherein the expected sequence has identical fields in only certain predetermined positions. The structure disclosed in the specification is the logic circuit which includes n-bit shift register (24) and AND gate (25) as shown in Figure 2, and its equivalents. 4:51-53; Fig. 2.
CLAIM 2: DISPUTED TERMS	**CONSTRUCTION**
Claim 2, element [d] means synchronized by said determination that identical fields are located in only said predetermined positions in a sequence of the compared received video fields, for inserting indications of sequential video field position in the received video signal	A structure which is the same as or the equivalent of the structure in the specification which performs the function of inserting indications of sequential video field position in the received video fields. The structure disclosed in the specification is the film synchronization VBI inserter shown as element 106 in the '287 patent. 7:5-7; 7:25-27.
CLAIM 3: DISPUTED TERMS	**CONSTRUCTION**
Claim 3, element [d] means for timing said comparisons of said compared results with the predetermined sequence and for providing an indication that the received video fields were not so derived from film when a determination that identical fields are located in only said predetermined positions in a sequence of the compared received video fields, is not made within a predetermined time	The Court adopts Dwin's position that the *functions* are (1) timing said comparisons of said compared results with the predetermined sequence *and* (2) providing an indication that the received video fields were not so derived from film when a determination that identical fields are located in only said determined positions in a sequence of the compared received video fields is not made within a predetermined time. *See* Final Chart, p. 4, col. 3. The structure disclosed in the specification is counter (43) and logic gate (30) as shown in Figure 2, and its equivalents.[FN2] *See* Plaintiff's Opening Claim Construction Brief at 16:26-17:2.
CLAIM 4: DISPUTED TERMS	**CONSTRUCTION**
Claim 4, element [a]: means for determining whether the received video signal was derived from a film having successive image frames by producing odd and even video fields from each film frame, with the video fields being produced at a greater rate than the film	The structure described in the specification corresponding to the claimed "determining" function and equivalents thereof. The structure disclosed in the specification is the "comparing" means in Claim 1, element [b], coupled to a logic circuit which includes n-bit shift register (24), first

frame rate and in a repetitive sequentially varying relationship to the film frames	AND gate (25), counter (29), second AND gate (30), and third AND gate (31), as interconnected in Figure 2. 4:51-52; 4:62-64; 5:24-29; Figs. 2, 3.
Claim 4, element [c]: means responsive to a determination that the received video signal was so derived from film, for combining the received and delayed video fields to provide a progressive-scan video frame signal at the video field rate, in which alternate lines are derived respectively from odd and even video fields	The structure described in the specification corresponding to the claimed function and equivalents thereof. The disclosed structure includes switching circuit (36), memory (38, 39), and switch control logic circuit (41) as shown in Figure 2. *See* Plaintiff's Opening Claim Construction Brief at 20:21-28.
Claim 4, element [d]: means responsive to a determination that the received video signal was not so derived from film, for combining the predetermined portions of the received signal to provide a progressive-scan video frame signal at the video field rate	The structure described in the specification corresponding to the claimed function and equivalents thereof. The disclosed structure includes switching circuit (36), memory (38, 39), averaging circuit (37), and switch control logic circuit (41) as shown in Figure 2. *See* Final Chart, p. 13, col. 2.

FN1. Citations to the patent specification are of the form column: line. For example, 4:3-4 refers to column 4 line 3 to 4 of the '287 patent.

FN2. The Court's interpretation of the structure associated with Claim 3, element [d] does not seem inconsistent with either party's proposed structural interpretations. Faroudja identifies the structure " 'as one embodiment,' a counter (43) and logic gate (30)," and Dwin identifies the structure as a "counter 43 and a logic gate 30 in Fig. 2." Final Joint Chart at 9. The Court is unclear why this element is still being disputed by the parties.

V. ANALYSIS OF CLAIM CONSTRUCTION

The Court's understanding of the disputed claim terms and the nature of the disputes stems from the parties' briefs, oral arguments of counsel, and pending motion for summary judgment of non-infringement. This Order interprets the disputed claim terms in a manner that addresses the disputes. The Court does not attempt to interpret claim terms not in dispute.

In interpreting the disputed claim terms of the '287 patent, the Court has considered the intrinsic evidence of record, including the language of the '287 patent claims and the specification of the '287 patent. The Court has also examined extrinsic evidence, including dictionary definitions of the disputed claim terms and expert declarations. As such, the Court sets forth the following ruling on claim construction.

A. Terms Disputed

The parties agree that Claim 1 relates generally to a system for determining the sequential position of video fields of a video signal derived from film. However, the parties dispute the interpretation of several terms used in the preamble which reads as follows, with the disputed language underlined:

A system for determining the sequential position of video fields of a received video signal that was derived from a film having successive image frames, with the video fields having been produced at a greater rate than the film frame rate and in a predetermined *repetitive sequentially varying relationship* to the film

frames wherein at predetermined positions in the sequence a video field is *identical* to the video field preceded it by the duration of a given number of video fields, the system comprising[.]

