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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/010,074	12/07/2007	5,329,369	230.2-US-RX	1754
20872	7590	10/29/2010	EXAMINER	
MORRISON & FOERSTER LLP			FERRIS III, FRED O	
425 MARKET STREET			ART UNIT	PAPER NUMBER
SAN FRANCISCO, CA 94105-2482			3992	
			MAIL DATE	DELIVERY MODE
			10/29/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/010,021	09/06/2007	H. 5329369	4671-4672-001-02	8993

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EXAMINER
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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* FUNAI ELECTRIC CO., LTD.

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Appeal 2010-003274  
Reexamination Control 90/010,021 & 90/010,074  
United States Patent 5,329,369  
Technology Center 3900

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Before SALLY C. MEDLEY, KARL D. EASTHOM, and KEVIN F.  
TURNER, *Administrative Patent Judges*.

EASTHOM, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” shown on the PTOL-90A cover letter attached to this decision.

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Patent owner (Appellant) appeals under 35 U.S.C. §§ 134(b) and 306 from a final rejection of claims 1-18.<sup>2</sup> Claims 19-29 have been confirmed. (App. Br. 2.) We have jurisdiction under 35 U.S.C. §§ 134(b) and 306.

We affirm.

#### STATEMENT OF THE CASE

This proceeding arose from two separate third party requests for *ex parte* reexamination of U.S. 5,329,369. The Office granted and *sua sponte* merged the two requests, Reexamination Control 90/010,021 and 90/010,074. Appellant's Brief states that there are currently four related litigations and investigations involving the '369 patent. Three separate litigation actions in the Central District Court of California were stayed pending the resolution of a separate investigation by The International Trade Commission. Pursuant to the investigation, an Administrative Law Judge at the ITC conducted a hearing and rendered an Initial Determination that claims 1, 3, 7, 19, and 21 of the '369 Patent are invalid. The Commission declined to review the ALJ's findings on February 11, 2009. The findings are now final. The '369 Patent and EPO Patent No. 532,682 claim priority to the same British patent application and cover similar subject matter. On March 19, 2004, the EPO Board of Appeals affirmed an EPO opposition decision revoking the '682 patent. (*See* App. Br. 1.) An oral hearing before the panel listed above involving the '369 patent and another patent assigned

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<sup>2</sup> Patent owner, Appellant, Funai Electric Co., Ltd., is the real party in interest for this appeal and assignee of record of U.S. Patent 5,329,369 "Asymmetric Picture Compression" (issued July 12, 1994 with listed inventors Donald H. Willis and Barth A. Canfield).

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to the same assignee, U.S. Patent 6,115,074 (Appeal 2010-007834), was conducted at the USPTO on August 18, 2010.

*The '369 Patent*<sup>3</sup>

The '369 patent describes a wide screen television with a width to height display ratio of 16 x 9. First and second video signals define first and second pictures. The second video signal has a second format display ratio smaller than, or different from, the wide screen television ratio, for example, a width to height ratio of 4 x 3. A video signal processor asymmetrically compresses the second video signal, for example, 4:1 horizontally and 3:1 vertically. (Abstract.)

*The Exemplary Claims, References, and Rejection*

Exemplary claims 1 and 10 on appeal read as follows:

Claim 1: A television apparatus, comprising:

- video display means having a first format display ratio of width to height;
- means for receiving a first video signal representing a first picture;
- means for receiving a second video signal representing a second picture having a second ratio of width to height different than said first ratio;
- means for changing said ratio of width to height of said second picture; and,
- means for combining a portion of said first picture with a portion of said changed second picture for simultaneous display of said first and second picture portions.

Claim 10: A video display system, comprising:

- video display means having a first format display ratio of width to height;

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<sup>3</sup> The ensuing description constitutes findings of fact referenced herein as "D1".

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means for receiving a first video signal, defining a picture in a second format display ratio of width to height smaller than said first format display ratio;  
means for asymmetrically compressing said width and height of said picture; and,  
means for mapping said asymmetrically compressed picture onto said display means.

(App. Br. Claims App'x .)

The Examiner listed and employed the following prior art references:<sup>4</sup>

Fernandez	US 4,947,257	Aug. 7, 1990
Marlton	US 5,027,212	June 25, 1991

Claims 10-18 stand rejected under 35 U.S.C. § 102(e) as anticipated based on Fernandez.

Claims 1-18 stand rejected under 35 U.S.C. § 102(e) as anticipated based on Marlton.<sup>5</sup>

## OPINION

### *Issue-Fernandez*

The dispositive dispute with respect to Fernandez involves whether the Examiner established that Fernandez discloses structure satisfying the “the means for asymmetrically compressing said width and height of said picture” as recited in claim 10.

