

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

<i>In re</i> Patent of Kenneth Jacobs et al.	§	Group Art Unit: 3992
	§	Examiner: Deandra M. Hughes
U.S. Patent No.: 9,699,444	§	
	§	Confirmation No.: 5884
Issue Date: July 4, 2017	§	
Filing Date: July 22, 2016	§	Requester Atty. Dkt. No.: VDP444
	§	
Reexamination Control No.: 90/015,245	§	Requester Customer No.: 165774
	§	
Title: FASTER STATE TRANSITIONING	§	
FOR CONTINUOUS ADJUSTABLE	§	
3DEEPS FILTER SPECTACLES USING	§	
MULTI-LAYERED VARIABLE TINT	§	
MATERIALS		

**REPLY TO PATENT OWNER STATEMENT TO THE REQUEST FOR  
EX PARTE REEXAMINATION OF U.S. PATENT 9,699,444**

Mail Stop “*Ex Parte* Reexam”  
Attn: Central Reexamination Unit  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Pursuant to the provisions of 37 C.F.R. § 1.535, Unified Patents, LLC (“Requester”) hereby submits this Reply to Patent Owner (“VDPP”)’s Statement pursuant to 37 C.F.R. § 1.530 (“VDPP’s Statement”). VDPP’s Statement was served to Requester on September 26, 2023, setting the due date for this Reply of November 26, 2023.<sup>1</sup> Requester believes no fee is due with this submission, however the Commissioner is hereby authorized to charge any fee deficiency or credit any over-payment to Deposit Account 50-6990.

Patent Owner’s unsupported attorney arguments do not overcome the evidence presented in the Request. Accordingly, Requester maintains the Challenged Claims of U.S. Patent 9,699,444 (“the ’444 Patent”) are invalid over the prior art and evidence provided in the Request. Requester, therefore, requests that an Office Action rejecting claims 26 and 27 be issued.

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<sup>1</sup> Because November 26, 2023 is a Sunday, Requester has submitted this Reply on the next business day (Monday, November 27, 2023). 37 C.F.R. § 1.7(a); 35 U.S.C. § 21(b).

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## I. INTRODUCTION

Requester submits this Reply to address the arguments in Patent Owner's statement. As shown, none of Patent Owner's attacks overcome the Request's showing that claims 26 and 27 are obvious over Okamura in view of MacInnis.

First, Patent Owner relies on an incorrect, unnecessarily narrow construction of the term "removing a portion of the first image frame" as "removing people or at least one object from background of an image frame, such that the modified image is substantially similar to the first image." VDPP's Statement, 6-7. VDPP's proposed definition ignores claim construction principles and is not supported by the specification of the '444 Patent. *Infra*, Section II. Accordingly, as explained below, this term should be given its plain and ordinary meaning and VDPP's construction rejected.

Second, based primarily on its incorrect interpretation, VDPP argues that the prior art fails to disclose limitations [26c] and [26e] of claim 26. As to both limitations, VDPP improperly adds additional requirements to the claim language that do not exist, and are contrary to proper interpretation of the limitations. *Infra*, Section III.

Therefore, an Office Action should be issued, and challenged claims 26 and 27 rejected as unpatentable.

## II. VDPP'S PROPOSED CONSTRUCTION OF "REMOVING A PORTION OF THE FIRST IMAGE FRAME" IS UNSUPPORTED AND IMPROPERLY NARROW

Undermining each of VDPP's arguments is an incorrect construction of the term "removing a portion of the first image frame." VDPP's Statement, 6-7. VDPP proposes that this phrase be defined as "removing people or at least one object from background of an image frame, such that the modified image is substantially similar to the first image." *Id.*, 7. But this narrow definition is inconsistent with the claim language and the specification of the '444 Patent. For the reasons discussed immediately below, Requester submits that this claim term be given its plain and ordinary meaning for purposes of this reexamination.

