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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes details for application 90/019,416 and 108676 7590, listing inventor Ronald M. Kachmarik and attorney ESCALANTE, OVIDIO.

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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(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

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1101 K Street, NW  
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WASHINGTON DC 20005

***EX PARTE* REEXAMINATION COMMUNICATION TRANSMITTAL FORM**

REEXAMINATION CONTROL NO. 90/019,416 .

PATENT UNDER REEXAMINATION 11599997 .

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> 90/019,416	<b>Patent Under Reexamination</b> 11599997	
	<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 02/14/2024 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, 3, 12-16, and 19-28 of U.S. Patent 11,599,997 issued to Salah et al. on March 7, 2023 (hereinafter the '977 patent) was filed on February 14, 2024 and assigned control number 90/019,416 ("the '416 Request").
2. The '977 patent was filed on November 18, 2020 and is based upon U.S. Patent Application No. 16/951,401.
3. On February 22, 2024, the Office mailed a "Notice of Assignment of Reexamination Request" indicating the '416 Request was granted a filing date.

### **II. Pertinent History of the '997 Patent.**

4. The '997 patent was filed as U.S. Patent application No. 16/951,401 (the '401 application) on November 18, 2020.
5. On May 13, 2021 the examiner issued a non-final office action which rejected claim 1 on the ground of non-statutory double patenting over US Patents 10,558,501, 10,736, 715, and 10,842,592. Claim 12 was rejected under 35 USC 112, second paragraph. The examiner also rejected claims 1, 2, and 4 over Dorodvand. Claim 3 was rejected over Dorodvand and Charles. Claims 5-9 and 11 were rejected over Dorodvand, Lyons and Shanjani. Claim 10 was rejected over Dorodvand, Lyons, Shanjani and Meyer. Claim 12 was rejected over Dorodvand and Meyer.

6. On July 16, 2021 a Letter Withdrawing the May 13, 2021 Non-Final Office Action was mailed in light of conflicting claims filed on March 16, 2021 and November 18, 2020. A Notice of Non-Compliance was mailed in order to address this issue.

7. On July 20, 2021, the Applicant filed remarks stating that the only current claims for the present application were the claims submitted on November 18, 2020.

8. On October 22, 2021, the examiner issued a new non-final office action which rejected claims 1-28 under non-statutory double patenting over several related US Patents. Claims 2-4, and 10-27 were rejected under 35 USC 112, second paragraph. Claims 1, 3, 12-19, and 21-28 were rejected over Prakash et al. US Patent Pub. 2013/0209954. Claim 2 was rejected over Prakash and Charles US Patent Pub. 2014/0005484. Claims 4-11 were rejected over Prakash and Shanjani US Patent Pub. 20180000563. Claim 20 was rejected over Prakash and Pfeiffer US Patent 5,677,537.

9. In response to the non-final office action, the Applicant amended several claims to improve clarity with “imaging device” being replaced by “patient operated imaging device” and “substantially” being removed in view of the 112 2<sup>nd</sup> paragraph rejections.

With respect to the teachings of Prakash, the Applicant maintained that Prakash does not deal with a “mouth retractor”, to push the lips away from the teeth so as to expose the teeth to the imaging device. The Appellant states that to the contrary, Prakash causes a subject to bite against the bite guides of the mouthpiece.

10. In response to the Applicant’s arguments, the examiner issued a Final Office Action which maintained that as per a dictionary definition, a retractor is “an instrument or appliance for drawing back an impeding part.” The examiner maintained that the mouthpiece mechanism with the bite guides is indeed a mouth retractor. The examiner also stated Prakash’s Figures 8, 9

clearly show the image of teeth of a patient and that the clam is not directed to capturing images of the patient's front teeth.

11. In response to the Final Office Action, the Applicant amended claim 1 to add "through which, in a service position, front teeth of the patient are visible." Claim 28 remained unamended.

12. A RCE was subsequently filed and the examiner held an Interview with the Applicant. The examiner stated during the interview that claim 28 was missing the amended limitation of claim 1 and the examiner proposed to amend claim 28 to add that limitation. The Applicant's representative agreed to amend the claim for allowance.

13. The examiner subsequently issued a Notice of Allowance on October 12, 2022. The Notice of Allowance included an examiner's amendment to claim 28 which amended the claim to recite "through which, in a service position, front teeth of the patient are visible".

The examiner stated with respect to Prakash that "the structure of the device is such that the patient has to bite on the mouth retractor and therefore it does not show the front teeth of the patient. With respect to Charles, the examiner stated that Charles "does not teach a mouth retractor which shows the front teeth of the patient." With respect to Shanjani, the examiner stated that Shanjani "fails to teach a structure of the mouth retractor that results in the visibility of the front teeth.

### **III. The '997 Patent.**

14. The '997 Patent is directed to a device to acquire dental images of a patient.

Independent **claim 1** of the '997 patent is repeated below:

1. A patient-operated imaging device comprising:

a support;

a mouth retractor formed as an integral part of the support and defining a retractor opening; and

a mechanism for fastening an image acquisition apparatus to the support in a position in which the acquisition apparatus is oriented so as to receive an image of the retractor opening through which, in a service position, front teeth of the patient are visible, wherein the support takes the form of a box that is in communication with the outside via the retractor opening and via an acquisition opening through which the image acquisition apparatus fastened to the support receives the image of the retractor opening, the support being configured so that the image acquisition apparatus observes the retractor opening regardless of the configuration of the support;

the mechanism being chosen from the group consisting of an elastic member, clip-fastening means, self-gripping strips of hook and loop fastener type, clamping jaws, screws, magnets, and complementarity of shape between the support and the image acquisition apparatus, or consisting of a cover that may be clamped against the support, wherein the patient-operated imaging device is adapted to obtain a plurality of images,

wherein at least two of the plurality of images correspond to different angles with respect to the patient's teeth.

