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108676	7590	02/21/2024	EXAMINER	
Ronald M. Kachmarik Cooper Legal Group LLC 1388 Ridge Road, Unit 1 Hinckley, OH 44233			ESCALANTE, OVIDIO	
			ART UNIT	PAPER NUMBER
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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. 90/019,399 .

PATENT UNDER REEXAMINATION 11532079 .

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)).

<b>Order Granting Request For Ex Parte Reexamination</b>	<b>Control No.</b> 90/019,399	<b>Patent Under Reexamination</b> 11532079	
	<b>Examiner</b> OVIDIO ESCALANTE	<b>Art Unit</b> 3992	<b>AIA (FITF) Status</b> Yes

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

The request for *ex parte* reexamination filed 02/02/2024 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.

/OVIDIO ESCALANTE/ Primary Examiner, Art Unit 3992		
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cc:Requester ( if third party requester )

## **REASONS FOR SUBSTANTIAL NEW QUESTION OF PATENTABILITY DETERMINATION**

### **I. Review of Facts**

1. A request for *ex parte* reexamination of claims 1 -13 of U.S. Patent 11,532,079 issued to Salah et al. on December 20, 2022 (hereinafter the '079 patent) was filed on February 2, 2024 and assigned control number 90/019,399 ("the '399 Request").
2. The '079 patent was filed on July 6, 2020 and is based upon U.S. Patent Application No. 16/921,545.
3. On February 8, 2024, the Office mailed a "Notice of Assignment of Reexamination Request" indicating the '399 Request was granted a filing date.

### **II. Pertinent History of the '079 Patent.**

4. The '079 patent was filed as U.S. Patent application No. 16/921,545 (the '545 application) on July 6, 2020.
5. During prosecution of the '545 application, the Examiner issued a non-final office action which rejected claims 1-20 on the ground of non-statutory double patenting. In addition, claims 1-6, 9-10 were rejected as being anticipated by Prakash et al. (US Patent Pub. 2013/0209954) and claims 7, 11-20 were rejected as being unpatentable over Prakash in view of Dorodvand et al. (US Patent Pub. 2019/0167115). Claim 8 was rejected as being unpatentable over Prakash in view of Charles (US Patent Pub. 2014/0005484).

In response to the non-final office action, the Applicant filed terminal disclaimers and amended claim 1 to recite "the support not being bitten by the patient's teeth during the acquisition of the at least one dental image". Claim 13 was amended to recite that "the distance

between said openings being greater than 5 cm". The Applicant also filed new independent claim 65.

The Applicant argued that the mouthpiece of Prakash is designed to be bitten and allowing to expose the subject's oral cavity to inspection through the opening. The Applicant stated that Prakash requires the use of a mouthpiece including an upper bite guide and a lower bite guide. The Applicant states that the method as claimed in claim 1 acquires all teeth of a dental arch, contrary to Prakash which is focused on the acquisition of the oral cavity...it is not possible to acquire images of the front teeth.

With respect to claim 13, the Applicant argued that Prakash does not disclose a distance between a first and second opening being greater than 5 cm.

With respect to claim 65, the Applicant states that in Prakash, the teeth, and more particular front teeth, are not visible and dental image of a patients' front teeth cannot be acquired.

In response to the Applicant's amendment, an Interview was held in which it was maintained that the amendment to claim 1 was not supported in the specification and claims 13 and 65 do not have the new limitations of claim 1. A proposed amendment was discussed.

The Examiner subsequently issue a Notice of Allowance with an Examiner's Amendment which amended claim 1 to recited "the support being configured so that when the patient put his/her lips around the first opening, patient's teeth are made visible through said first opening". Claims 13-20 were canceled and claim 65 was amended to be a dependent claim of claim 1.