Analysis of the claim language reveals at least two problems with VDPP's proposed construction. **First**, and most significant, nothing in the claim language provides support for VDPP's proposed construction of "removing people or at least one object from background of an image frame, **such that modified image is substantially similar to the first image**," and VDPP provides no evidence from the claims to support the addition of this narrowing language. In fact,

the already existing claim language **directly contradicts** VDPP's proposed construction—i.e., limitation [26c] explicitly requires the apparatus to “generate a modified image frame by performing at least one of . . . removing a portion of the first image frame . . . wherein the **modified image frame is different from the first image frame.**” VDPP provides no way to rationalize how the modified image frame should, on one hand, be “**different** from the first image frame,” (from the original claim language) but now also be “**substantially similar** to the first image” (VDPP's proposed construction). The Supreme Court has held that “[e]ach element contained in a patent claim is deemed material to defining the scope of the patented invention.” *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997). VDPP's definition, however, would render superfluous limitation [26c]'s recitation of “wherein the modified image frame is **different** from the first image frame.” *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 801, 810 (Fed. Cir. 2021) (“It is highly disfavored to construe terms in a way that renders them void, meaningless, or superfluous”). For this reason alone, VDPP's construction should not be adopted, as it is inconsistent with the plain language of the claim and would arguably render the explicit recitation of “wherein the modified image frame is different from the first image frame” meaningless because VDPP's construction would simultaneously require the modified image frame be “substantially similar” to the first image frame. *See, e.g., Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950–52 (Fed. Cir. 2006) (*citation omitted*) (“proposed claim construction would be to read limitations...out of the claim [...which is] contrary to the principle that claim language should not be treated as meaningless”).

VDPP's only cited evidence to support its narrow construction that the modified image should be “substantially similar” to the first image is a statement from the summary and introduction of the '444 Patent (i.e., VDPP's Statement at 7, citing EX1001 at 4:36-42). But VDPP provides no evidence or argument as to how this general statement from the beginning of the patent's summary requires that the claim should be narrowed in the way proposed by its construction. As mentioned, VDPP has provided no argument as to how its “**substantially similar**” construction can be supported given limitation [26c]'s explicit recitation of “wherein the modified image frame **is different** from the first image frame.”

**Second**, as to VDPP's proposal that the limitation of “**removing a portion** of the first image frame” (original claim language) now be narrowed to now require “**removing people or at least one object from background** of an image frame,” (VDPP's proposed construction) the

claim language never considers or suggests that the step of removing (or indeed, any of the image modifications steps listed in limitation [26c]) should be limited to removing “people or at least one object from the background of an image frame.” VDPP provides no citation to any portion of the claim language, evidence, or any other argument to support narrowing the claim in such a way.

The specification also does not support VDPP's narrow definitions. As its primary evidence, VDPP cites to one example in the specification (i.e., EX1001 at 46:37-61) that describes pictures being “collaged or stitched together from multiple sources” where “parts may be removed or inserted, lifted and reshaped and/or relocated.” EX1001, 46:37-61. What VDPP fails to do, however, is explain how this non-limiting example from the specification **requires** reading VDPP's narrowing limitations into the claim language. For instance, VDPP's cited passage from the specification states that “parts may be removed” in one example; but this does not lead to a **required narrowing** of the claim such that the removal must be of “people or at least one object from background,” or that the modified image frame must now be “substantially similar to the first image” (VDPP's proposed construction). Instead, like the claim language's broad recitation of “removing a portion of the image frame,” the specification merely states that “parts” of an image “may be removed,” just like the claim language states that a “portion” of an image is removed—the claimed “portion” and the specification's “parts” are arguably interchangeable terms, but in any event, does not lead to a conclusion that requires reading VDPP's narrowing and additional limitations into the claims.

As another example of why VDPP's construction should be rejected, Figure 28 of the '444 Patent depicts *removing a portion of the first image frame* by removing a portion of the first image frame (e.g., frame J) and replacing a portion of that image with black pixels (e.g., frames L or N) in a manner similar to that found in Figure 36 of Okamura:

