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EXAMINER	
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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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EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. *90/019,781* .

PATENT UNDER REEXAMINATION *10021380* .

ART UNIT *3992* .

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Order Granting Request For Ex Parte Reexamination	Control No. 90/019,781	Patent Under Reexamination 10021380	
	Examiner James Menefee	Art Unit 3992	AIA (FITF) Status Yes

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The request for *ex parte* reexamination filed 12/18/2024 has been considered and a determination has been made. An identification of the claims, the references relied upon, and the rationale supporting the determination are attached.

Attachments: a)☐ PTO-892, b)☑ PTO/SB/08, c)☐ Other: ____

1. ☑ The request for *ex parte* reexamination is GRANTED.

RESPONSE TIMES ARE SET AS FOLLOWS:

For Patent Owner's Statement (Optional): TWO MONTHS from the mailing date of this communication (37 CFR 1.530 (b)). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).**

For Requester's Reply (optional): TWO MONTHS from the **date of service** of any timely filed Patent Owner's Statement (37 CFR 1.535). **NO EXTENSION OF THIS TIME PERIOD IS PERMITTED.** If Patent Owner does not file a timely statement under 37 CFR 1.530(b), then no reply by requester is permitted.

cc:Requester (if third party requester)

ORDER GRANTING REEXAMINATION REQUEST

A substantial new question of patentability ("SNQ") affecting claims 1-10 of U.S. Patent No. 10,021,380 ("the '380 patent") is raised by the request filed 12/18/2024 ("Request"). The '380 patent has an effective filing date after 3/16/2013 and will be examined under the AIA first to file regime. While the patent contains 30 claims, only claims 1-10 were requested for reexamination, therefore claims 1-10 will be reexamined.

Patent owner has two months to file a statement in response to this order. 37 CFR 1.530(a)-(c); MPEP 2249. An extension of time beyond the two months may be requested under 37 CFR 1.550(c). Extensions of time under 37 CFR 1.136 are not permitted in reexamination. The requester may reply only if patent owner files such a statement. 37 CFR 1.535; MPEP 2251.

References Cited as Raising SNQs

U.S. Patent App. Pub. 2009/0184916 to Miyazaki ("Miyazaki")

U.S. Patent App. Pub. 2002/0054241 to Compton ("Compton")

U.S. Patent No. 7,030,902 to Jacobs ("Jacobs")

U.S. Patent No. 5,351,082 to Kasagi ("Kasagi")

Yamada, Proc. IEEE 33rd Annual 1999 Int'l Carnahan Conf. pp. 440-445 ("Yamada")

None of these were of record during the original prosecution

Prosecution History

The '380 patent is drawn generally to a system called 3Deeps, a type of 3D glasses that allow an ordinary 2D motion picture to be viewed in 3D, though this is not the subject of the claims. The claims are drawn primarily to the Eternalism embodiment, shown at Figs. 23-29, and

are an apparatus and method for modifying video. The system will create an illusion of continuous movement by repetitively presenting at least two substantially similar images and another bridging image so that there appears to be seamless and sustained directional movement. There is a storage storing a sequence of image frames and a processor acting on the images. First and second image frames are expanded, then combined for displaying.

The '380 patent was filed as application 15/907,614 with claims 1-10, and claims 11-30 were added by preliminary amendment before examination. On 5/25/2018, the examiner issued a first action allowance. As to claim 1, the examiner stated that the prior art fails to teach a combination of all the claimed features, which include:

"expanding the first image frame to generate a modified first image frame, wherein the modified first image frame is different from the first image frame;

expanding the second image frame to generate a modified second image frame, wherein the modified second image frame is different from the second image frame;

combining the modified first image frame and the modified second image frame to generate a modified combined image frame,

the modified combined image frame having first and second opposing sides defining a first dimension and third and fourth opposing sides defining a second dimension; and

displaying the modified combined image frame." (paragraph breaks added)

As to claim 6, the examiner identified the same general limitations. Claim 1 is a method claim and 6 is an apparatus claim, with a "processor adapted to" perform the above functions. No prior art was discussed on the record.

Accordingly, prior art references teaching the above quoted limitations, identified by the examiner as lacking in the prior art, would provide a new technical teaching and would have been important to a reasonable examiner in determining patentability, raising an SNQ.