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<sup>4</sup> Other references of record listed in the Answer are not repeated here because they are not material to the decision. (*See* Ans. 3-4.)

<sup>5</sup> The Examiner withdrew a rejection of claims 1-9 under 35 U.S.C. § 102(e) based on a patent to Rabii as “largely cumulative” of Marlton and Fernandez (Ans. 33) and “in the interest of simplifying issues before the Board of Appeals” (Ans. 3).

*Fernandez's Teachings*

F1. Fernandez discloses video input processors (VIPs) 26 which scale video input so that it can fit into particular displays. A cubic spline interpolation algorithm carries out the scaling. (Col. 5, ll. 52-57; Fig. 3.)

*The '369 Patent Disclosure*

D2. In Figure 9 of the '369 patent, the "DECIMATION CIRCUIT" 328C appears as a hardware block which includes, according to Figures 10-12 and the related description in the '369 patent (col. 13, l. 12 to col. 14, l. 17), *inter alia*, counters 850 and 858, and a circuit 859 which further includes multiplexers 862 and 864. The invention modifies a basic CPIP (picture-in-picture) chip to include the decimation circuit. (Col. 13, ll. 12-15, 36-40.)

D3. "The picture-in-picture processor 320, according to an inventive arrangement and unlike the basic CPIP chip, is adapted for asymmetrically compressing the video data in one of a plurality of selectable display modes." (Col. 13, ll. 12-15.)

*Analysis*

The Examiner maintains that Fernandez's VIPs 26 (*see* F1) satisfy the disputed means structure as recited in claim 10 (i.e., the "means for asymmetrically compressing said width and height of said picture.") (*See* Ans. 5.) Appellant maintains that "the '369 patent describes decimation circuitry as corresponding to the recited function." (App. Br. 10.) Appellant contends that because "the 'examiner should provide an explanation and rationale in the Office action as to why the prior art element is an equivalent'" (*id.* (quoting MPEP § 2183) (emphasis by Appellant)) to this

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disclosed decimation circuitry, and did not do so, “[t]he Examiner has failed to meet his burden of proof” (*id.*).

Appellant refers (*id.* at 9) to the Brief’s “Summary of Claimed Subject Matter” to further describe the decimation circuitry as including, *inter alia*, element 328C in Figures 9-12 as the structure corresponding to the asymmetrically compressing function (*id.* at 4-5.). According to Appellant, “the decimation circuits . . . allow for separate horizontal and vertical compression of the picture.” (*Id.* at 5.)

In other words, Appellant relies on specific decimation hardware disclosed in the ‘369 patent as corresponding structure for the disputed means clause. The Examiner does not attempt to show how the Fernandez VIPs include structure which is either the same as or equivalent to the decimation circuit disclosed as part of the modified ‘369 CPIP chip. Rather, the Examiner maintains that the disclosed “decimation circuitry alone cannot perform the function” and that “the asymmetric compression is carried out by the processor (320).” (Ans. 28.)

Appellant responds by noting that “the corresponding structure for the ‘means for asymmetrically compressing’ may include not only the decimation circuit, but also timing and control section 328, which both reside in the PIP processor 320.” (Reply Br. 4.)

Appellant’s argument is more persuasive. The ‘369 patent indicates that “unlike the basic CPIP chip” (D3), the invention includes a modified chip which at least includes hardware decimation circuitry. The modified chip corresponds to the “means for asymmetrically compressing” recited in



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claim 10. (*See* D2, D3.) As such, the Examiner has not established that the Fernandez chip meets the disputed means structure.

Based on the foregoing discussion, the Examiner erred in finding that Fernandez anticipates independent claim 10 and claims 11-18 dependent therefrom.

#### *Conclusion*

The Examiner did not establish that Fernandez discloses structure satisfying the “means for asymmetrically compressing said width and height of said picture” as recited in claim 10. As such, we do not sustain the anticipation rejection of claims 10-18 based on Fernandez.

#### *Issue-Marlton*

Appellant’s responses to the Examiner’s rejection based on Marlton raise the following issues:

Does Marlton disclose “means for receiving a second video signal representing a second picture having a second ratio of width to height different than said first ratio” of width to height of a video display means, and “means for changing said ratio of width to height of said second picture,” as recited in claim 1?

Does Marlton disclose a “means for receiving a first video signal, defining a picture in a second format display ratio of width to height smaller than said first format display ratio” as recited in claim 10?

#### *The ‘369 Patent Disclosure*

D4. As background, the ‘369 patent notes that “[m]ost televisions today have a format display ratio, horizontal width to vertical height, of 4:3. A wide format display ratio corresponds more closely to the display format ratio of movies, for example 16:9.” (Col. 1, ll. 6-9.) The patent describes

“the use of a wide display ratio screen” (col. 1, l. 32) and “signal transmissions . . . broadcast with a 4 X 3 format display ratio” (col. 1, ll. 15-17).