'287 patent at 8:1-10.

1. "Repetitive Sequentially Varying Relationship"

[12] The parties dispute the interpretation of "repetitive sequentially varying relationship" as stated in the preamble of Claim 1. Plaintiff Faroudja would like the Court to construe "repetitive sequentially varying relationship" to mean "a varying repeating relationship between sequences of video fields derived from film frames in which the field/frame rates do not match and the field rate is greater than the frame rate." Final Chart at 1. Defendant Dwin, on the other hand, proposes a slightly different construction: " 'repetitive sequentially varying relationship' means a video signal produced such that the ratio of video fields to film frames changes between different ratios within the video signal in a predetermined repetitive pattern." Final Chart at 1. The Court adopts Dwin's interpretation as the more legally proper constructionof "repetitive sequentially varying relationship."

In construing "repetitive sequentially varying relationship," the Court is guided by general principles of claim construction and begins with the phrase's ordinary meaning. *See* Vitronics, 90 F.3d at 1583 (instructing the court to look first at the words themselves). The Court may look to other words in the preamble to provide contextual support for the proper interpretation. At first blush, this phrase appears to lack any obvious "ordinary or customary meaning." *See* Wolverine World Wide, Inc. v. Nike, Inc., 38 F.3d 1192, 1196 (Fed.Cir.1994). However, its meaning becomes evident when the Court considers the phrase in context.

First, the "relationship" at issue is the relationship between video fields and film frames. This relationship is better expressed as a ratio. The parties do not appear to disagree that this is the relationship to which the preamble refers. *See* Plaintiff's Opening Claim Construction Brief at 8:6-7; Defendant's Claim Construction Brief at 7:4-5. This ratio, when monitored for a particular sequence, must be "varying" in that the number of video fields derived from a single film frame must change. In addition, the ratios must vary repeatedly within a particular sequence. The sequence referred to is a sequence of video fields. *See* Plaintiff's Opening Construction Claim Brief at 8:6 ("sequences of video fields"); Defendant's Claim Construction Brief at 7:4-5 ("video field sequence").

The '287 specification supports this interpretation as seen in the examples shown in Figures 1 and 7. *See* '287 patent Figs. 1, 7. These diagrams illustrate the relationship between the video fields and the film frames specifically in the context of a 3:2 pull down film-to-video conversion. FN3 For example, in Figure 1, the relationship between the video fields and the film frame is 3 (fields) to 1 (frame) for the first film frame or 3:1; 2 (fields) to 1 (frame) for the second film frame or 2:1; 3 (fields) to 1 (frame) for the third film frame or 3:1; 2 (fields) to 1 (frame) for the fourth film frame, and so forth. Thus, the *relationship* of video fields to film frame within this video field sequence *varies sequentially* between 3:1 and 2:1 in a *repetitive* pattern: 3, 2, 3, 2, etc.

FN3. The 3:2 pull down method is a common technique used to convert film to video. Other techniques, such as a 4:3:3 pull down method, would involve a transfer process whereby four video fields are derived from the first film frame, three video fields from the second frame, three fields from the third frame, four fields from the fourth frame, and so forth. In such a system, the ratio of video fields to film frames would vary sequentially between 4:1 and 3:1. Film that was transferred to video using a 4:3:3 pull down method would be distinguished by a repetitive predetermined pattern of 4, 3, 3, 4, 3, 3, etc. Using such a process instead of the 3:2 pull down method would also meet the limitations of the preamble of Claim 1 as construed.

Faroudja accuses Dwin of trying to "import an *example* of a repetitive sequentially varying relationship, namely the 3:2 pull down method, into the claim interpretation." Plaintiff's Opening Claim Construction Brief at 6:28-7:1. Although Dwin may have attempted this at one time, see Joint Claim Construction ("JCC"), p. 1, col. 3, it does not appear that Dwin does this now, see Final Chart, p. 1, col. 3. However, to the extent that either party proposes to import an example of a repetitive sequentially varying relationship into the claim interpretation (e.g. such as the repetitive sequentially varying relationship associated with the 3:2 pull down method), their interpretation must be denied. The illustrations provided in the specification provide only one example of a repetitive sequentially varying relationship. The interpretation of "repetitive sequentially varying relationship" is not limited to the specific relationship which arises from the use of 3:2 pull down techniques and encompasses any varying relationship of video fields to film frame that repeats sequentially.

Faroudja's proposed interpretation of "repetitive sequentially varying relationship" is "a varying repeating relationship between sequences of video fields derived from film frames in which the field/frame rates do not match and the field rate is greater than the frame rate." Final Chart, p. 1, col. 2. The language, "in which the field/frame rates do not match and the field rate is greater than the frame rate," is superfluous. Faroudja has stated that the relationship between video fields and film frames is a "varying repeating relationship." It is unnecessary to repeat this limitation again by stating that the "field/frame rates do not match". Also, Faroudja attempts to import a limitation from another part of the preamble which already requires the field rate to be greater than the frame rate into the construction of this phrase. *See* '287 patent at 8:1-10 ("the video fields having been produced at a greater rate than the film frame rate"). Such a limitation which requires the field rate to be greater than the film rate is not required for the interpretation of the phrase "repetitive sequentially varying relationship," nor is it a limitation supported by plain language or the specifications.