The examiner has not found any post-grant Office proceedings involving the '380 patent. 35 U.S.C. 325(d) is therefore not applicable. There are numerous litigation proceedings involving the '380 patent as indicated in the Request. Patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any proceeding involving the '380 patent. See MPEP 2207, 2282 & 2286. Requester may also notify the Office of such proceedings. In particular, the Office is most interested in being made aware of decisions on the merits of the claims, such as validity or claim construction rulings involving the '380 patent.

As to the merits of the claims, the examiner is aware of *VDPP LLC v. Vizio, Inc.*, Appeal 21-2040 (Fed. Cir. Mar. 25, 2022) (nonprecedential) in which the Federal Circuit determined, among other things, that 112(f) was not invoked for claim 6 of the '380 patent. The issue of validity was remanded in light of this ruling, and as far as the examiner can tell the case was dismissed with no further decision on the merits.

Claim Construction

The '380 patent contains a specific reference to patent applications filed in 2002, and contains no patent term adjustment on its face. The patent is therefore expired. Claim construction will follow the *Phillips* standard used generally by the courts, not the broadest reasonable interpretation standard used generally in patent applications. MPEP 2258 I.G.

As mentioned above, the Federal Circuit has already determined that the processor and storage of claim 6 are not subject to interpretation under 35 U.S.C. 112(f). The examiner likewise determines that 112(f) is not invoked for the same reasons.

Effective Filing Date

The '380 patent was filed on 2/18/2018 and claims priority under 35 U.S.C. 119 and 120 to numerous prior applications, going all the way back to 1/23/2001. Of the references cited as raising an SNQ, Kasagi and Yamada were published more than 1 year prior to the earliest potential effective date and therefore are prior art regardless of any priority claim findings. Miyazaki was published 7/23/2009,[1] Jacobs was published in 2006 and is part of the same priority chain as the '380 patent, and Compton was published 5/9/2002, filed 7/30/2001. The requester argues that the '380 patent is not entitled to its earliest priority date, and thus all of its provided references are prior art, for various reasons.

Written Description Support

To be entitled to the benefit of the filing date of an earlier application, 35 U.S.C. 120 requires that the earlier application discloses the claimed invention in the manner required by 35 U.S.C. 112. Furthermore, each application being relied on in a chain of applications must satisfy section 112. *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1571 (Fed.Cir.1997).

The examiner agrees with the discussion in the Request at 5-7, section 4(a) that there is not sufficient disclosure earlier than application 15/683,623, filed 8/22/2017. That is, at least application 15/606,850, the parent of the '623 application, does not disclose the limitations of the

[1] Miyazaki is a patent application publication of a 371 filing of an international application. The international application was not published in English, therefore the reference has no pre-AIA 102(e) date.

claims, breaking the priority chain. While the specifications of these applications seem to be the same as that of the '380 patent, the disclosure is at best in the original claims of the '380 patent and the '623 application. More specifically, there is very little in the specification about expanding image frames, and there is simply no disclosure in the specification about expanding a first image frame, expanding a second image frame, and combining *those expanded frames*. At best the specification indicates that picture B may be an expansion of picture A, but not that both are expanded.

The examiner also mostly agrees with the discussion in the Request at 7-10, section 4(b) that even if the above provided sufficient disclosure, there is not sufficient disclosure earlier than three applications filed in 2014. That is, the earliest disclosures of expanding the first and second image frames as claimed is at best in applications 14/333,266 (filed 7/16/2014), 14/268,423 (filed 5/2/2014), and 14/451,048 (filed 8/4/2014). This is not to say that even these applications provide sufficient 112 support of the full scope of the claims,[2] but they are the earliest ones that even come close to touching on expanding image frames. At least the direct parents to these applications, 14/149,293, 13/168,493, and 14/155,505,[3] do not disclose the limitations of the claims, breaking the priority chain. As the chain is broken, the earliest potential date is 5/2/2014.

