IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: Kenneth Martin Jacobs	Group Art Unit: 3992
Appl. No.: 15/217,612	Examiner: HUGHES, DEANDRA M
Filed: Jul 22, 2016	Confirmation No: 5884
U.S. Patent No. 9,699,444 Issue Date: July 4, 2017 Reexamination Control No. 90/015,245	Atty. Dkt. No.: 20311.0001.REEX00
Title: FASTER STATE TRANSITIONING FOR CONTINUOUS ADJUSTABLE 3DEEPS FILTER SPECTACLES USING MULTI-LAYERED VARIABLE TNT MATERALS	

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RESPONSE TO NO-FINAL OFFICE ACTION PURSUANT TO 37 C.F.R.§ 1.111 and 1.550

Enclosed herewith is VDPP, LLC's Response pursuant to 37 C.F.R § 1.111 and 1.550 to the Non-Final Office Action filed on January 23, 2024.

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Patent Owner's Exhibits

Exhibit No.	Description
2001	Processor Defined in Microsoft Computer Dictionary
2003	Processor and Instruction Defined in Dictionary of Computer and Internet Terms
2004	Processor (computing) – Wikipedia Source: https://en.wikipedia.org/wiki/Processor_(computing)

I. STATUS OF THE CLAIMS

Claims 1-27 stand issued in U.S. Patent No. 9,699,444 ("the '444 Patent") of which claims 1, 26 and 27 are subject to reexamination. Claims 2-25 are not subject to reexamination. Of those claims subject to reexamination, claims 26 and 27 are rejected, claim 1 is confirmed patentable. The Patent Owner has not presently amended the claims.

II. OVERVIEW OF THE OFFICE ACTION

In the Non-Final Office Action in Ex Part Reexamination issued on January 23, 2024 ("NFOA"), the Examiner rejects claims 26 and 27 on the following grounds:

Claims 26 and 27 are rejected under 35 U.S.C.§ 102(b) as being anticipated by Okamura (U.S. 6,061,103).

Patent Owner disagrees with Examiner's assessment. Patent Owner respectfully traverses the ground of rejection and requests entry of the present Response and Reconsideration of the rejection in view of the arguments presented herein.

III. SUMMARY OF THE '444 PATENT

U.S. Patent No. 9,699,444 ("the '444 Patent") is directed to an apparatus and method for originating visual illusions of figures and spaces in continuous movement in any chosen direction using a finite number of pictures (as few as two

pictures) that can be permanently stored and copied and displayed on motion picture film or electronic media. The '444 Patent, 4: 31-36.

The method of the '444 Patent entails "repetitive presentation to the viewer of at least two substantially similar image pictures alternating with a third visual interval or bridging picture that is Substantially dissimilar to the other substantially similar pictures in order to create the appearance of continuous, seamless and Sustained directional movement." The '444 Patent, 4: 36-42.

The rolling movements of pictorial forms thus created (figures that uncannily stay in place while maintaining directional movement, and do not move into a further phase of movement until replaced by a new set of rotating units) is referred to as Eternalisms, and the process of composing such visual events is referred to as Eternalizing. The '444 Patent, 4: 51-57.

Figs. 22a-22c (reproduced below) illustrate the effect of Eternalisms. In Figs. 22a-22 c, both pictures are identical except for the position of a superimposed image F on the pictures. Image F could be taken from the original picture G or could be taken from another picture, which is separate and distinct from pictures G and H. For 35 example, pictures G and H could have the common background of a countryside road while image F is a man walking his dog. In picture G, the man and his dog is placed at one location while on picture H the man and his dog is placed at a different location on the country road. By viewing the repeating of a

series of G, H, C, a viewer is given with the impression that the man is walking his dog down the road, from top of the frame towards the bottom of the frame, appearing to be continually moving in the same direction without changing his actual position. The '444 Patent, 39: 31-45.