Although the Court does not believe that the parties' proposed interpretations differ much in substance, the Court adopts Dwin's proposed construction of the phrase "repetitive sequentially varying relationship" as correct.

2. "Identical"

[13] The preamble of Claim 1 states "wherein at predetermined positions in the sequence a video field is *identical* to the video field preceded it by the duration of a given number of video fields[.]" '287 patent at 8:7-9 (emphasis added). The parties dispute whether the term "identical" requires further definition beyond its ordinary meaning. At one point, Dwin agrees with Faroudja that the term "identical" should be given its ordinary meaning. *See* Defendant's Claim Construction Brief at 9:13-14. However, Dwin seems to also contend that the term "identical" as used throughout the '287 patent is ambiguous so that the Court must reference the specification in order to "determine how identical is identical." *See* Defendant's Claim Construction Brief at 9:25-10:1. As such, Dwin asks the Court to find that "identical" in the '287 claims means either:

(1) two odd video fields or two even video fields derived from the same film frame or (2) identical, within a predetermined threshold, where the threshold is predetermined so that (a) when two video fields are both odd or both even and the two video fields are derived from a film frame compared to each other they are consistently found to be identical and (b) when an odd field and an even field derived from the same film frame are compared or when a field derived from one film frame is compared with a field from another film frame, they are consistently found *not* to be identical.

Defendant's Claim Construction Brief at 12:25-13:3. The Court finds no support for this loquacious

limitation proposed by Dwin. Accordingly, the Court interprets "identical" in the preamble, and as used throughout the '287 patent claims, as *not* limited to these particular conditions. Such limitations are simply not warranted by the claim language itself.

The Court begins its analysis with the ordinary meaning of the term. The parties do not dispute the ordinary meaning of "identical" and agree that the ordinary meaning of "identical" refers to "being the same" or "having such close resemblance as to be essentially the same," as defined in Webster's New Collegiate Dictionary (1980), at 563. *See* Defendant's Claim Construction Brief at 9:13-15; Plaintiff's Opening Claim Construction Brief at 9:9-11. A claim term is to be given its ordinary meaning unless the patentee has explicitly redefined the term, or the term itself is so ambiguous it is incapable of being understood without reference to the specification. *See* Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 990, 991 (Fed.Cir.1999) ("A court must presume that the terms in the claim mean what they say, and, unless otherwise compelled, give full effect to the ordinary and accustomed meaning of claim terms."). The term "identical" as used throughout the '287 claims is not incapable of being understood on its own. As such, the Court finds that the meaning of "identical" in the context of the '287 patent is consistent with the ordinary meaning of the word.

The Court also considers whether the preamble gives contextual support for the proposed limitation. The Court finds that it does not. The preamble of claim 1 refers simply to identical video fields being found at predetermined positions in the sequence. *See* 8:7-8. Nothing in the preamble itself requires such a garrulous interpretation of identical.

The Court also finds that the specification is not inconsistent with the ordinary meaning of "identical," but rather provides an example illustrating where identical video fields may be found. Dwin alleges that because the specification indicates "identical" video fields occur where the fields are derived from the same film frame and are both even or both odd, reading this limitation into the claim term is supported, if not required. Although the specification provides an illustration of the term "identical," the term itself is not limited to that particular illustration when its ordinary meaning conveys a clear and accurate description.

Furthermore, the patentee has not used the term in such a way so as to deviate from its customary usage. There is nothing to indicate that the patentee sought to redefine "identical" in a manner that is inconsistent with its ordinary meaning. The Court agrees with Faroudja that "[t]he claim was drafted using the plain terminology" and recourse to the specification to redefine the term would be improper. *See* Claim Construction Hearing Transcript at 59:7-8; Enercon GmbH v. International Trade Comm'n, 151 F.3d 1376, 1384-85 (Fed.Cir.1998) (generic claim terms should not be limited to the example disclosed in the specification absent clear redefinition of the claim term by patentee); Envirotech Corp. v. Al George, Inc., 730 F.2d 753, 759 (Fed.Cir.1984) ("[w]ords in a claim 'will be given their ordinary and accustomed meaning, unless it appears that the inventor used them differently.' " (Citation omitted.)).