The Examiner set forth a reasons for allowance which stated:

The reference of Prakash et al. (US PGPub 2013/0209954 A1) teach a method to acquire dental images of a patient with a support defining a chamber that is in communication with an outside of the chamber via a first opening and a second opening. It also teaches placing a mobile phone in front of the second opening, positioning the first

opening in front of a mouth of the patient and acquiring dental image by means of the mobile phone. However, the mechanism of **Prakash et al's** dental imaging device requires the patient to bite on a bite guide for the imaging module to capture dental images, and as a result the support is not configured so that when the patient put his/her lips around the first opening, patient's teeth are made visible through the first opening as claimed. Although the reference of **Dorodvand et al. (US PGPub 2019/0167115 A1)**, in the same field of endeavor, teach that the distance between the first opening and second opening being constant and acquisition of dental images being performed by the patient, but it does not teach that the support is configured so that when the patient put his/her lips around the first opening, patient's teeth are made visible through the first opening. The reference of **Charles (US PGPub 2014/0005484 A1)**, in the same field of endeavor, teaches that the chamber holding the imaging system is cylindrical, but it fails to teach that the support is configured so that when the patient put his/her lips around the first opening, patient's teeth are made visible through the first opening. As a result independent claim 1 stands allowable. Rest of the claims are directly or indirectly dependent on the independent claim and therefore stand allowable.

### **III. The '079 Patent.**

6. The '079 Patent is directed to a method to acquire dental images of a patient.

Independent **claim 1** of the '079 patent is repeated below:

1. A method to acquire dental images of a patient with a support defining a chamber that is in communication with an outside of said chamber via a first opening and via a second opening, said method comprising the following steps:  
fixing a mobile phone in front of the second opening;  
positioning said first opening in front of a mouth of the patient;  
acquiring at least one dental image by means of the mobile phone, the support being configured so that when the patient put his/her lips around the first opening, patient's teeth are made visible through said first opening.

### **IV. Determination of the '399 Request**

7. Claims 1-13 of the '079 patent will be the basis for deciding whether or not a "substantial new question of patentability" (SNQ) is present. See 37 CFR 1.620(a).

## **V. Criteria for the '399 Request Determination.**

8. Whether a substantial new question of patentability (SNQ) affecting claims 1-13 of the '079 patent is raised by the prior art references presented in the '399 Request. See 35 U.S.C. 257(a), MPEP §2242.

## **VI. Prior Art References**

9. The '399 Request requests *ex parte* reexamination in view of the following cited prior art references, submitted with the '399 Request and re-cited below:

- 1) Dorodvand et al. US Patent Pub. 2019/0167115
- 2) Carrier, Jr. et al. US Patent Pub. 2018/0125610
- 3) Kino et al. JP 4576325

## **VI.A. Information Disclosure Statement**

10. With respect to the Information Disclosure Statement submitted on February 2, 2024 along with the Request for Reexamination, the information cited has been considered as described in the MPEP. Note that MPEP 2256 and 2656 indicate that degree of consideration to be given to such information will be normally limited by the degree to which the party filing the information citation has explained the content and relevance of the information. Information that does not appear to be "patents or printed publications" as identified in 35 U.S.C. 301 or publications which have not been dated as required, have been considered to the same extent (unless otherwise noted), but have been lined through and will not be printed on any resulting reexamination certificate.

## **VII. Prior Art Analysis**

11. SNQ standard as set forth in MPEP 2242:

For "a substantial new question of patentability" to be present, it is only necessary that: (A) the prior art patents and/or printed publications raise a substantial question of patentability regarding at least

one claim, i.e., the teaching of the (prior art) patents and printed publications is such that a reasonable examiner would consider the teaching to be important in deciding whether or not the claim is patentable; and (B) the same question of patentability as to the claim has not been decided by the Office in an earlier concluded examination or review of the patent, raised to or by the Office in a pending reexamination or supplemental examination of the patent, or decided in a final holding of invalidity (after all appeals) by a federal court in a decision on the merits involving the claim. If a reexamination proceeding was terminated/vacated without resolving the substantial question of patentability question, it can be re-presented in a new reexamination request. It is not necessary that a "*prima facie*" case of unpatentability exist as to the claim in order for "a substantial new question of patentability" to be present as to the claim. Thus, "a substantial new question of patentability" as to a patent claim could be present even if the examiner would not necessarily reject the claim as either fully anticipated by, or obvious in view of, the prior art patents or printed publications.