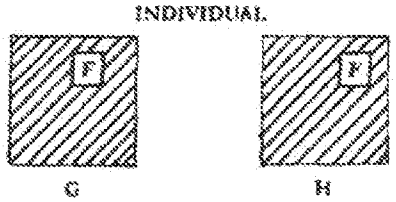


Fig. 22A

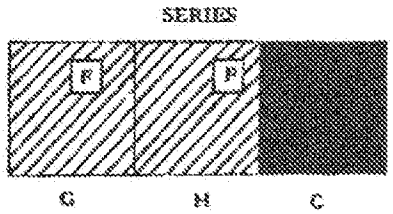


Fig. 22B

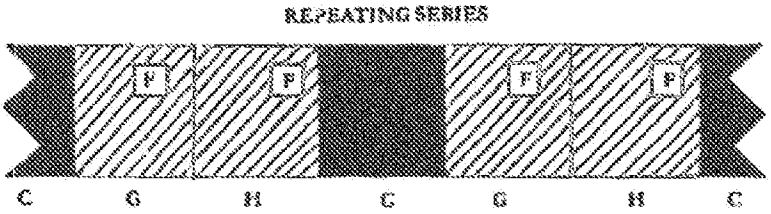


Fig. 22C

Figs. 22a-22c of the '444 Patent

The present invention is best created on the computer, to be viewed on the computer or transferred to film or any video format. It can also be created directly

onto film or video but the precision control possible with the computer is lacking. The '444 Patent, 40: 55-59.

IV. CLAIM CONSTRUCTION

Because the present Request relates to an expired patent, the claims should be construed according to same standard applied by Article III courts, outlined *in Phillips v. AWH Corp.,* 415 F.3d 1303 (Fed. Cir. 2005) (en bane). See *In re CSE-System Int'l, Inc.,* 832 F.3d 1335, 1341 (Fed. Cir. 2016). Under this standard, claims are given their ordinary and customary unless the patentee "has clearly set forth an explicit definition of the term" in the specification or disclaimed scope of coverage using expressions of "manifest exclusion or restriction" during prosecution. *Id.* at 1319-20.

In accordance with these principles, Patent Owner submits that the terms of the '444 Patent are clear on their face, except the following claim term which should be construed as follows:

1."processor" (Claim 26)

An ordinary meaning of the term "processor," as known in the art, is defined in Microsoft Computer Dictionary (Ex. 3001) as "central processing unit," or "CPU," which is the computational and control unit of a computer." The CPU is the device that interprets and executes instructions. The CPU—or microprocessor, in the case of a microcomputer—has the ability to fetch, decode, and execute

instructions and to transfer information to and from other resources over the computer's main data-transfer path, the bus. By definition, the CPU is the chip that functions as the "brain" of a computer. In some instances, however, the term encompasses both the processor and the computer's memory or, even more broadly, the main computer console (as opposed to peripheral equipment).

The term "processor" defined in the Dictionary of Computer and Internet Terms (Ex. 2003) as "The computational and control unit of a computer. The CPU is the device that interprets and executes instructions."

Regarding the term "instruction," Dictionary of Computer and Internet Terms (Ex. 3004) explain it as "An action statement in any computer language, most often in machine or assembly language. Most programs consist of two types of statements: declarations and instructions."

A POSITA would have understood from the ordinary meaning that the term "processor" is the computational and control unit of a computer, "processor" has the ability to interpret and execute instructions, which is an action statement in any computer language.

V. THE ASSERTED PRIOR ART

a. Okamura (Ex. 1006)

Okamura describes a display apparatus Suitably constructed to obtain an observing image with high resolution, even though the apparatus has the delta arrayed pixels as in the general liquid crystal. Ex. 1006, 2:30-32.

In order to improve resolution, one embodiment of an image display apparatus comprises, an image display element having a plurality of pixels arrayed in matrix and divided into a plurality of regions, for displaying images by scanning these pixels with image signals, a first pixel shifting means for selectively shifting optical axes of images in respective regions, a second pixel shifting means having the same shifting amount as that of the first pixel shifting means, a viewing optical system for projecting it magnified virtual image on eyes of a viewer, and a control means for controlling a position of image displayed on the image display element in synchronism with the operation of the first and Second pixel shifting means. Ex. 1006, 2:46-59.

In order to perform the pixel shifting by selectively shifting the optical axis of images on the display element by the optical axis shifting means. Fig.35(reproduced below) shows "any images are not displayed on the display element at an instant of performing pixel shifting. That is, black is displayed. If the images having different sampling timing of a picture 1 and a picture 2 to each other are continuously displayed, a black picture is inserted between the picture 1 and the picture 2." Ex. 1006, 22:46-56.