As this Court well knows, a "[l]awyer may create a 'dispute' about any word, but there is nothing ambiguous or linguistically obscure about [the term] as used in the present claim" to justify turning to the specification for redefinition. Senmed v. Richard-Allan Med. Indust., Inc., 888 F.2d 815, 819 (Fed.Cir.1989). Simply because parties dispute a term it does not follow that the term itself must be ambiguous. The Court declines to treat the claim language like a "nose of wax, which may be turned and twisted in any direction, by merely referring to the specification, so as to make it include something more than, or something different from, what its words express." White v. Dunbar, 119 U.S. 47, 51, 7 S.Ct. 72, 30 L.Ed. 303 (1886).

B. Structural Disputes

The parties also dispute what structure corresponds to the "means" associated with the '287 claims. The parties have represented to the Court that their disputes can be resolved by the determination of two central

issues: (1) whether it is proper to describe structure in functional terms, and (2) the degree of specificity/detail that should be used in the identification of the structure. (Letter from Stephen Jensen, Esq. to Judge Williams of 9/10/99, at 1). Thus, the Court will focus its discussion on the resolution of these two issues.

1. The Use of Functional Terms to Describe Structure in Means-Plus-Function Claims

[14] All claims in dispute contain elements written in "means-plus-function" format in accordance with 35 U.S.C. s. 112, para. 6. Such a claim includes two different parts, a means (or structure) component and a function component, each of which is interpreted differently. The functional aspect of a means-plus-function claim is identified by the claim language itself accordingto the claim construction rules previously discussed. *See Chiuminatta,* 145 F.3d at 1308 ("A determination of the claimed function [is] a matter of construction of specific terms in the claim."). Once the function of the claim is identified, a court must look to the patent specification (the written description, the drawings, and the other claims in the patent) to identify the structure, or means, corresponding to the claimed function. *See id*. The structural component of a means-plus-function claim must be construed to encompass *only* that structure which is necessary to perform the recited function, and its structural equivalents.FN4 *See id*. (quoting 35 U.S.C. s. 112, para. 6).

FN4. The determination of what constitutes structural equivalents of the identified structure is a question of fact to be decided by a jury. *See* Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259 (Fed.Cir.1999). Thus, this Court will only identify the structure in the specification that performs the function recited in the claim element in its Order and leave the determination of structural equivalents to the jury.

[15] The processes employed to identify the means component and the function component of a means-plus-function claim are analytically distinct. Dwin argues for the use of functional terms to describe the structure in a means-plus-function claim. Dwin also asks the Court to add functional limitations that are not recited in the claim to the corresponding structure. Dwin's argument is incorrect and unsubstantiated by both the statute and federal precedent. The function may *not* be read into the structure portion of a means-plus-function claim in an attempt to limit the structure.

Dwin relies primarily on *WMS Gaming* for the proposition that functional limitations from the specification may be imported to limit the structural claim elements. WMS Gaming, Inc. v. International Game Tech., 184 F.3d 1339 (Fed.Cir.1999). The Court finds *WMS* inapplicable as it addresses the *special situation* in which a structure corresponding to the means element is an algorithm executed by a computer. *See id*. at 1344. The Federal Circuit stated that where a patent discloses a general purpose computer or microprocessor as the structure, "[t]he instructions of the software program that carry out the algorithm electrically change the general purpose computer by creating electrical paths within the device [that] create a special purpose machine for carrying out the particular algorithm." *Id*. at 1348. Therefore, computers which can be programmed to carry out a myriad of functions, whereby the program itself changes the structure of the computer by affecting its electrical paths, create a special problem in means-plus-function claim construction. Since the disclosed structure cannot in these circumstances be identified as the general purpose computer, whose structure changes according to its programmed function, a court must identify the special purpose computer programmed to perform the disclosed algorithm. *See id*. at 1348-49. In this special case where the structure is altered by virtue of its programmable nature, a court must construe the structural element to include only the structure programmed to perform the particular disclosed function. The Federal Circuit's decision does not lead to the conclusion that a court must, as a routine matter, limit the structural element to its functional purpose by importing functional language into the structure specification.

Under Dwin's rationale, 35 U.S.C. s. 112, para. 6 would remove the identification of structure completely from this mode of claiming, and functional language would thus both define the function and structure of a

claim. Such interpretation was not what the Federal Circuit, nor statute, intended. *See Chiuminatta,* 145 F.3d at 1308 (agreeing that "the district court erroneously identified as the disclosed structure broad functional language in the specification rather than physical structure.").

2. Patentee is limited only to the Structure Disclosed in Means-Plus-Function Claims

Means-plus-function claims present a special case from ordinary claim constructionin that a claim which discloses a means for performing a function " *without* the recital of structure, ... shall be construed to [only] cover the corresponding structure ... disclosed in the specification and equivalents thereof." 35 U.S.C. s. 112, para. 6; Valmont Indus., Inc. v. Reinke Mfg. Co., 983 F.2d 1039, 1042 (Fed.Cir.1993) (emphasis added). In this respect, section 112, paragraph 6 " 'operates to cut back on the type of means which could literally satisfy the claim language.' " Jonsson v. Stanley Works, 903 F.2d 812, 819 (Fed.Cir.1990) (citation omitted).