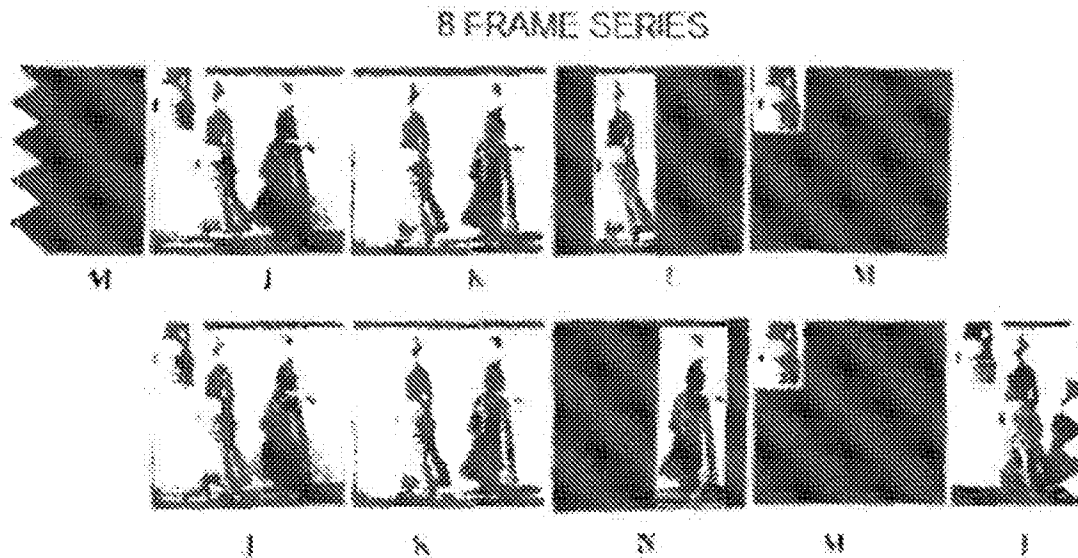


Fig. 28

'444 Patent, EX1001, Fig. 28; *see also id.*, 42:53-60. This example demonstrates that the '444 Patent considers removing portions of an image and replacing them with black pixels (i.e., just as described in Okamura; *infra*, Section III.A) in a way that is not consistent with VDPP's proposed construction.

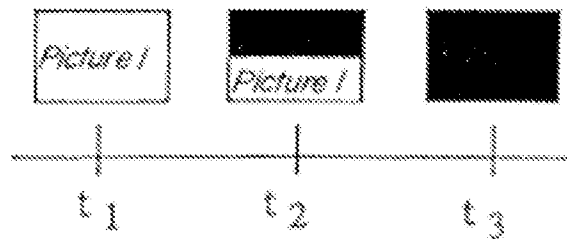
In summary, VDPP's interpretation of its own evidence and its approach attempting to narrow the claim term are incorrect. As a general rule, "[c]laim terms should be given their plain and ordinary meaning to one of skill in the art at the relevant time and cannot be rewritten by the courts to save their validity." *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371-74 (Fed. Cir. 2014). To justify narrowing a claim term with unrecited language, there must either be disclaimer or evidence that the **only way** a person of ordinary skill in the art would have understood the recited language was for it to include unrecited limitations. *Thorner v. Sony Computer Entertainment America LLC*, 669 F.3d 1362, 1365-66 (Fed. Cir. 2012). Nowhere does the specification describe VDPP's proposed construction as "essential" or otherwise critical to the invention. *See Blackbird Tech LLC v. ELB Elecs., Inc.*, 895 F.3d 1374, 1377-78 (Fed. Cir. 2018). Instead, the already existing claim language contradicts VDPP's construction. Accordingly, VDPP's construction should be rejected in favor of the plain and ordinary meaning of "removing a portion of the first image frame."

### III. THE PRIOR ART RENDERS THE ENTIRETY OF THE CLAIMS OBVIOUS

#### A. Okamura discloses or renders obvious limitation [26c]

For at least the reasons presented in the Request, Okamura discloses or renders obvious limitation [26c]. Limitation [26c] requires: “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.” As explained in the Request at Section I.C.3, this limitation of generating a modified image frame should be interpreted as encompassing situations where only one operation of the list of six operations is performed. VDPP does not dispute this interpretation of limitation [26c] that only one operation in the list of six operations must be performed.

As explained in the Request, Okamura discloses generating a modified image frame by *removing a portion of the first image frame*. For example, in FIG. 36 of Okamura, at time  $t_2$ , half of the image frame of Picture 1 at  $t_1$  is removed by rewriting it with black pixels so as to create a different image. Request at 48-49 (citing Okamura, EX1006, 22:57-23:3).