D5. “Figure 1(b) shows a 16 X 9 screen. A 16 X 9 format display ratio video source would be fully displayed.” (Col. 5, ll. 24-25.)

D6. Figure 1(d) “illustrates a display format, wherein the main and auxiliary video signals are displayed with the same size picture. Each [side-by-side] display area has an [sic] format display ratio of 8 X 9 . . . . In order to show a 4 X 3 format display ratio source in such a display area, without horizontal or vertical distortion, the signal must be cropped on the left and/or right sides.” (Col. 5, ll. 41-48.)

D7. “A first tuner [sic: tuner] or jack provides a first video signal, representing a first picture. A second tuner or jack provides a second video signal, representing a second picture having a second ratio of width to height different than the first format display ratio.” (Col. 3, ll. 47-51.)

#### *Marlton's Teachings*

M1. “The video input stage has inputs for accepting video signals in RGB format, composite (PAL or NTSC) format, or SVHS format. SVHS signals are similar to composite signals, but have separate chroma and luma/-sync signals. Referring to FIG. 3, the video input stage 26 has six analogue video input channels . . . .” (Col. 4, ll. 56-61.)

M2. Marlton's system combines graphics generated from a computer with an outside video source, including video described above, and also, video from a disk player. According to Marlton, in the prior art, aspect ratios for computer graphics are not the same as that for usual standards of

video image. These prior art (synchronous) systems cannot easily correct the graphics aspect ratio relative to that of the video. Prior art systems also limit both the graphics and video displays to fill the whole of the display area on the display screen. Further, in prior art systems, the combined display will be distorted by a graphics input: “A circle drawn in computer graphics will appear as an ellipse in the combined display” (col. 1, ll. 46-47). (Col. 1, ll. 7-12, 38-54.)

M3. Marlton’s system digitally encodes and asynchronously converts video input to a signal synchronized to a graphics generator, allowing for a wide variety of different video source signal formats to be combined with computer graphics. The graphics and video are combined into a high resolution computer monitor display which may have the same, less, or more video display lines than the number of video lines in the video input. (Col. 1, ll. 65-67; col. 7, ll. 3-11.) Marlton’s system overcomes the above-described prior art problems “using a high resolution computer monitor capable of displaying the full resolution of all the computer’s graphics modes. Since the video signal is converted asynchronously, effects such as video picture magnification and reduction, as well as aspect ratio correction can be achieved.” (Col. 1, l. 65 to col. 2, l. 2.)

M4. Marlton describes maintaining an input video aspect ratio while reducing the video image: “If the video image is being reduced in size in proportion, i.e., maintaining its aspect ratio, two or more video lines may be stored in the linestore 118. This enables more extensive interpolation to be effected by using more vertical samples.” (Col. 7, ll. 31-36.)

M5. Marlton describes vertical scaling and reduced size display windows:

Vertical scaling is required because the video source has either 240 lines (NTSC) or 288 line[s] (PAL) of active video per field. Using a full computer display screen, the video image has to be displayed in 350, 400 or 480 scan lines of the 31.5 MHz output display, depending on the computer graphics mode in use. If a windowed screen is used, i.e. the video is displayed in a reduced size window of the computer graphics screen, more vertical scaling is required.  
(Col. 6, ll. 54-62.)

M6. Marlton discloses a specific example of vertically scaling an NTSC format of 240 lines of video so that it fits into a reduced sized window “set to 71% of the full screen size. Therefore, the number of display lines in the video window is 71% X 480=340 full lines.” As 340 is more than the input video of 240 lines, “line doubling is effected” with a vertical scaling factor of  $340/240 = 1.4$  – i.e., magnifying the input image by a factor of 1.4 “to fit the display window.” (Col. 7, l. 67 to col. 8, l. 10.)  
(This example requires sub-sampling the (over-sampled) doubled lines (by interpolation) to obtain 340 out of 480, and discarding remaining lines.  
(Col. 8, ll. 23-45.))

M7. Figure 10 is depicted next:

VERTICAL FILTERING AND INTERPOLATION			
SIZE RATIO	FILTER	BANDWIDTH	INTERPOLATION
100% - 50%	A	100%	No
50% - 33%	A	100%	Yes
33% - 00%	B	90%	Yes

*FIG.10*

Figure 10 “shows the filter combinations used depending on the degree of vertical scaling.” (Col. 7, ll. 48-49.)

M8. Marlton also discloses horizontal scaling. “Horizontal scaling allows the video to be displayed in a reduced size window of the graphics screen.” (Col. 6, ll. 14-16.)