Without disagreeing with this principle, Faroudja argues that the means should not be limited to their narrowest description where the specification describes a structural element in both general and specific terms. Faroudja cites *Serrano* for the proposition that "a means-plus-function claim is not limited to the most detailed description of the structure disclosed in the patent simply because the disclosure is there." Plaintiff's Claim Construction Reply Brief at 6:8-10; Serrano v. Telular Corp., 111 F.3d 1578 (Fed.Cir.1997). Faroudja argues that under *Serrano,* the general description of the structure in the '287 text supersedes the more specific example provided in the '287 illustrations. The Court finds that *Serrano* is inapposite because the patent at issue disclosed *alternative embodiments* whereas the '287 patent in this case does not.FN5

FN5. Plaintiffs also cite to Micro Chemical, Inc. v. Great Plains Chemical Co., Inc., 194 F.3d 1250 (Fed.Cir.1999) for support. "Identification of corresponding structure may embrace more than the preferred embodiment." Id. at 1258. The *Micro Chemical* case, like *Serrano,* however, is a case in which the district court overlooked alternative embodiments of the invention. Therefore, the Court did not find this applicable to the case at hand.

In *Serrano,* the Federal Circuit held that the district court incorrectly limited the structural component of the "means" element in dispute to the discrete logic components of the preferred embodiment in the specification, ignoring the particular alternative structures specifically named in the patent text. The Federal Circuit concluded that the proper structural component included both "discrete logic circuitry" *and* "a microprocessor-based system." The court held that when the specification mentions specific alternative structures which are capable of performing the disclosed function, those structures will also be included in the scope of the patent. *See id.* at 1583.

Here, by contrast, the '287 specification does not provide specific alternative structures. Therefore, the Court must limit the structure identified to that which is specifically disclosed by the patent in a means-plus-function claim. Where the '287 patent discloses a specific field comparator as the *only* embodiment, it is this exact field comparator that is properly identified as the corresponding structure to the means-plus-function claim elements. *See* Signtech USA, Ltd. v. Vutek, Inc., 174 F.3d 1352, 1356 (Fed.Cir.1999); Fonar, 107 F.3d at 1551; Valmont, 983 F.2d at 1042.

a. Claim 1, element [b]: "means for comparing ..."

[16] The parties dispute the function and structure associated with this element. The parties agree that the function of this element, at a minimum, is "comparing each received video fields with a video field that has been delayed from the received field by the given number of video fields." *See* JCC, p. 3, col. 4; Plaintiff's Opening Claim Construction Brief at 8:26-28; Defendant's Claim Construction Brief at 13:8-9. The parties

disagree on whether the identification of this function requires more. Dwin proposes adding the language "to determine whether the fields are 'identical' as that term is used in the preamble." *See* Final Chart, p. 3, col. 3. Faroudja argues that this added language is not necessary.

The Court interprets the function of this means-plus-function claim as "comparing each received video field with a video that has been delayed by the duration of said given number of video fields." Each term in this phrase has a common and well-understood meaning. Therefore, turning to the specification is not only unnecessary, but improper as well. *See* Enercon, 151 F.3d at 1384-85. Dwin's proposed addition is not supported by the plain language of the claim text. The plain text of the claim element does not reference identical fields although the subsequent element does. Dwin's proposal, in addition to being improper, makes the following element redundant. The Court holds the element means neither more nor less than what it actually says.

After construing the function of a means-plus-function claim element, courts should then "consult the specification to define the structure, material or acts corresponding to this claimed function." Sage Products, Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1428 (Fed.Cir.1997); *see also* 35 U.S.C. s. 112, para. 6. The parties dispute the structure corresponding to the "comparing" function disclosed. In this case, the specification discloses both a general "field comparator" in Figure 2 of the '287 patent, which is indicated by box (23), and a more detailed "preferred embodiment" in Figure 3 which discloses various components of the field comparator in Figure 2. *See* '287 patent, Figs. 2(23), 3 (57, 58, 59, 60, 61, 62, 63, 64, 65, 66).

Faroudja argues that the "comparing" means should not be limited to the specific field comparator in Figure 3 because the specification text permits the use of "field comparator" generally. *See* Plaintiff's Claim Construction Reply Brief at 9:15-23 (referencing '287 patent at 4:50-51). Faroudja contends that under *Serrano,* it is improper to limit the structural element to the most detailed disclosure simply because the patentee has chosen to discuss the component elements of the structure disclosed. *See* Plaintiff's Claim Construction Reply Brief at 9:15-17 (citing Serrano v. Telular Corp., 111 F.3d 1578 (Fed.Cir.1997)). The general description of the comparing means as a "field comparator 23," however, does not sufficiently describe any particular structure. Allowing the structure to be any "field comparator" would not provide readers of the patent with adequate notice of the invention's scope.FN6

FN6. Referring to the disclosure requirement of s. 112 para. 6, the Federal Circuit has stated that "[f]ailure to describe adequately the necessary structure, material, or acts in the written description [of a patent] means that the drafter has failed to comply with the mandate of [35 U.S.C.] s. 112 para. 2 ...." In re Dossel, 115 F.3d 942, 946 (Fed.Cir.1997); *see also* In re Donaldson, 16 F.3d 1189, 1195 (Fed.Cir.1994)("[I]f one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112."). Although s. 112 para. 2 concerns have not been raised, the Court is mindful of this disclosure requirement when construing the '287 claims.