In addition, as set forth in MPEP 2216, "[t]he legal standard for ordering *ex parte* reexamination, as set forth in 35 U.S.C. 303(a), requires a substantial new question of patentability. The substantial new question of patentability may be based on art previously considered by the Office if the reference is presented in a new light or a different way that escaped review during earlier examination."

The Examiner notes that the Request relies upon **Dorodvand et al.** as a basis for establishing a SNQ for some grounds. Specifically, the Request takes the position that Dorodvand anticipates/renders obvious claims 1-7 and 9-13. In addition, Dorodvand is used in combination with Kino and Carrier to render obvious claims 2-4, 6 and 8.

The Examiner notes that during the original prosecution, Dorodvand was relied upon as a secondary reference to teach a limitation directed to the distance between the first opening and the second opening being constant (prosecution claims 7 and 13- [0042]), acquisition of dental images being performed by the patient (prosecution claim 11, [0020-0021]) and acquiring is performed in less than a minute, without recourse to a specialist (prosecution claim 12, [0017], [0020]).



The Examiner during the original prosecution also stated “Although the reference of **Dorodvand et al. (US PGPub 2019/0167115 A1)**, in the same field of endeavor, teach that the distance between the first opening and second opening being constant and acquisition of dental images being performed by the patient, but it does not teach that the support is configured so that when the patient put his/her lips around the first opening, patient’s teeth are made visible through the first opening.”

Thus, the issue is whether the Request presents Dorodvand et al.” in a new light or a different way that escaped review during earlier examination.”

The Examiner finds that Dorodvand was never applied as a primary reference. In addition, with respect to the limitation “the support being configured so that when the patient put his/her lips around the first opening, patient’s teeth are made visible through said first opening” the Request cited additional paragraphs which were never recited in the previous examination. Including at least paragraphs [0033], [0038-0040] and Figures 5a and 5e.

Therefore, the Examiner finds that the Request presents Dorodvand in new light or a different way. The Examiner will thus determine, below, whether these teachings present a substantial new question of patentability.

The Examiner also finds that **Carrier, Jr. US Patent Pub. 2018/0125610** was cited during the original prosecution. Carrier was not relied upon by the Examiner to support a basis for rejection of the claims. In addition, the Examiner provide any comments regarding Carrier. Therefore, the Examiner finds that Carrier is being presented in a new light or in a different way that escaped review during the earlier examination.

### **VIII. Prior Art References Raising a Substantial Question of Patentability**

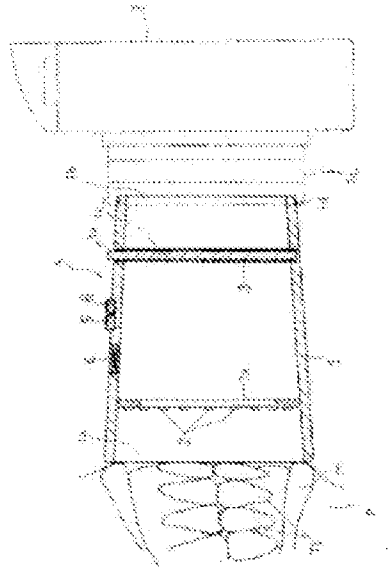
As identified above during the examination of the underlying patent application, the teachings directed to “the support being configured so that when the patient put his/her lips around the first opening, patient’s teeth are made visible through said first opening” as recited in claim 1 will be the basis for determining whether the cited references raise a SNQ as to at least claim 1. As set forth above, during the original prosecution, these limitations were considered important in determining the patentability of the claims over the relied upon prior art.