FIG_35

Fig. 35 of Ex. 1006

FIG. 36 (reproduced below) shows the change of the images on the display element in this embodiment. As shown in FIG. 36, at an instant (time) t1, a picture 1 is displayed on the display element, at a time t2, the picture 1 is gradually rewritten by a black image from upper side and at a time t3, the picture1 is wholly replaced by a black image. At this instant, the pixel shifting is performed, at a time t4, the black image is gradually rewritten by a picture 2 from upper side, and at a time t5, whole image of picture 2 is displayed. If such an operation is performed, the instant in which the picture 1 and the picture 2 are displayed simultaneously, is not present, the pixel shifting can be performed by wholly separating the pictures 1 and the picture 2, so that the resolution can be increased. Ex. 1006, 22:57-23:3.

FIG. 36

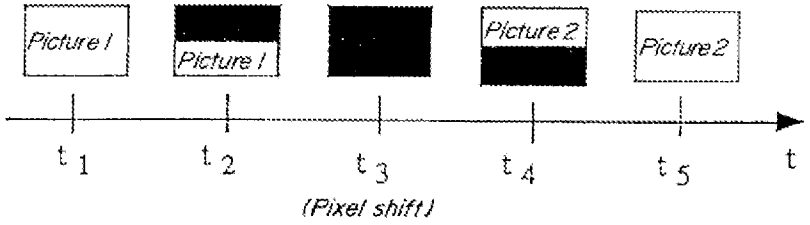


Fig. 36 of Ex. 1006

VI. CLAIM REJECTIONS

A. Okamura Fails to anticipate Claims 26 and 27

The Office action rejects Claims 26 and 27 under 35 U.S.C.§ 102(b) as being anticipated by Okamura. Patent Owner respectfully submits that Okamura fails to teach or suggest each and every limitation of Claims 26 and 27 and requests that the rejection of Claims 26 and 27 be withdrawn.

1. Claim 26

The Requester has divided claim 26 into elements for consideration as follows:

[26-Preamble] An apparatus comprising:

[26a] a storage adapted to: store one or more image frames; and

[26b] a processor adapted to: obtain a first image frame from a first video stream;

[26c] generate a modified image frame by performing at least one of expanding the first image frame, shrinking the first image frame, removing a portion of the first

image frame, stitching together the first image frame with a second image frame, inserting a selected image into the first image frame, and reshaping the first image frame, wherein the modified image frame is different from the first image frame;

[26d] generate a bridge frame, wherein the bridge frame is a solid color, wherein the bridge frame is different from the first image frame and different from the modified image frame;

[26e] display the modified image frame; and display the bridge frame.

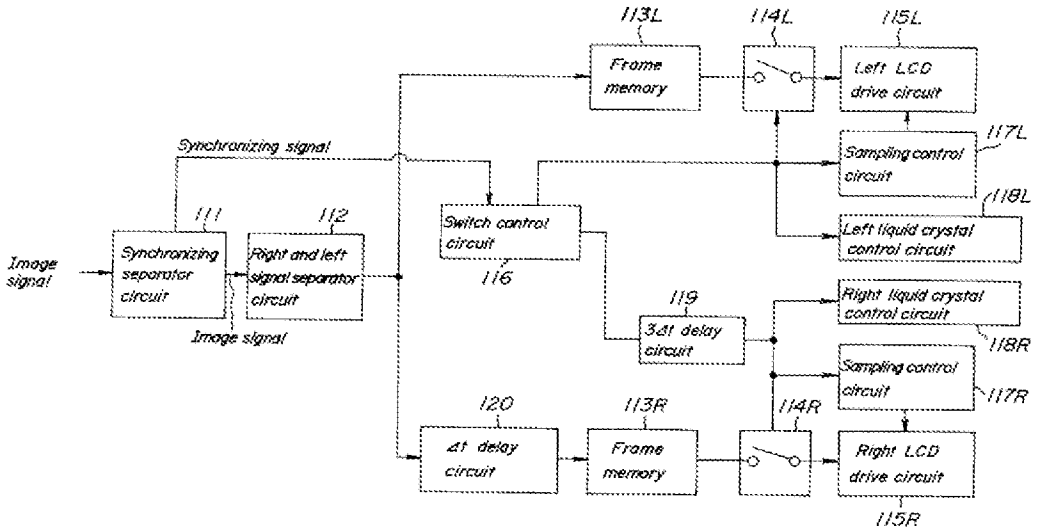
a. Element [26b]

Okamura does not disclose Element [26b], particularly, Okamura does not disclose "processor."