Consistent with 35 U.S.C. s. 112, para. 6's claim limitation purpose, the Court agrees with Dwin that the structure described in the specification is not just any "field comparator" but rather the specific field comparator disclosed in Figure 3. The field comparator in Figure 2 that Faroudja would have this Court identify as the proper structure is depicted by a box labeled as "Field comparator 23". Figure 3, however, provides more meaningful information about the field comparator's particular structure: "The field comparator includes an arithmetic processor 57, first, second, third and fourth threshold detectors 58, 59, 60, 61, first, second, third and fourth counters 62, 63, 64, 65 and an OR gate 66." '287 patent at 5:25-29. The fact that Figure 3 is labeled as merely a "preferred embodiment" does not lead the Court to believe it is not the disclosed structure. Diagrams which do not depict any internal circuitry, such as the "box" marked "field

comparator 23" in Figure 2, cannot be properly identified as the corresponding structure in a means-plus-function element. Such diagrams provide no information about the particular structure and fail to provide adequate notice of the patent's scope. *See* Atmel Corp. v. Information Storage Devices, Inc., 997 F.Supp. 1210, 1226 (N.D.Cal.1998).

Furthermore, the Court finds *Serrano,* as relied upon by Faroudja, is inapposite to this case as the '287 patent does not disclose alternative embodiments. *See* Serrano, 111 F.3d at 1583 (finding the district court erred in limiting the structure to only one of the disclosed embodiments when the patentee disclosed alternative embodiments). Courts have also made it clear that a specification that merely mentions the possibility of alternative structures without specifically identifying them is not sufficient to expand the scope of the claim beyond the single example used. *See* Fonar Corp. v. General Elec. Co., 107 F.3d 1543, 1551 (Fed.Cir.), *cert. denied,* 522 U.S. 908, 118 S.Ct. 266, 139 L.Ed.2d 192 (1997). "Although patentees are not necessarily limited to their preferred embodiment, interpretation of a means-plus-function element requires this court to consult the structure disclosed in the specification, which often, as in this case, describes little more than the preferred embodiment." Signtech, 174 F.3d at 1356.

The '287 patent only discloses a single embodiment of the field comparator, which is depicted in Figure 3. The fact that the patentee labels a specification as merely a "preferred embodiment" does not expand the scope of the specification when it is the only meaningful embodiment disclosed. The patent specification describes Figure 3 as "a diagram of *the* field comparator in the system of Fig. 2." '287 patent at 4:3-4. The Court interprets this language to mean that the more detailed diagram in Figure 3 represents the specific field comparator in Figure 2 with all its necessary components. The use of "the" demonstrates that the structural components disclosed in Figure 3 are necessarily those required to form the field comparator in Figure 2, and not merely "preferred" or "alternative" embodiments as Faroudja would have the Court believe.

Moreover, the Federal Circuit has emphatically stated that where a "preferred embodiment" or "alternative embodiment" is in fact the *only* embodiment disclosed, the claim is limited to that embodiment. *See* Signtech, 174 F.3d at 1356; Fonar, 107 F.3d at 1551; Valmont, 983 F.2d at 1042. Therefore, the Court finds that the structure necessary to perform the comparing function disclosed is the more detailed field comparator in Figure 3 of the '287 patent, and its equivalents. *See* '287 patent Fig. 3 (57, 58, 59, 60, 61, 62, 63, 64, 65, 66).

b. Claim 1, element [c]: "means for comparing the results ..."

[17] The parties dispute the function associated with this means-plus-function claim. Faroudja argues that the "function is comparing the results of a successive number of video field comparisons to determine whether the results are consistent with the sequence expected in a video signal derived from film. The expected sequence has *meaningfully* identical fields in only certain known positions." Final Chart, p. 3, col. 2 (emphasis added). Dwin argues that the "function is comparing the results of a successive number of video field comparisons to determine whether the results are consistent with the *repetitive* sequence that would be expected in a video signal derived from film, wherein the expected sequence has identical fields in only certain predetermined positions." Final Chart, p. 3, col. 3 (emphasis added). In Plaintiff's Reply Brief, Faroudja explains that it includes the term "meaningfully" in order to "more closely follow the dictionary definition of 'identical' Faroudja cited in its opening brief." Plaintiff's Claim Construction Reply Brief at 10:8-12. The Court finds that the use of "meaningfully" is unnecessary as the term "identical" has been clearly defined. As such, it appears that Faroudja's main objection to Dwin's proposed construction is the insertion of "repetitive," which in Faroudja's opinion, "is not in the claim language, adds nothing to the construction, and simply adds additional technical words for the jury." *See* Plaintiff's Claim Construction Reply Brief at 10:13-15. The Court does not agree.