Incorporation by Reference and Labelling

The Request also argues that the earlier priority claims are improper due to improperly incorporating by reference and due to improper labelling of applications as continuations rather than continuations-in-part. Request 10-15. The examiner does not make any determinations on

[2] For example it is not at all clear that these applications show combining expanded frames. Nor do they show expansion of two different image frames. See again the discussion at Request 5-7. But in any event, the findings herein are enough to show that the art provided in the Request is prior art.
[3] These are the direct parents, not cases listed by the requester.

these issues, as the findings above are sufficient. The examiner would reconsider these issues if it were shown that earlier applications provide the required support for the claims. Thus, if patent owner wishes to argue in this proceeding that it is entitled to an earlier date, it should also address these issues.

Conclusion

In light of the above, the effective filing date of the '380 patent is at best 5/2/2014, making all of the references presented in the Request prior art under section 102(a)(1). If patent owner disagrees, and wishes to antedate any of the references, it should point out in detail how all of the limitations of all of claims are supported.

Proposed SNQs

Requester proposes the following SNQs:

1 & 2. Claims 1 and 6 are anticipated by/obvious over Kasagi. Request 24-34, App. A.

3 & 4. Claims 1 and 6 are anticipated by/obvious over Yamada. Request 35-39, App. B.

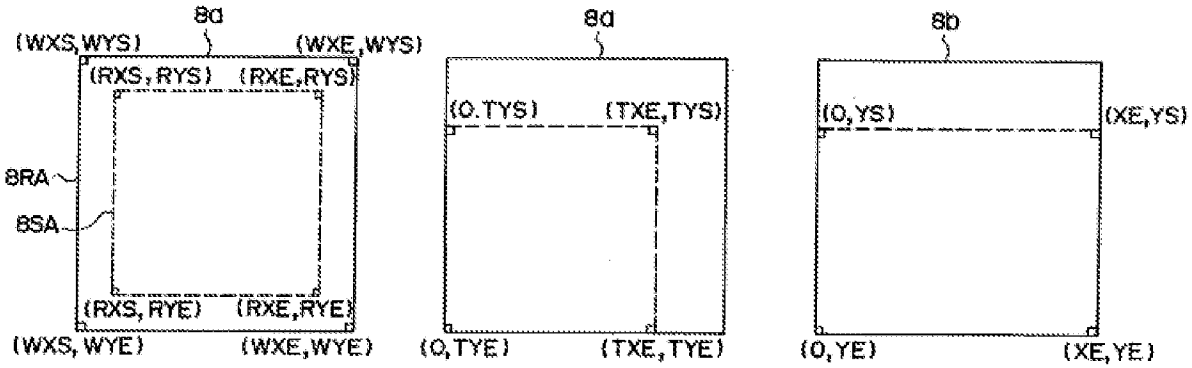
5. Claims 1-4 and 6-9 are obvious over Jacobs. Request 40-41, App. C.

6. Claims 1-10 are obvious over Miyazaki in view of Compton. Request 41-52, App. D.

SNQs 1 & 2

Kasagi is an image processing system in which images are magnified with minimal distortion. For example, Figs. 10A-10C (col. 14 lines 35-54) respectively show an original image

with a dashed area to zoom in, creating a new frame of the dashed portion, then that is expanded in Fig. 10C.



F I G. 10A F I G. 10B F I G. 10C

Kasagi later describes an "Addition of Superimposing Means" at col. 34 line 63 to col. 35 line 55. It may "combine the signals representing one image with those representing another image, thereby forming a composite image." Col. 34 line 63 to col. 35 . It is not clear to the examiner that this describes a combining of two particular first and second *expanded* image frames as claimed. But nonetheless, the requester (see Request 30-32) plausibly explains how the different embodiments of expanding (as in Fig. 10) and of superimposing might be combined, and this combination would be all of the material that was deemed missing from the claims during the original prosecution. Kasagi therefore would have been important to a reasonable examiner in considering the patentability of the claims, and an SNQ is raised.

The teachings of Kasagi as discussed in the Request are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination, and the same question was not the subject of a final holding of invalidity in the Federal Courts.