Marlton’s Figure 9 is depicted next:

HORIZONTAL FILTERING		
SIZE RANGE	Y FILTER	Y B/W
100% - 90%	A	100%
90% - 75%	B	90%
75% - 60%	C	70%
60% - 35%	D	55%
35% - 00%	E	34%

*FIG. 9*

Figure 9, depicted *supra*, and Figure 8, not depicted, show that a “particular configuration of the filter 100 is dependent on the degree of horizontal scaling, the narrowest band pass filter combination E being selected for the smallest video picture size.” (Col. 6, ll. 28-31.) “The five filter combinations [A-E] configurable in the horizontal luma filter 100 are shown in” Figure 8 (and correspond to those in Figure 9). (Col. 5, ll. 65-67.)

M9. Marlton provides a specific example of horizontal scaling of one-half and corresponding vertical scaling of differently contemplated degree:

If the video data has been horizontally scaled, more than one video line may be stored in the linestore. For example, if the video is horizontally scaled to half its original width, two video lines may be stored in the line store 118. The vertical scaler has two modes of operation, depending on the degree of vertical scaling required.

(Col. 7, ll. 20-26.)

M10. Vertical scaling is further described as follows: “The framestore input is fed in at a rate determined by the horizontal and vertical scalers that sub-sample the video signal, as described hereinbefore.” (Col. 9, ll. 6-8.) The vertical scaler 116 includes interpolators 120 and 121 which perform sub-sampling in a similar manner to the horizontal interpolator 104. (Col. 7, ll. 17-56; *see* fig.4.)

M11. The synchronizer 25 includes a vertical sync microprocessor 398 which is controlled by microprocessor 38. (Col. 17, ll. 18-22; Figs. 2, 21.)

#### *Analysis*

Appellant’s arguments focus on independent claims 1 and 10. (App. Br. 8.) Accordingly, claims 1 and 10 are respectively selected to represent claims 1-9 and claims 10-18. *See* 37 C.F.R. § 41.37(c)(1)(vii).

With respect to claim 1, Appellant argues that Marlton does not disclose the “means for receiving a second video signal representing a second picture having a second ratio of width to height different than said first ratio.” (App. Br. 12.) Appellant’s arguments with respect to claim 10 mirror the arguments presented with respect to claim 1. (*See* App. Br. 20.) As Appellant notes, claim 10 more narrowly requires the input video to be smaller than, rather than different from, the format display ratio of width to height. (*Id.*)

While Appellant argues that the width to height ratio of Marlton’s display screen is not disclosed (*see* App. Br. 12), and assuming for the sake of argument that is correct, Appellant does not explain why Marlton’s video input stage cannot accept any second video signal, including one having a

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second ratio of width to height different than the width to height of the computer display. As the Examiner found, Marlton specifically discloses that the graphics aspect ratio is different than the standard input video ratios. (Ans. 12 (last full ¶); *accord* Ans. 32, M2.)

Appellant responds that this graphics aspect ratio does not refer to the physical dimensions of the display, but rather only refers to the resolution of graphics images or signals. (*See* App. Br. 13; Reply Br. 18-19, 27.) That is, Appellant argues that Marlton’s “correction applies to the mutable aspect ratio of graphics images, not the fixed aspect ratio of any display.” (Reply Br. 27.) On the other hand, Appellant admits that Marlton’s “system *could . . . change the aspect ratio, and display the resulting picture in a window not filling the entire extent of the display.*” (Reply Br. 19-20 (emphasis added, footnote omitted).) In the omitted footnote, Appellant explains that “Marlton contemplates displaying video in windows that do not fill the display screen, but does not disclose changing the aspect ratio.” (Reply Br. 20, n.9.) Taken out of context, this argument is not clear entirely.

However, Appellant appears to be arguing that the “video display means having a first format display ratio of width to height” in claim 1 limits the display video display means to a fixed aspect ratio for the *whole* display screen and precludes it from referring to a *smaller window* in the claimed video display means. (*See* Reply Br. 19-20 (paragraph spanning both pages).) The ‘369 Patent disclosure is not as limiting as the argument implies. The ‘369 Patent refers to a “format display ratio” in terms of a source, a screen (*see* D4, D5), and a display area (D6). Regarding the latter, these display areas are smaller windows within a full screen, i.e., the two 8

X 9 side-by-side windows in Figure 1(d) are described as “display area[s]” with a “format display ratio of 8 X 9.” (D6.)<sup>6</sup>

In other words, Appellant apparently concedes that Marlton’s system accepts video inputs having an aspect ratio different than a *window* in a full display screen. This concession means that Marlton satisfies the disputed claim limitation based on a claim interpretation in which Marlton’s windows satisfy the video display means.