The reference to "predetermined sequence" is this element relates directly to the antecedent "predetermined sequence" phrase used earlier in the preamble. As discussed, the "predetermined sequence" has video fields with predetermined repetitive sequentially varying relationships to the film frames from which they were derived. Thus, the insertion of "repetitive" is not inaccurate. However, in accordance with the Court's unwillingness to stray from the claim language absent ambiguity, the Court finds that the function is more properly described as "comparing the results of a successive number of video field comparisons to determine whether the results are consistent with the sequence that would be expected in a video signal derived from film, wherein the expected sequence has identical fields in only certain predetermined positions."

The parties also dispute the structure associated with this means-plus-function element. Faroudja argues for a more general description of the means as a "logic circuit 24, 25." Final Chart, p. 7, col. 2. The components identified as 24 and 25 include n-bit shift register 24 and first AND gate 25 in Figure 2 of the '287 patent. *See* '287 patent Fig. 2 (24, 25); 4:51-52. Dwin argues for the more detailed description that the means is:

A first one-field delay unit 21, a second one-field delay unit 22, a field comparator 23, an n-bit shift register 24, and a first AND gate 25, which are interconnected as shown in Fig. 2. Each of the one-field delay units 21, 22 delays the received video signal by 262 horizontal lines. There is a one-line delay unit 26 connected between the one-field delay units 21, 22.

Further, *some* of the "interconnect[ions] as shown in Fig. 2" that are necessarily part of the structure of logic circuit 21 are: (1) the field comparator (23), as shown in detail in Fig. 3 has one input connected to a received video signal and the other input connected to a delayed video signal after the received signal has passed through two 1-field delay circuits (21 and 22) and a 1-line delay (26); (2) the n-bit shift register (10 bit as shown in Fig. 2)(24) has its input connected to the output of the field comparator (23); (3) each input of the 10 input AND gate (25) is connected to one bit of the 10-bit shift register (24) with a logical inverter circuit inserted between each of the fourth and ninth bits of the 10-bit shift register and the corresponding input of the 10-input AND gate.

Final Chart, p. 7-8, col. 3. However, Dwin states that it is willing to accept the following structural definition as "more technically proper": a "specific circuit which compares a number of successive outputs from the field comparator, (each indicating whether two fields are identical and which are stored in at least 10-bit shift register 24), to the expected sequence identified by the 10-input AND gate 25." Final Chart, p. 7, col. 3; Defendant's Claim Construction Brief at 17:9-15. Except for the field comparator, the components identified by Dwin are encompassed by the components identified by Faroudja. Thus, the only difference between the parties' positions is the field comparator. The Court focuses its analysis on whether the field comparator is necessary to perform the recited structure. *Chiuminatta,* 145 F.3d at 1308 (quoting 35 U.S.C. s. 112, para. 6). The Court finds it is not.

This element's function is comparing the results of the comparisons performed in the previous step to determine when identical fields are located in certain predetermined positions, or second "comparing" means. *See* '287 patent at 8:16-20. The first "comparing" function of claim 1, element [b] has already been identified as being performed by the field comparator. The element in question, claim 1, element [c], examines the *results* produced by the first "comparing" means and does not repeat the first set of comparisons done in claim 1, element [b] by the field comparator. Therefore, the Court does not find that the field comparator means identified in claim 1, element [b] is necessary to perform this second "comparing" means of claim 1, element [c]. As such, the field comparator means of claim 1, element [b] has no place in this element. The structure for this element is only the logic circuit which includes n-bit shift register (shown as component 24) and AND gate (shown as component 25), without the field comparator, and its equivalents. *See* '287 patent at 4:51-52; Fig. 2 (24, 25).

c. Claim 2, element [d]: "means synchronized ..."

It is unclear whether this means-plus-function element is still in dispute. In the most recent submission to the Court, Faroudja identifies the means as a "film synchronization VBI inserter 106." Final Chart, p. 8, col. 2. Dwin also identifies the means as a "circuit that inserts a video field position synchronization signal to indicate position in the received video signal," or "film synchronization VBI inserter 100, 106." Final Chart, p. 8, col. 3. The Court finds the properly identified means is a film synchronization VBI inserter shown as element 106 in the '287 patent, which the parties seem to agree upon, and its equivalents. The specification supports this finding. *See* '287 patent at 7:5-7; 7:25-27.

d. Claim 3, element [d]: "means for timing ..."