SNQs 3-4

Yamada is a system for improving the viewing of obscure video images, in which images are enlarged to improve their usefulness. For example, Fig. 4 shows a 640x480 image enlarged to 1024x480 to get a better view of a license plate number. Yamada also discloses that two image frames of the same scene may be combined to reduce noise and supply missing color information for images that are too dark. Yamada's example of "General Darkness Correction and General Picture Enlargement" on page 442 states that sequential images are enlarged to identify a vehicle that is difficult to see in the shade. This would seem to clearly read on expanding first and second image frames at different chronological positions to generate modified first and second image frames as claimed. Yamada further shows in Fig. 6 that images are superimposed, i.e. they are combined, then they are displayed. Yamada therefore teaches expanding two image frames, combining, and displaying, all of the features that were missing from the claims during the original prosecution, and would have been important to a reasonable examiner in considering patentability.

The teachings of Yamada as discussed in the Request are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination, and the same question was not the subject of a final holding of invalidity in the Federal Courts.

SNQ 5

Jacobs is a patent that is earlier in the priority chain of the '380 patent, but as discussed above the priority chain is broken and Jacobs is considered prior art. The requester cites essentially two short passages of Jacobs to meet the limitations that were missing during the original prosecution, at col. 11 line 64 to col. 12 line 9, and col. 13 line 65 to col 14 line 4. These state that if there are two sequential image frames A and B, B may be an expansion of A, and also that it is known to expand, reshape, or otherwise manipulate image frames. This does not say that two image frames are modified by expanding; at best it is just one that is expanded then perhaps combined with the original. The requester acknowledges that these sections do not meet the claims, but argues that while this is not anticipation, it is enough to show that the claims are obvious.

Importantly, requester does not at all explain any rationale for modifying Jacobs to render the claims obvious. Requester merely says "to the extent the '380 patent claims are enabled, they are obvious over Jacobs." Request 41. That is, while the requester acknowledges that the claims are not met, it does not explain how the claims exactly should be met, in light of the Jacobs disclosure. There is no technical rationale explaining why the claims are obvious. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (quoted with approval in *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). It is equivalent to a hindsight argument—the claims are obvious because of the disclosure of the '380 patent. Perhaps if the Request had made a plausible argument with some rational underpinning in favor of obviousness it would have a point, but it did not make any such argument and advanced no rationale.

Given that Jacobs is not shown to describe the material that was missing from the original prosecution, and given that the requester has not articulated any reasoning why the missing material would have been obvious, requester has not shown that Jacobs would have been important to a reasonable examiner considering patentability. An SNQ is not raised by this proposal.

SNQ 6

Miyazaki is an image display apparatus for displaying video signals and largely concerns frame interpolation where frames are combined and added to alter an original video. Miyazaki recognizes that it was known to convert movie film or TV broadcast film at 24 or 60 Hz (FPS) to other frame rates, such as 120 Hz for home viewing. To do so, additional frames are added; for example and very generally, if you have 60 frames per second and add an interpolation frame between each frame, now you have 120 frames per second.

When frame interpolation is done, the frames that are added are created as a blend of the original frames to reduce judder, i.e. improve smoothness. For example, when multiple frames are added between frames A and B, the first frame might be 80%A/20%B, the second 60%A/40%B, and so on, so it gradually moves from A to B. Miyazaki does this in a different and more complex way to achieve better results, but it is the same general process. This may be considered to be first and second image frames that are combined and then displayed. Miyazaki does not describe expansion of the image frames.

Compton teaches it was commonly required and known to change the shape and expand image frames. Accordingly, if Compton's teachings were applied to Miyazaki, the first and

second image frames might be expanded before combining as claimed. The combination of Miyazaki and Compton teach the material that was missing during the original prosecution. The Request additionally provides a plausible reason for combining the references. Request 47-49. The combination would therefore have been important to a reasonable examiner in considering the patentability of the claims, and an SNQ is raised. The requester also appropriately applies the art against the dependent claims, therefore an SNQ is raised as to all claims.

The teachings of Miyazaki and Compton as discussed in the Request are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination, and the same question was not the subject of a final holding of invalidity in the Federal Courts.

Conclusion

All correspondence relating to this *ex parte* reexam proceeding should be directed as follows:

By **U.S. Postal Service Mail** to:

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ATTN: Central Reexamination Unit
Commissioner for Patents
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Papers may also be filed electronically at https://patentcenter.uspto.gov/

Any inquiry concerning this communication or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Signed:

/JAMES A MENEFEE/
Reexamination Specialist, Art Unit 3992

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January 24, 2025

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