Regarding the limitation "processor," Requester proffers that

The circuit structure disclosed in Figure 39 of Okamura discloses a processor capable of performing each of the functions recited in elements 26b through 26e of claim 26. In performing the recited functions, the Figure 39 circuit structure uses a plurality of circuits, including separator circuits 111 and 112, and numerous "control circuits" such as "switch control circuit 116," "sampling control circuit 117[L/R]" and "[Right/Left] liquid crystal display circuit 118[L/R]," as shown below:

FIG_39

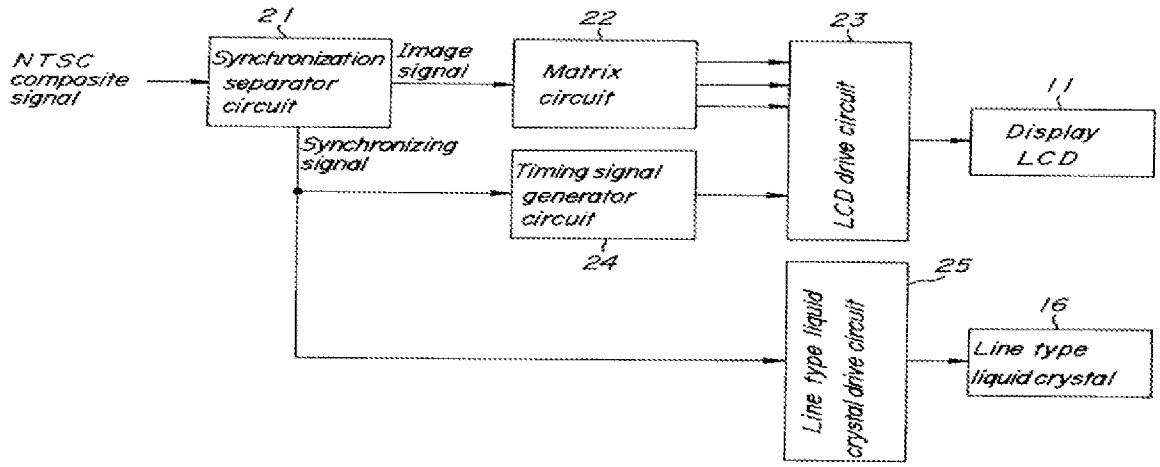


Regarding that the processor is adapted to obtain a first image frame from a first video stream, Okamura discloses obtaining an image frame from a video stream. For example, Okamura discloses the use of separator circuits (111, 112) to obtain image frames that are part of a video to be displayed. EX1006, 23 :45-60. Okamura discloses:

In this circuit structure, the image signals from an image reproducer (not shown) are separated into a synchronizing signal and an image signal by a **synchronous separator circuit 111, and the separated image signals are separated into right and left image signals in a right and left separator circuit 112.** The left image signals separated from the right and left separator circuit 112 are stored in a frame memory 1 13L and the right image signals are stored in a memory 13R by delaying them by L1t by a L1t delay circuit 120. Id (emphasis

added). This idea is also described by Okamura in Figure 4, which depicts an "NTSC composite signal" (i.e., a first video stream), that includes the synchronization separator circuit for obtaining a first image frame. Req.,45-47.

FIG. 4



In so arguing, Requester confuses the concept of "processor" and "circuit structure." Patent Owner appreciates that "processor" is a kind of "circuit structure," since "in computing and computer science, a processor or processing unit is an electrical component (digital circuit) that performs operations on an external data source, usually memory or some other data stream" (Ex2004). But "circuit structure" covered broader concept than "processor," "circuit structure" of Okamura such as "separator circuits 111 and 112," and numerous "control circuits" such as "switch control circuit 116," "sampling control circuit 117[L/R]" and "[Right/Left] liquid crystal display circuit 118[L/R]," are all dedicated circuits for LCD, the "circuit structure" has no ability to interpret and execute instructions and

is not a "processor." According to claim construction in section IV, the term "processor" is a computational and control unit of a computer with the ability to interpret and execute instructions. A POSITA would understand that the "circuit structure" in Okamura has no ability to interpret and execute instructions, and since the "circuit structure" includes dedicated circuits for LCD, there is no need that "circuit structure" in Okamura to interpret and execute instructions. The argument of Requester therefore cannot show that Okamura discloses "processor."

Regarding "processor," the Examiner states that "Okamura necessarily discloses a "processor" because the pixel shifts of figure 36 are images processed by a computer." Page 11, Ex Parte Reexamination of U.S. 9,699,444-Non-final Office Action, Jan. 23, 2024. (NFOA).