Even without that concession or assuming *arguendo* that the claim is more limiting (to a full display screen) as Appellant argues, according to Appellant, the means for receiving a second video merely constitutes an input structure, such as S1, S2, ANT 1, ANT 2, AUX1 and AUX2 as depicted at Figure 2, Section 20, of the ‘369 Patent. (App. Br. 3.) The ‘369 Patent also describes a “jack” as corresponding structure. (D7.) In other words, a simple video signal input path including a jack constitutes corresponding means structure. The Examiner found that Marlton’s various input structures (i.e., six video input channels) constitute corresponding input structure. (Ans. 12; *accord* M1.) That is, Marlton includes a wide variety of input formats and structure for receiving these varied formats, including video disk inputs and other (NTSC, PAL, RGB, etc.) types

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<sup>6</sup> In the Brief, Appellant does not indicate that this “video display means” is in means plus function format. Appellant’s citations to the ‘369 Patent indicate a tube with a screen supports the structure. (*See* App. Br. 2 (describing claim 1), referencing “‘369 Patent Abstract; 3:45-47” and “1:6-9.”); App. Br. 4 (describing claim 10, same reference). The Abstract broadly describes pictures within a picture and arrays of pictures on a whole screen. Thus, these particular citations do not limit the video display means to a whole screen. In any event, the sections just cited also support a broader interpretation which includes a window within a screen.



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(having varying line formats). (M1, M2, M3, M5.) These simple input paths (i.e., jack inputs and channel) in the '369 Patent and similar input paths in Marlton (*see* M1 - input video channels imply similar channel input structure) do not limit the aspect ratio of the input video signal to any particular ratio.

As such, because Marlton's apparatus has the same or similar video input as the '369 Patent and specifically processes aspect ratios different than the computer graphics ratio, Marlton's device is capable of receiving a video input signal having a variety of width to height (aspect) ratios. If one input aspect ratio is the same as the display screen as Appellant argues, it follows that others of such input different aspect ratios must be different than a fixed ratio for the display screen. To support this capability, the Examiner quoted Marlton to show that "the synchronizer can control the aspect ratio of the video image in the combined display." (Ans. 30, quoting Marlton at col. 2, ll. 24-26.) Based on this finding, the Examiner reasoned that "Marlton can accommodate a second video signal having a width and height (aspect ratio) different than a first aspect ratio." (Ans. 30; *accord* M1-M5.)

The Examiner's rationale is sound. Nothing in Marlton, including the input paths, or the width to height ratio of Marlton's display screen (whatever it is), limits the width to height format ratio of any video signal which finds its way to Marlton's input stage. If anything, given the foregoing discussion, the fact that Marlton's display screen and window sizes are not disclosed implies that Marlton's disclosure does not constrain the aspect ratio of the video input relative to the display screen.

Claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function, provided the structure is capable of performing the function. *In re Schreiber*, 128 F.3d 1473, 1477-78 (Fed. Cir. 1997) (holding that a funnel disclosed for oil dispensing anticipated a claim to a funnel-like structure employed for dispensing popcorn and that applicant had the burden to prove that the funnel was not capable of dispensing popcorn once the Examiner established a similarity in structure);<sup>7</sup> *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1468 (Fed. Cir. 1990) (“[A]pparatus claims cover what a device *is*, not what a device *does*.”); *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) (“Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim.”).

Based on the discussion *supra*, Appellant’s argument (Reply Br. 19) that the Examiner’s finding of Marlton’s “mere capability” of receiving a second video signal as set forth in claim 1 (and similarly in claim 10) is not enough for anticipation, is not persuasive. *Cf. In re Mott*, 557 F.2d 266, 269 (CCPA 1977) (“Absent structure which is capable of performing the functional limitation of the ‘means’, Leutwyler does not meet the claim);

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<sup>7</sup> While the *Schreiber* opinion did not specifically expound on the claim form, *Schreiber*’s claim 1 includes a means plus function limitation: “means at the enlarged end of the top to embrace the open end of the [popcorn] container, the taper of the top being uniform and such as to by itself jam up the popped popcorn before the end of the cone and permit the dispensing of only a few kernels at a shake of a package when the top is mounted on the container.” *Id.* at 1476.

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*RCA Corp. v. Applied Digital Data Systems, Inc.*, 730 F.2d 1440, 1444 (Fed. Cir. 1984) (quoting *Mott's* “capable of performing” standard with approval).

Whereas the Examiner has identified Marlton’s video inputs as structure corresponding to the claimed function, and whereas these standard video input structures and signal formats are similar to or the same as those in the ‘369 patent, Marlton’s receiving means necessarily can receive video signals having different width to height ratios than a display screen. It is well settled that when the prior art structure is the same or substantially similar to the applicant’s disclosed structure, and Appellant contends that the identical function is not disclosed, under *Schreiber*, Appellant has the burden of demonstrating otherwise.<sup>8</sup> Absent evidence to the contrary, Marlton’s system necessarily has the capability to receive a video signal of a width to height ratio different or less than the display ratio of a screen (or window), thereby satisfying the disputed limitation in claim 1, and the similar disputed limitation in claim 10.<sup>9</sup> Appellant points to nothing in Marlton which would preclude such a relative aspect ratio video reception.