*Id.*, FIG. 36, (excerpt). In the above example, the *first image frame* is “Picture 1,” which occurs at time at  $t_1$ , and the *modified image frame* occurs at time  $t_2$ . Accordingly, the image at  $t_2$  is a *modified image frame* that is generated by *removing a portion of the first image frame*.

Patent Owner does not directly dispute this disclosure from Okamura, but instead argues that “Requester errs byon [sic] equating ‘a portion of the first image’ to ‘an **area** of the first image,’” relying on its erroneous claim construction to argue Okamura does not *remov[e] a portion of the first image frame*. VDPP’s Statement, 11. Specifically, VDPP argues that “at time  $t_2$ , half of the image frame of Picture 1 at  $t_1$  is removed by rewriting it with black pixels so as to create a different image, [w]hich means half area of the image frame of Picture 1 is removed, not people

or at least one object is removed from [sic] background of the image frame of Picture 1. Since half area of the image frame of Picture 1 is removed not necessary remove people or at least one object, but remove half area of background which do not need to be removed in the '444 Patent." *Id.*, 12-13. Because VDPP's entire argument is predicated on acceptance of its claim construction of *removing a portion of the first image frame*—which as explained above, is incorrect—this argument should similarly be rejected for the same reasons. *Supra*, Section II.

Patent Owner next argues that, because the “function of claim 1” is to create a “visual illusion,” and Okamura “can not cause **visual illusion**,” Okamura does not disclose this limitation. VDPP's Statement, 12. But there is no limitation in claim 26 that requires creating a “visual illusion,” and VDPP's attempt to inject even further narrowing limitations into the claim language should be rejected.

Finally, despite agreeing with the Order granting reexamination and admitting that Okamura “essentially removes a portion of the image frame identified as Picture 1 of figure 36,” (Reexam Order, page 9; VDPP's Statement, 12) Patent Owner nonetheless argues Okamura does not “create a different image.” VDPP's Statement, 12. VDPP appears to argue that because Okamura performs this pixel shifting “in hardware - on the display” as opposed to providing “changes to the image frame before they are displayed,” Okamura does not disclose this limitation. VDPP's Statement, 12-13. Once again, there is no limitation found in claim 26 that requires *removing a portion of the first image frame* additionally be performed in either hardware or software, nor is there a timing component as to when and how the *modified image frame* is generated by doing so, and VDPP's attempt to inject even further narrowing limitations into the claim language should be rejected here too. Like its erroneous claim construction position, VDPP provides no evidence that the claim language or specification requires limiting *removing a portion of the first image frame* in the way it argues. And even if there was such evidence, VDPP provides no explanation as to how or why limitation [26c] should be limited in a way that prevents Okamura from disclosing it.

In summary, limitation [26c] broadly requires *removing a portion of the first image frame*, and as discussed above, Okamura discloses this limitation. Furthermore, Okamura does so in a manner like that found in an example provided by the '444 Patent. For example, Figure 28 of the '444 Patent depicts *removing a portion of the first image frame* by removing a portion of the first image frame (e.g., frame J) and replacing a portion of that image with black pixels (e.g., frames L



or N) in a manner similar to that found in Figure 36 of Okamura:

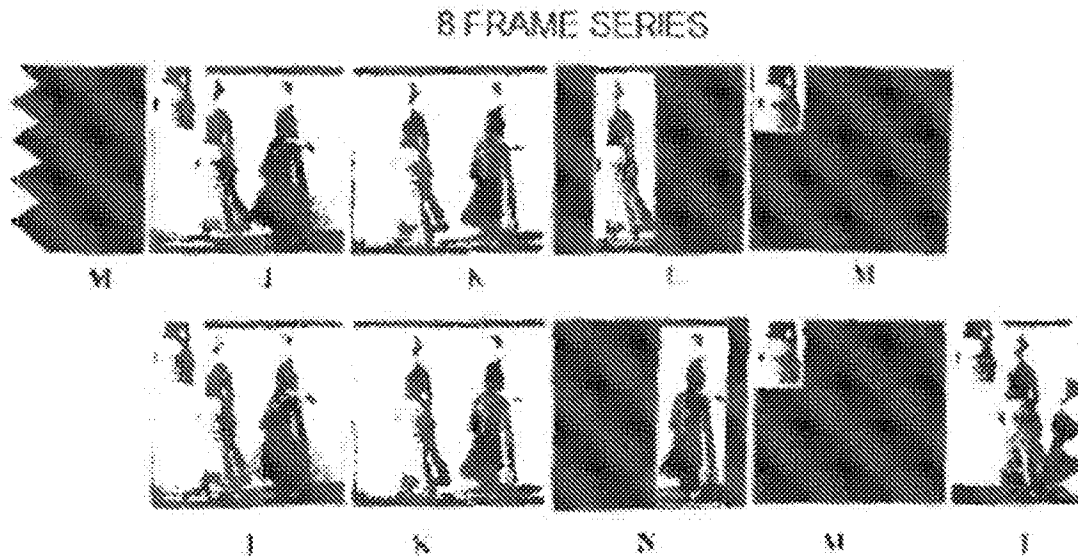


Fig. 28

'444 Patent, EX1001, Fig. 28; *see also id.*, 42:53-60. Even still, this single example from the '444 Patent (among the many provided between Figures 18 and 29 of the '444 Patent) should not be read as limiting the claim language, which Okamura readily discloses.

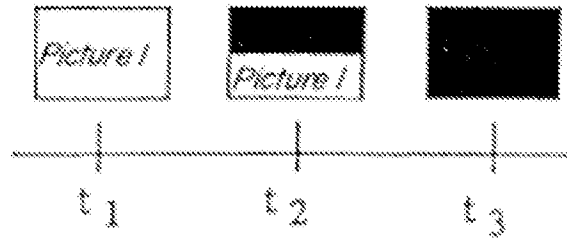
#### B. Okamura discloses or renders obvious limitation [26e]

For at least the reasons presented in the Request, Okamura discloses or renders obvious limitation [26e]. Limitation [26e] requires: "display the modified image frame; and display the bridge frame."

For at least the reasons presented in the Request, Okamura discloses displaying a modified image frame and a bridge frame. Okamura states:

FIG. 36 shows the change of the images on the display element in this embodiment. As shown in FIG. 36, at an instant (time)  $t_1$ , **a picture 1 is displayed** on the display element, **at a time  $t_2$** , the picture 1 is gradually rewritten by a black image from upper side and **at a time  $t_3$** , the picture 1 is wholly replaced by a black image.

Request, 50-51 (citing Okamura, EX1006, 22:57-23:3). Accordingly, *Okamura* discloses displaying the *modified image frame* at time  $t_2$  and displaying *the bridge frame* at time  $t_3$ :



EX1006, FIG. 36, excerpt.

In response, Patent Owner argues that the “words of the limitation [26e] recite ‘display the modified image frame; and display the bridge frame,’ which means there is no other image frame displayed between the modified image frame and the bridge frame.” VDPP’s Statement, 14. As its alleged support, VDPP points to a nonlimiting example from the ’444 Patent’s specification regarding Figure 20C. *Id.*, 14-15. Finally, VDPP argues that Okamura’s “gradual” display of images does not disclose its narrow interpretation of limitation [26e]. *Id.*, 15-16.

Again, VDPP is improperly importing additional requirements into the claim language that do not exist, and all of VDPP’s arguments fail for the following reasons. **First**, VDPP’s nonlimiting example from the specification in Figure 20C does not support an interpretation of limitation [26e] that “there is no other image frame displayed between the modified image frame and the bridge frame.” VDPP’s Statement, 14. As described above in Section II regarding claim construction, there is a high bar for importing limitations from the specification into the claim language, and VDPP has not met it here.