Okamura discloses the pixel shifting of figure 36 is performed by optical axis shifting means in the tenth and eleventh embodiments. EX1006, 22 :46-65.

Okamura also discloses the structure of optical axis shifting means in the tenth embodiment:

FIG. 29 shows a tenth embodiment of the image display apparatus according to the present invention. ……To this end, in this embodiment, a back light 72 generating a white light is arranged at the back side of the LCD 71 and a first polarization converting liquid crystal plate 73, a first birefringent plate 74, a second polarization converting liquid crystal plate 75 and a second birefringent

plate 76 which constitute an optical axis shifting means, are arranged in order at front side of the LCD 71. EX1006, 19 :25-44.

FIG_29

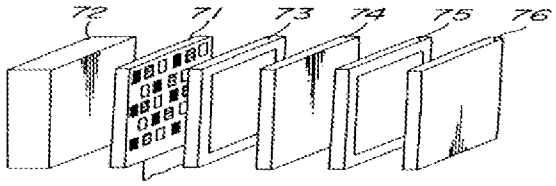


Fig.29 of Okamura

Okamura also discloses how to control the optical axis shifting means:

The LCD 71 is scanned in the horizontal direction so as to display the images on the image plane vertically, and is controlled in such a manner that the images are displayed by shifting the sampling timing of the image signals by a pixel pitch with a LCD drive circuit (not shown). The first and second polarization converting liquid crystal plates 73 and 75 are subjected to On. OFF control in synchronism with the display of images by LCD 71 by a liquid crystal control circuit (not shown), so as to transmit incident polarized light, as it is, under the ON state and to rotate the incident polarized light by 90 degrees under the OFF state. EX1006, 19 :25-44.

The cited portion of Okamura shows that pixel shifting of figure 36 is performed by an optical axis shifting means comprising a back light 72 generating a white light is arranged at the back side of the LCD 71 and a first polarization converting liquid crystal plate 73, a first birefringent plate 74, a second polarization converting liquid crystal plate 75 and a second birefringent plate 76 which are dedicated electronic components for LCD, A POSITA would understand that the optical axis shifting means is not a "processor." The optical axis shifting means is controlled by a LCD drive circuit and a liquid crystal control circuit which are dedicated LCD circuit. A POSITA would understand that "the LCD drive circuit" and "the liquid crystal control circuit" in Okamura have no ability to interpret and execute instructions. Thus, they are not processors.

Regarding the term "computer," Okamura only discloses:

In FIG. 32, the display apparatus unit 81 is connected to a conventional video deck and a TV tuner through the cable 88 to display the image or to a computer to display the image of a computer graphics and a message image from the computer. Alternatively, the display apparatus unit 81 is provided with an antenna without using the cable 88, to receive the image signals externally as an electromagnetic wave. EX1006, 21:65 -22:5,

The cited portion of Okamura shows "computer" is employed to send image signal to display apparatus unit 81, the "computer" does not perform the operations in the elements [26b]-[26e] in claim 26.

Therefore, Okamura does not disclose "processor" as required by claim 26, claim 26 is not anticipated by Okamura, since "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051,1053 (Fed. Cir. 1987).

2.Claim 27

Claim 27 depends from claim 26 and is not anticipated by Okamura for at least the same reasons.

VII. THE COMBINATION OF OKAMURA AND MACINNIS DOES NOT RENDER OBVIOUS CLAIMS 26 AND 27

Although, there is no analogous art requirement for a reference being applied in an anticipation rejection under 35 U.S.C. 102. *In re Schreiber,* 128 F.3d1473, 1478, 44 USPQ2d 1429, 1432 (Fed. Cir.1997). In order for a reference to be proper for use in an obviousness rejection under 35 U.S.C. 103, the reference must be analogous art to the claimed invention. *In re Bigio,* 381 F.3d 1320, 1325, 72USPQ2d 1209, 1212 (Fed. Cir. 2004). Thus, if a reference is not analogous art to the claimed invention, it may not be used in an obviousness rejection under 35 U.S.C. 103.

Okamura and Macinnis are not analogous art to claim 26 of the '444 patent.

First, the '444 patent and Okamura, Macinnis are allocated in different International Patent Classifications (IPC or CPC).