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<sup>8</sup> *See also In re Swinehart*, 439 F.2d 210, 213 (CCPA 1971) (“[T]he mere recitation of a newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. Additionally, where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.”)

<sup>9</sup> While Appellant submitted an expert declaration, it does not address this issue. (*See* “Declaration of Professor Kannan Ramchandran Under CFR 1.132 In Support of Response to Non-Final Office Action,” ¶¶16-20 (App. Br. Evidence App’x, Exhibit D).)

Shifting to another claim limitation, i.e., the “means for changing said ratio of width to height of said second picture,” in claim 1 and a similar limitation in claim 10, Appellant also argues that Marlton’s system does not change the aspect ratio of the second input video signal because Marlton discloses preventing such a change. (App. Br. 15-16.) This argument is also unpersuasive. The Examiner relied upon the horizontal and vertical scaling in Marlton as providing the identical function recited. (Ans. 13-14; *accord* M4-M10.) The Examiner also found that Marlton discloses that “the synchronizer can control the aspect ratio of the video image in the combined display.” (Ans. 30 (quoting Marlton at col. 2, ll. 24-26).) The Examiner also explained that “[w]hile Marlton does indeed address the situation where the aspect ratio is maintained (preventing changing) as proposed by Appellants (e.g. at 7:32), Marlton also makes clear that the aspect ratio can be controlled (i.e. changed) by the synchronizer as explained above.” (Ans. 31.) The Examiner further explained that Marlton has two purposes, one related to distortion control, the other related to different video input and graphics display aspect ratios. (*See* Ans. 31.) The record supports this position. Marlton controls a video aspect ratio so that a video input fits into any sized computer graphics *display*, and also controls distortion caused by a graphics *input* when combined with a video input. (*See* M2, M3.)

Appellant responds that in Marlton, *control* of the aspect ratio means that Marlton *prevents change* in the aspect ratio, because otherwise, changing it would result in unwanted distortion. (Reply Br. 21-22; *accord* App. Br. 15-16.) Appellant explains further that Marlton is *only capable* of presenting the distortion option and “instead suggests the opposite” option.

(Reply Br. 22.)<sup>10</sup> The specific Marlton passage relied upon by the Examiner (“e.g. at 7:32”) states: “*If the video image is being reduced in size in proportion, i.e., maintaining its aspect ratio, two or more video lines may be stored in the linestore 118. This enables more extensive interpolation to be effected by using more vertical samples.*” (M4 (emphasis supplied).)

This passage, stating that “*if the video image is being reduced in size in proportion,*” implies that the image need not be reduced in such proportion. As such, Marlton necessarily discloses the disputed function. Moreover, Appellant’s reliance (App. Br. 15-16) on Marlton’s desire for distortion prevention improperly conflates Marlton’s desire to prevent distortion of a *graphics* source (i.e., “[a] circle drawn in computer graphics will appear as an ellipse in the combined display”) to Marlton’s *video* source. (M2.) Skilled artisans would have recognized that Marlton’s system provides an option for altering the aspect ratio of input video.

In further support of these findings, Marlton also discloses horizontal scaling at one-half, with vertical scaling at virtually any reasonable amount, depending on two separate modes. (M7.) Another specific example which does not specify the horizontal scaling, describes a different (than one-half) vertical scaling of 1.4 to fit a reduced window of 71%. (M9.) In addition to these examples, Marlton discloses aspect ratio correction and video reduction with both vertical and horizontal scaling controlled at any amount necessary to allow for an image to fit into a reduced size display window,

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<sup>10</sup> Appellant’s expert (*supra* note 9) opines in a similar or cumulative fashion. (*See* Ramchandran Decl. ¶¶16-19.) The expert does not address the Examiner’s finding that Marlton’s system *also* produces distorted (i.e., changed aspect ratio) pictures.

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and further discloses different filter combinations and different sampling and scaling for obtaining the different vertical and horizontal scaling. (M4-M6, M8, M10.)

Finally, as noted above, Appellant acknowledges that Marlton displays video to fit different windows. (Reply Br 19-20.) While Appellant maintains that Marlton does not disclose changing the input video aspect ratio (*id.* at 20 n.9.) the argument reduces to the assertion that Marlton's disclosure limits all windows to the same aspect ratio as other windows or as the screen. No basis exists for such a limitation on Marlton's generic disclosure of windows.