**Second**, the plain language of limitation [26e] merely requires *display[ing] the modified image frame*, and *display[ing] the bridge frame*; accordingly, VDPP’s arguments that Okamura may display them in a “gradual” manner is of no consequence if the reference nonetheless teaches displaying—at any point—the *modified image frame* and the *bridge frame*. Okamura does so for the reasons discussed in the Request and above. VDPP also appears to argue that because there may be “many other pictures” displayed in Okamura between times  $t_1$ ,  $t_2$ , and  $t_3$ , this somehow prevents it from disclosing limitation [26e]. VDPP’s Statement, 15-16. But because this is not a limitation found in the claims, Okamura does disclose limitation [26e] under a plain reading of the term by displaying both a modified image frame and a bridge frame.

**Third**, VDPP does not appear to actually dispute that Okamura discloses a *modified image frame* or a *bridge frame*—nor does it appear to substantively argue that these frames are displayed in Okamura. Instead, VDPP argues that Okamura displays additional frames in a manner that

somehow prevents it from disclosing the claim limitation under VDPP's erroneous interpretation. Because VDPP's erroneous interpretation should be rejected in favor of a plain interpretation of "display the modified image frame; and display the bridge frame," Okamura discloses or renders obvious limitation [26e].

**C. Patent Owner's remaining arguments fail**

Patent Owner presents two additional arguments; first, that Requester failed to perform a *Graham* analysis, and second, that the "bridge frame" of the '444 Patent serves a different purpose than the "bridge frame" of Okamura. VDPP's Statement, 17-19.

First, VDPP does not explain how Requester failed to perform a proper obviousness analysis under the *Graham* decision. To the contrary—the Request set forth the Requester's contentions that the combination of Okamura and MacInnis disclosed each and every limitation of claims 26 and 27 with specific citations to evidence from the references and expert testimony, and further provided detailed rationales as to the motivation to combine the references. Request, 42-53.

Second, VDPP provides an argument that because "the 'bridge frame' of Okamura has a different function than the '444 patent, the combination of Okamura and Macinnis does not render obvious claim 26." VDPP's Statement, 19. Notably, VDPP first admits that "Okamura discloses [a] 'bridge frame' as required by claim 26." *Id.*, 17. But, according to VDPP, the bridge frame of the '444 Patent "is used to create the appearance of continuous, seamless and sustained directional movement, a space illusion." *Id.* VDPP then presents arguments that the '444 Patent allegedly "makes flicker apparent," while in an embodiment of Okamura, flicker is intended to be reduced. *Id.*, 18-19. But these arguments fail for the same reasons discussed above in Sections III.A and III.B—VDPP's arguments rely on an interpretation of the claim language that imports additional requirements into the claim language that do not exist.

Here, VDPP attempts to import a purpose requirement from the specification into the claims to argue that Okamura cannot disclose a *bridge frame*. But like all the arguments prior, there is no such limitation found anywhere in the claims regarding the *bridge frame* and flicker. Without this unclaimed purpose requirement, VDPP simultaneously admits that Okamura discloses a bridge frame as required by claim 26. VDPP's Statement, 17 ("Although Okamura discloses 'bridge frame' as required by claim 26 . . .").

Finally, the case cited by VDPP (*In re Kerkhoven*, 626 F.2d 846 (CCPA 1980)) is

inapposite—the passage cited by VDPP concerns whether it is prima facie obvious to combine two compositions for the same purpose, not whether it is proper for VDPP to import an unclaimed “purpose” requirement into the *bridge frame* of claim 26. It is not proper, and as set forth above and in the Request (e.g., Request at 50-51) and agreed upon by VDPP, Okamura discloses or renders obvious the claimed *bridge frame*.

**D. Challenged Claim 27 is similarly obvious**

Patent Owner presents no additional arguments against the obviousness of the dependent claim 27 and relies exclusively on the arguments presented against claim 26. VDPP's Statement, 19. Thus, they fail for the same reasons. Requester submits that claim 27, depending from claim 26, is similarly obvious for the reasons presented in the Request and further explained above. Accordingly, all Challenged Claims in the request are obvious. Requester, therefore, requests that an Office Action rejecting claims 26 and 27 be issued.

**IV. CONCLUSION**

Requester believes no fee is due with this submission, however the Commissioner is hereby authorized to charge any fee deficiency or credit any over-payment to Deposit Account 50-6990.

Please direct all correspondence in this matter to the undersigned.

Dated: November 27, 2023

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