The parties dispute the function of this means-plus-function claim. Faroudja interprets the function to be "providing an indication that received video fields were not derived from the film when the determination that the received video signal as derived from film is not made within a predetermined time period." Final Chart, p. 4, col. 2. Dwin's construction, however, is the "verbatim claim language." *See* Final Joint Chart, p. 4, col. 3; '287 patent at 8:68-9:6. Since the patent does not indicate a different interpretation of the claim language was intended, this ordinary construction must be adopted. Having no reason to stray from the claim language itself, the Court adopts Dwin's proposed construction.

The parties appear to agree that the structure corresponding to this function is a counter and a logic gate. *See* Final Claim Chart, p. 9, col. 2-3; '287 patent Fig. 2 (43, 30). Dwin, however, attempts to add functional limitations to the disclosed structure in its proposed construction: "A counter 43 and a logic gate 30 in Fig. 2; the counter counts fields to establish intervals of five fields, and at every fifth field the gate determines whether a determination of identical fields has been made." Final Chart, p. 1, col. 3. As explained above, the Court finds the use of functional language to identify structure inappropriate in this case. Therefore, the means portion of this claim limitation is interpreted to encompass a counter (43) and logic gate (30), and its equivalents.

e. Claim 4, element [a]: "means for determining ..."

The parties also dispute the structure corresponding to the disclosed function of this means-plus-function element. Faroudja argues that the structure disclosed in the specification is alternatively, "a field comparator (23) and a logic circuit (24, 25, 29, 30, 31) coupled to the field comparator" or a "film sync detect circuit (20)." Final Chart, p. 10, col. 2.FN7 Dwin's proposed structure includes functional language and requires nearly two pages of description. *See* Final Chart, p. 10-11, col. 3. Consistent with the Court's position on the use of function to identify structure in this case, the Court adopts Faroudja's construction as the properly identified means. Therefore, the means portion of this claim limitation is interpreted to include the specific field comparator identified in claim 1, element [b] coupled to logic circuit which includes n-bit shift register (24), first AND gate (25), counter (29), second AND gate (30), and third AND gate (31), as interconnected in Figure 2, and its equivalents. *See* '287 patent at 4:50-66; Figs. 2 (23, 24, 25, 29, 30, 31, 20), 3 (57, 58, 59, 60, 61, 62, 63, 64, 65, 66).

FN7. The field comparator (23) referenced in this element is the structure identified as the "comparing" means of Claim 1, element [b]. The Court will substitute the structural components identified in Claim 1, element [b] for the more general "field comparator (23)" reference made here.

f. Claim 4, element [c]: "means responsive to a determination ... from film ..."

The parties dispute the structure of this means-plus-function claim. Faroudja identifies the structure as "a switching circuit (36) which cooperates with memory (28, 29) and a switch control logic circuit (41)." Final

Chart, p. 12, col. 2. Dwin's proposed construction appears to include the same structural components, however, Dwin uses functional language to identify the structure as a "switching circuit responsive to the determination that the video source was derived from film, that cooperates with memory to combine alternate lines from respective odd and even video fields from a common film frame, to provide the progressive-scan video frame." Final Chart, p. 12, col. 3. Once again, Dwin seeks to identify the structure not by pointing to specific structural components but by restating what it, whatever those components are, must do. This begs the question of what structure is necessary to perform the disclosed function in a means-plus-function element. In order to keep structure distinct from function as 35 U.S.C. s. 112, para. 6 requires, the Court finds that the structure disclosed is a switching circuit (36), memory (38, 39), and a switch control logic circuit (41), and its equivalents, which is supported by the specification of the '287 patent. *See* '287 patent at 4:66-5:2; 6:10-38; Fig. 2 (36, 38, 39.41).

g. Claim 4, element [d]: "means responsive to a determination ... not ... from film ..."

The parties dispute the structure portion of this claim limitation. Faroudja identifies "a switching circuit (36) which cooperates with memory (38, 39), an averaging circuit (37) and a switch control circuit (41)" as the corresponding means. *See* Final Chart, p. 13, col. 2. Dwin argues that the structure is a "switching circuit that progressively interlaces the lines of a field with either the averages of adjacent lines of the same field or lines of an immediately preceding field." *See* Final Chart, p. 13, col. 3. For the same reasons discussed above, the Court finds the identification of structure using functional terms to be inappropriate in this case. *Cf. WMS Gaming,* 1999 U.S.App. LEXIS 16696, at (construing the structural element to include only the structure programmed to perform a particular disclosed function in the special case of general purpose computers executing algorithms where structure changes according to its programmed function). Finding this particular situation to be distinguishable from the "special case" described in *WMS Gaming,* the Court declines to allow the use of functional language to describe the structure. Therefore, the Court adopts Faroudja's interpretation of the structure necessary to perform the disclosed function which includes switching circuit (36), memory (38, 39), averaging circuit (37), and a switch control logic circuit (41), as shown in Figure 2. *See* '287 patent Fig. 2 (36, 38, 39, 37, 41).

VI. CONCLUSION

The Court adopts a construction of the disputed '287 patent claims as set forth above.

IT IS SO ORDERED.

N.D.Cal.,1999.
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