In any event, different scaling of the horizontal versus the vertical video input constitutes distortion by disproportionate scaling, i.e., not maintaining the aspect ratio. (*See* App. Br. 13, 19-20.) Contrary to Appellant's arguments, while Marlton's disclosure does indicate that the horizontal scaling and vertical may be the same, Marlton's broad disclosure discussed *supra* presents a distortion option.

Appellant also relies on *Transclean Corp. V. Bridgewood Servs., Inc.*, 290 F.3d 1364,1373 (Fed. Cir. 2002) for the proposition that a prior art reference must necessarily disclose the identical function. (App. Br. 18.) Similar to the argument presented *supra*, Appellant argues that even if a prior art means is "capable of performing the recited function," such is not sufficient to show that Marlton "necessarily perform[s] the recited function." *Id.*

As indicated *supra*, the Examiner's findings and the record shows that Marlton's disclosure necessarily either describes a pre-configured apparatus

with a distortion option (with selectable different horizontal and vertical filters employed during different scaling options, etc.) or an apparatus having post-optional configuration(s) (i.e., options for adding the different horizontal and vertical filters, etc. and scaling options to the apparatus as required) which necessarily include a distortion option. Contrary to Appellant's argument, *Transclean* does not preclude a finding of anticipation based on a reference which informs skilled artisans of the various options necessary to perform the recited function. *Cf. In re Mott*, 557 F.2d at 269 (relying on the capable of performing standard for a means clause to show a lack of anticipation).

In other words, even if additional modifications are required, as long as any such required modifications are disclosed in the four corners of Marlton such that Marlton discloses the invention in the manner claimed (i.e., without picking and choosing), Marlton anticipates the claims. *Net MoneyIn, Inc. v. VeriSign, Inc.* 545 F.3d 1359, 1371 (Fed. Cir. 2008) (holding that an anticipating reference must “disclose[] within the four corners of the document not only all of the limitations claimed, but also all of the limitations arranged or combined in the same was as recited in the claim”); *cf. Transclean*, 290 F.3d at 1372 (noting that nothing in the prior art Becnel patent showed how a skilled artisan would recognize that that the claimed flow equalization was necessarily present).<sup>11</sup>

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<sup>11</sup> Appellant also relies on “an analogy” in *Net MoneyIn*, 545 F.3d at 1367. Appellant argues that this case stands for the proposition that “a prior art reference disclosing a general purpose computer does not satisfy a means-plus-function element reciting a particular function on the theory that the computer is capable of being programmed to perform the recited function.

Appellant also argues that Marlton does not disclose . . . “means for combining a portion of said first picture with a portion of said changed second picture . . . or means for changing the ratio or width to height of said second picture.” (App. Br. 14 (bolding emphasis deleted).) With respect to the first portion of the argument, Appellant contends that the Examiner did not respond to Appellant’s “arguments that Marlton lacks ‘means for combining . . . .’” (App. Br. 16.) The Examiner found, *inter alia*, that Marlton’s “fading/mixing circuit 34 combines tile video and graphics signals” from each asynchronous converter 30, and that the output of the circuit 34 constitutes a combined display signal which is provided to the display monitor. (Ans. 14.) The Examiner also explained that that “the fading/mixing circuit 34 (matrix) [is] under the control of uP control 38,” and referenced the earlier “Final Office Action of 1/29/09.” (Ans. 31.)

In response, Appellant focuses on the functional limitations involving “changing” and does not contest (with any supporting argument or evidence) the Examiner’s finding that Marlton’s circuit 34 constitutes structure

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Rather the computer must be, in fact, programmed with an algorithm to perform the function.” (App. Br. 17, n. 9.) While *Net MoneyIn* does outline anticipation requirements in another portion of the opinion as summarized *supra*, in the portion of the opinion relied upon by Appellant, *Net MoneyIn* outlines the requirements for a *claimant’s disclosure* to satisfy 35 U.S.C. § 112 ¶¶ 2 & 6 when a claim is in a means-plus-function format. In any event, contrary to Appellant’s analogy, nothing in *Net MoneyIn* requires a general purpose computer to be programmed, “in fact,” either for anticipation purposes, or otherwise. For example, an algorithm specified as applicable for a general purpose computer in the patent specification can satisfy 35 U.S.C. § 112 ¶¶ 2 & 6. *Cf. id.* (holding means-plus-function claims indefinite under 35 U.S.C. § 112 ¶ 2 because “the specification fails to disclose an algorithm for performing the claimed function.”)



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satisfying the means for combining. (*See* App. Br. 16) In other words, Appellant only asserts but does not specifically explain why Marlton's structure is not the same as or an equivalent to Marlton's means for combining. Absent a specific explanation by Appellant to the contrary, the Examiner's response with respect to the means for combining clause appears supported because Appellant also discloses microprocessor control, albeit of, "*for example*, the multiplexers" (as structure corresponding to the function of combining a signal for display). (App. Br. 4 (emphasis added).) Such an "example" opens the door for other corresponding or equivalent hardware besides multiplexers. "It is the applicants' burden to precisely define the invention, not the PTO's." *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997).