The main international patent classification number of the '444 patent is H04N 13/0431 (2013.01). The '444 patent, Page 1, Code (52). Wherein H04N 13 covers systems providing a three-dimensional [3D] effect, or different views to one or more viewers by means of electronic signals representing images, which could

be taken from different viewpoints, or by means of signals including depth information, H04N 13/0431 (2013.01) (transfer to H04N13/334) covers using spectral multiplexing. (https://www.uspto.gov/web/patents/classification/cpc). The '444 patent relates to processing image frame itself, although the image frame needs to be displayed on a display apparatus, the '444 patent does not improve the performance of the display apparatus.

The main international patent classification number of Okamura is H04N 5/74. EX1006, Page 1, Code (51). Wherein H04N 13 covers details of television systems, H04N 5/74 covers projection arrangements for image reproduction, e.g. using eidophor. (https://www.uspto.gov/web/patents/classification/cpc).

The main international patent classification number of Macinnis is G09G 5/00. EX1008, Page 1, Code (51). Wherein G09G 5/00 covers control arrangements or circuits for visual indicators common to cathode-ray tube indicators and other visual indicators.

The '444 patent relates to processing image frame itself, although the image frame needs to be displayed on a display apparatus, the '444 patent does not improve the performance of the display apparatus. While Okamura, Macinnis relates to improve the performance of the display apparatus. Thus, Okamura and Macinnis are not from the same field of endeavor as the '444 patent.

Second, Okamura and Macinnis are not reasonably pertinent to the problem faced by the ’444 patent.

The ’444 Patent discloses apparatuses configured to present two substantially similar image pictures to a viewer and alternate those images with a third visual interval-or "bridge frame"-that is substantially dissimilar to the images. This, according to the ’444 Patent, creates "the appearance of continuous, seamless and sustained directional movement," which the inventors called an "Eternalism." EX1001, 4:36- 42, 43:55-44:37. Although the specification of the ’444 Patent is largely directed to three-dimensional visual effects when viewed through special "3Deeps" spectacles (eyeglasses), spectacles are not claimed.

The problem faced by the inventor of the ’444 Patent is to create an Eternalism, it need to process the imagine comprising (1) obtain a first image frame from a first video stream; (2)generate a modified image frame by performing at least one of expanding the first image frame, shrinking the first image frame, removing a portion of the first image frame, stitching together the first image frame with a second image frame, inserting a selected image into the first image frame, and reshaping the first image frame, wherein the modified image frame is different from the first image frame; (3) generate a bridge frame, wherein the bridge frame is a solid color, wherein the bridge frame is different from the first image frame and different from the modified image frame; (4) display the modified

image frame; and display the bridge frame. The claimed invention focuses on processing image frame, not on the device to show the image frame, in order to create an "Eternalism."

The problem faced by Okamura is to improve resolution in a display apparatus, even though the apparatus has the delta arrayed pixels as in the general liquid crystal. Ex. 1006, 2:30-32. Okamura describes that the display apparatus comprises an image display element having a plurality of pixels arrayed in matrix, for displaying images by scanning these pixels with image signals, a pixel shifting means provided so as to divide these image display elements into a plurality of regions in a direction orthogonal to the Scanning direction of the image signal, for selectively shifting viewing positions of the displayed images in respective regions, and a control means for controlling shifting operation at the viewing positions of the displayed images in corresponding regions of the pixel shifting means, in synchronism with the scanning of the image display elements. Ex. 1006, Abstract. Okamura is completely irrelevant to "Eternalism."

The problem faced by Macinnis is to support a combination of dynamically varying data types and data transfer rates and FIFI buffers between the producing and consuming modules in a graphics display system. Macinnis describes how the ATSC (Advanced Television Systems Committee) Digital Television Standard required televisions capable of receiving digital broadcasts to decode MPEG-2

video by a process that includes upscaling (i.e., increasing the displayed size), which allows displays to modify the incoming signal to match the resolution and size of the display. EX1008 at 64:31-49. Ex. 1008, 17:45-52. Macinnis is totally irrelevant to "Eternalism" either.

Okamura and Macinnis are not analogous art to claim 26 of the '444 patent, they may not be used in an obviousness rejection of claim 26 under 35 U.S.C. 103. The combination of Okamura and Macinnis does not render obvious claim 26. Claim 27 depends from claim 26 and is not obvious over Okamura and Macinnis for at least the same reasons.

VIII. CONCLUSION

Therefore, the Examiner should find that claims 26 and 27 are patentable over the prior art.

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March 23, 2024

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