#### **Grounds 1 – 4: Kino**

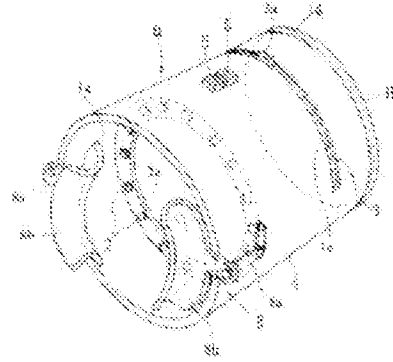
Kino discloses that it is possible to observe how tartar and plaque are deposited over substantially the entire jaw and to take a fluorescent image by looking into a camera attached to a nearby mobile phone. See paragraph [0021]. Kino discloses in paragraph [0001] that the invention relates to an oral cavity observation device used for observing the entire oral cavity to diagnose dental caries, defective areas, lesions, tartar or plaque adhesion, root canals, gingiva, tongue lesions, etc. Kino discloses that can be used not only by doctors, but also at home to check the appearance of teeth, etc. and to check the state of caries, tartar and plaque.

As explained in paragraph [0025], with reference to Figure 4, the mouthpieces 8b are used to hold the patient’s lips open.

[FIG. 3]

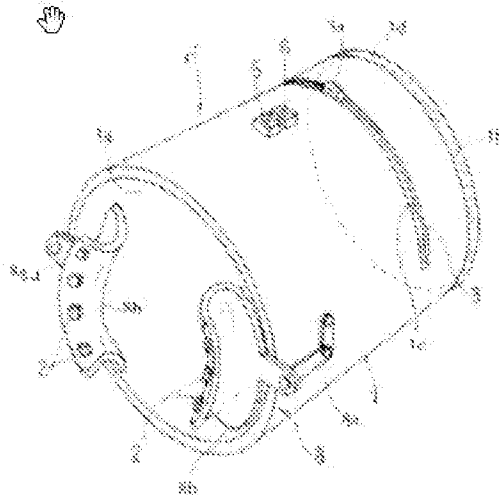


[FIG. 4]



With reference to Fig. 5 below, Kino shows the support has a dilator 8 comprising mouthpieces 8b to spread and hold the patient's lips. See also paragraphs [0007, 0013, and 0025]. Paragraph [0029] likewise discloses that the oral cavity observation device is oriented for full jaw observation.

[FIG. 5]



The Examiner notes that the above citations, which addresses teachings directed to “the support being configured so that when the patient put his/her lips around the first opening,

patient's teeth are made visible through said first opening" were not previously cited during the original prosecution of the underlying patent. In addition, no concluded review of this combination was previously set forth on the record. Accordingly, a reasonable examiner would consider this teaching important in determining the patentability of claims 1-13.

Accordingly, Kino raises a Substantial New Question of Patentability. The Examiner finds that Kino in view of Carrier and Kino in view of Dorodvand were also set forth in the Request. These combinations address dependent claims and thus also raise a SNQ for at least the same reasons set forth above.

### **Grounds 5-8: Dorodvand**

As explained above, this substantial new question of patentability is based on patents and/or printed publications already cited/considered in an earlier concluded examination or review of the patent being reexamined, or has been raised to or by the Office in a pending reexamination or supplemental examination of the patent. On November 2, 2002, Public Law 107-273 was enacted. Title III, Subtitle A, Section 13105, part (a) of the Act revised the reexamination statute by adding the following new last sentence to 35 U.S.C. 303(a) and 312(a):

"The existence of a substantial new question of patentability is not precluded by the fact that a patent or printed publication was previously cited by or to the Office or considered by the Office."

For any reexamination ordered on or after November 2, 2002, the effective date of the statutory revision, reliance on previously cited/considered art, i.e., "old art," does not necessarily preclude the existence of a substantial new question of patentability (SNQ) that is based exclusively on that old art. Rather, determinations on whether a SNQ exists in such an instance shall be based upon a fact-specific inquiry done on a case-by-case basis.

In the present instance, there exists a SNQ based solely on Dorodvand and based on Dorodvand and Carrier. A discussion of the specifics now follows:

As explained above, and discussed below, Dorodvand is being presented in a new light as compared with its use in the earlier examination. In the earlier examination, Dorodvand was relied upon to teach the limitations directed to “the distance between the first opening and second opening being constant” (paragraph [0042], lines 1-8), “acquisition of dental images being performed by the patient” (paragraph [0020] and [0021], lines 16-22) and “acquiring is performed in less than a minute, without recourse to a specialist” (paragraph [0017]).