With respect to the second portion of the argument, Appellant's arguments similarly focus on the asserted lack in Marlton of the "changing" function recited in the "means for changing" clause, and as also implied in the "means for combining . . ." clause (based on the recited "changed second picture" in the latter clause), in claim 1. On the other hand, Appellant does assert, without explanation, that the Examiner failed to show that Marlton's "synchronizer corresponds to the structure described in the '369 Patent, or an equivalent thereof, for performing the recited function of the 'means for changing.'" (Reply Br. 20.)

In other words, Appellant's terse assertion without explanation as to an alleged lack of changing (or other) means structure, coupled with pointed arguments alleging a lack of function, lead to the conclusion that Appellant relies on an alleged lack of disclosed function to show a lack of

corresponding structure. In response to Judge Turner's questions at the oral argument, Appellant verified that Appellant's arguments were not directed to a lack of structure corresponding to the means for changing clause, thereby waiving any such argument based on lack of structure. (*See* BPAI Hearing Transcript 12 (stating "I believe we did not make a structural argument in Marlton" and later, "[i]t wasn't in dispute").) In any event, comparison of the respective circuits at least reveals sufficient *prima facie* structural equivalence and/or correspondence.<sup>12</sup>

While Appellant recites limitations appearing in claims 5 (App. Br. 12), 12 (*id.* at 16, 20), and 16 (*id.* at 16), these separate recitations appear under the same section headings for the independent claims (i.e., "**1. Claims**

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<sup>12</sup> For example, Appellant states that the means for changing "may be accomplished by interpolation and resampling circuits that implement subsampling (when reducing) and up-sampling (when increasing) the line or pixel counts." (App. Br. 3.) Appellant also pointed (more specifically) to disclosed corresponding structure including interpolators, a processor, and decimation circuitry (as noted *supra* in the discussion of Fernandez). (*Id.* at 3-4.) The Examiner relied on Marlton's asynchronous video converter 30 and synchronizer. (*See* Ans. 13, citing Marlton at column 5, ll. 56-61.) Synchronizer 25 and converter 30 cooperate (Marlton, col. 4, ll. 24-31) to provide sync and include horizontal and vertical filters, and interpolators (*see* Ans. 13, citing Marlton at column 5, ll. 56-61). Synchronizer 25 is under microprocessor control. (M11.) The interpolator 104 provides "horizontal scaling . . . by sub-sampling at a predetermined clock rate." (Ans. 13, quoting Marlton at col. 6, ll. 12-16.) With respect to a more limiting "changing means" as recited in claim 9, the Examiner also pointed out that Marlton's vertical interpolator performs a similar sub-sampling as the horizontal interpolator. (Ans. 17, citing Marlton at col. 7, ll. 36-38.) The Examiner also pointed out that Marlton's synchronizer circuit performs both sub-sampling and over-sampling to change the aspect ratio. (Ans. 30 (citing Marlton at col. 7, ll. 28, 59).)

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**1-9,**” *id.* at 11, and “**2. Claims 10-18,**” *id.* at 20) and appear to be in the context of explaining the meaning of independent claims 1 and 10. As such, these mere recitations, each appearing as grouped with the corresponding independent claims, do not rise to the level of separate patentability arguments. *See* 37 C.F.R. § 41.37(vii). Moreover, Appellant asserts that dependent claims 2-9 and 11-18 respectively are patentable “for at least the reasons given for the independent claim[s]” 1 and 10. (App. Br. 19; *accord* App. Br. 16, 21.) In other words, based on the arguments presented, the dependent claims fall with the independent claims.

Based on the foregoing discussion, the Examiner did not err in finding that Marlton anticipates independent claims 1 and 10, and claims 2-9 and 11-18 dependent therefrom.

#### *Conclusion*

Marlton discloses “means for receiving a second video signal representing a second picture having a second ratio of width to height different than said first ratio” of width to height of a video display means, and “means for changing said ratio of width to height of said second picture,” as recited in claim 1. Marlton discloses a “means for receiving a first video signal, defining a picture in a second format display ratio of width to height smaller than said first format display ratio” as recited in claim 10. As such, we sustain the anticipation rejection of claims 1-18 based on Marlton.

#### DECISION

The Examiner’s decision to reject appealed claims 1-18 is affirmed.

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Requests for extensions of time in this ex parte reexamination proceeding are governed by 37 C.F.R. § 1.550(c). *See* 37 C.F.R. § 41.50(f).

AFFIRMED

KMF

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