In addition, during the earlier examination, the Examiner did comment in the Notice of Allowance that “**Dorodvand...** does not teach that the support is configured so that when the patient put his/her lips around the first opening, patient’s teeth are made visible through the first opening.”

In view of this statement, the Request presents new citations and figures which were not previously cited/relied by the Examiner in support of addressing the limitation at issue. Thus, based on the file history which indicates which portion of Dorodvand the Examiner specifically relied upon, the Examiner finds that the new citations to be sufficient to show that Dorodvand is presented in a new light.

**Dorodvand**, with respect to Figure 2 (shown below), discloses a support with a first opening and a second opening. (see paragraphs [0018] and [0038]). A mobile phone is placed in front of one of the openings. (see paragraphs [0017, 0038]) and the patient’s mouth is placed at the other opening. Fig. 2 shows a structure (rim 125) to spread and hold the patients’ lips during imaging, a lateral wall between the end faces that keeps the distance between the openings constant (see Fig. 2 and paragraph [0039-0040]).

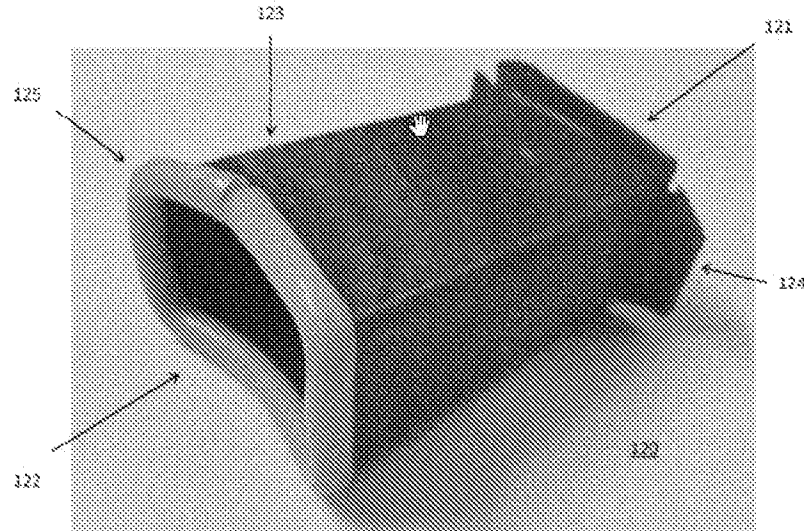


Fig 2

As disclosed in paragraph [0033], an image capture device 110 is configured to acquire digital image data and send the image data to the processing unit. The image capture device 110 can be a ... smart phone camera. Dorodvand discloses that the mouthpiece may further comprise “a rim 125 positioned around the perimeter of the second opening 122 of the mouthpiece... [W]hen held with the user’s lips around the rim, the opening frames the user’s front teeth and a portion of the gums surrounding the front teeth”. See paragraphs [0039-0040]

See also Figures 5a and 5e.

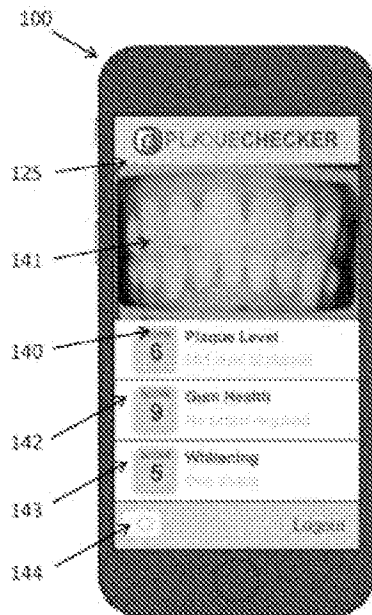


Fig 5a

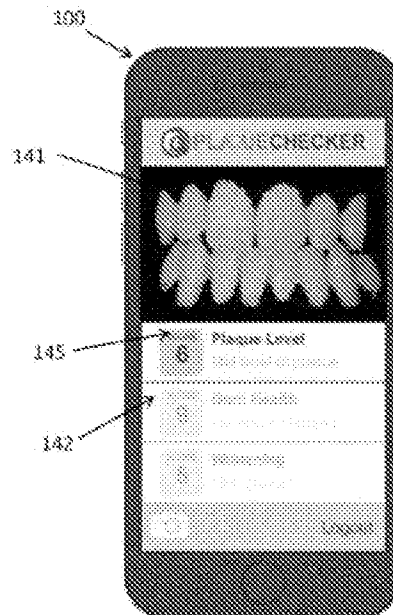


Fig 5b

The Examiner notes that the above citations, which addresses teachings directed to “the support being configured so that when the patient put his/her lips around the first opening, patient’s teeth are made visible through said first opening” were not previously cited during the original prosecution of the underlying patent. In addition, no concluded review of this combination was previously set forth on the record. Accordingly, a reasonable examiner would consider this teaching important in determining the patentability of claims 1-13.

Accordingly, Dorodvand raises a Substantial New Question of Patentability. The Examiner finds that Dorodvand in view of Kino and Dorodvand in view of Carrier were also set forth in the Request. These combinations address dependent claims and thus also raise a SNQ for at least the same reasons set forth above.

Accordingly, Dorodvand alone or in view of Kino and Carrier raise a Substantial New Question of Patentability.

## **IX. Conclusion**

**14. For the reasons given above, the present request for ex parte reexamination raises a substantial new question affecting claims 1-13 of the '079 patent.**

15. Claims 1-13 is not subject to a final holding of invalidity by a federal court or by the Office in a previous examination over the same issue.

### **35 USC 325(d)**

A review of the post grant history for the underlying patent indicates that there have been no other Office post grant challenges made to the patent (Reexamination Proceedings or Inter Partes Review, Post Grant Review, Covered Business Method trials). Accordingly, a discretionary denial of reexamination pursuant to 35 USC 325(d) is not applicable.

### **Extension of Time**

Extensions of Time Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that *ex parte* reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extensions of time in ex parte reexamination proceedings are provided for in 37 CFR 1.550(c).

### **Waiver of Right to File Patent Owner Statement**

In a reexamination proceeding, Patent Owner may waive the right under 37 C.F.R. 1.530 to file a Patent Owner Statement. The document needs to contain a statement that Patent Owner waives the right under 37 C.F.R. 1.530 to file a Patent Owner Statement and proof of service in the manner provided by 37 C.F.R. 1.248, if the request for reexamination was made by a third party requester, see 37 C.F.R 1.550. The Patent Owner may consider using the following statement in a document waiving the right to file a Patent Owner Statement: Patent Owner waives the right under 37 C.F.R. 1.530 to file a Patent Owner Statement.

### **Amendment in Reexamination Proceedings**



Patent owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR § 1.52(a) and (b), and must contain any fees required by 37 CFR § 1.20(c). See MPEP § 2250(IV) for examples to assist in the preparation of proper proposed amendments in reexamination proceedings.

### **Service of Papers**

After the filing of a request for reexamination by a third party requester, any document filed by either the patent owner or the third party requester must be served on the other party (or parties where two or more third party requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. See 37 CFR 1.550. Notification of Concurrent Proceedings

### **Notification of Concurrent Proceedings**

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 11,532,079 throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

16. **All** correspondence relating to this ex parte reexamination proceeding should be directed:

By Mail to:           Mail Stop *Ex Parte* Reexam  
                          Central Reexamination Unit  
                          Commissioner for Patents  
                          United States Patent & Trademark Office  
                          P.O. Box 1450  
                          Alexandria, VA 22313-1450

By FAX to:           (571) 273-9900  
                          Central Reexamination Unit

By hand:             Customer Service Window  
                          Randolph Building  
                          401 Dulany Street  
                          Alexandria, VA 22314

Art Unit: 3992

Any inquiry by the patent owner concerning this communication or earlier communications from the Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

    /Ovidio Escalante/    

Ovidio Escalante

Reexamination Specialist

Central Reexamination Unit - Art Unit 3992

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Conferees:

/MINH DIEU NGUYEN/

Primary Examiner, Art Unit 3992

/MICHAEL FUELLING/

Supervisory Patent Examiner, Art Unit 3992