#### **IV. Determination of the '416 Request**

15. Claims 1, 3, 12-16, and 19-28 of the '997 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 '416 Request Determination.**

16. Whether a substantial new question of patentability (SNQ) affecting claims 1, 3, 12-16, and 19-28 of the '997 patent is raised by the prior art references presented in the '416 Request. See 35 U.S.C. 257(a), MPEP §2242.

## **VI. Prior Art References**

17. The '416 Request requests *ex parte* reexamination in view of the following cited prior art references, submitted with the '399 Request and re-cited below:

- 1) Kino et al. JP 4576325
- 2) Dorodvand et al. US Patent Pub. 2019/0167115

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

18. With respect to the Information Disclosure Statement submitted on February 14, 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**

19. 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, 3, 11-16, 19, 21-24, and 28. In addition, the Request takes the position that Dorodvand in combination with Kino render obvious claims 1, 3, 12-16, and 19-28.

The Examiner notes that during the original prosecution, Dorodvand was relied upon as a primary reference. However, the examiner withdrew the action in which Dorodvand was relied upon since the rejection of the claims under Dorodvand was based on the wrong claim set (see above prosecution history).

The examiner did not rely upon Dorodvand thereafter or make a comment regarding Dorodvand with respect to the correct claim set of the '997 Patent.

Therefore, the Examiner notes that although Dorodvand was cited on the record and initially relied upon for a different claim set, the Examiner finds that the Request presents Dorodvand in new light or a different way since Dorodvand was never applied against the current claims and since the Request presents new citations which were not previously considered by the examiner.

The Examiner will thus determine, below, whether these teachings present a substantial new question of patentability.

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

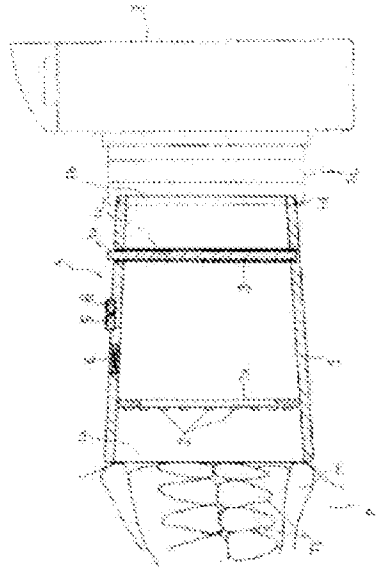
As identified above during the examination of the underlying patent application, the teachings directed to “through which, in a service position, front teeth of the patient are visible” as recited in claim 1 will be the basis for determining whether the cited references raise a SNQ as to at least claim 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 – 3: Kino**

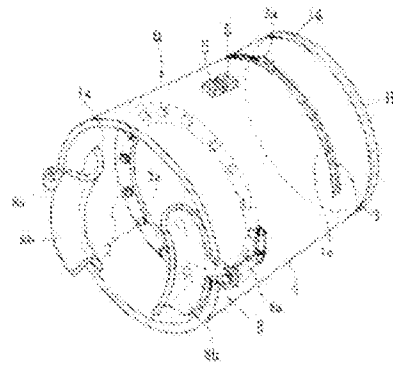
Kino discloses that it is possible to observe how tartar and plaque are deposited over substantially the entire jaw and to take a fluorescent image by looking into a camera attached to a nearby mobile phone. See paragraph [0021]. Kino discloses in paragraph [0001] that the invention relates to an oral 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.

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

[FIG. 3]

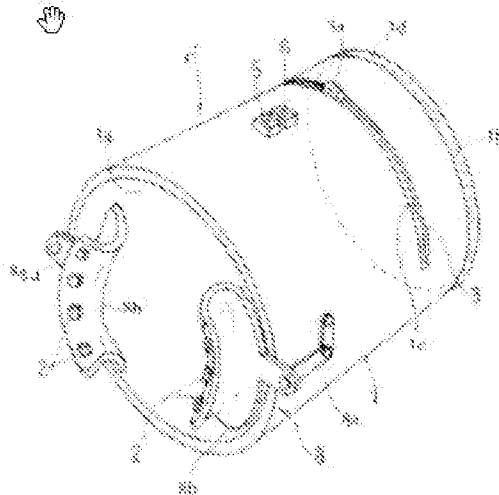


[FIG. 4]



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]



As explained above, paragraph [0001] discloses “observing the entire oral cavity” and Figure 3 (above) shows the patients front teeth against the oral cavity observation device. In addition, paragraph [0013] discloses “the entire Jaw is exposed and can be effectively observed” and paragraph [0029] disclose that the oral cavity observation device is “oriented for full jaw observation.”

The Examiner notes that the above citations, which addresses teachings directed to “through which, in a service position, front teeth of the patient are visible” 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, 3, 12-16, and 19-28.

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

#### **Grounds 4-6: 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 Kino. 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 initially relied upon but the Office Action was vacated due to using the claim set filed on March 19, 2021 as opposed to the claim set filed on November 18, 2020. The examiner issued a new non-final office action which addressed the claim set filed on November 18, 2020. The examiner did not rely upon Dorodvand nor did the Applicant make any comments regarding Dorodvand.

Thus, based on the file history and the citations set forth in the current Request which correlates various citations of Dorodvand with the current claim set which was not previously set forth during the previous examination or commented upon by the examiner or Applicant, the Examiner finds 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]).

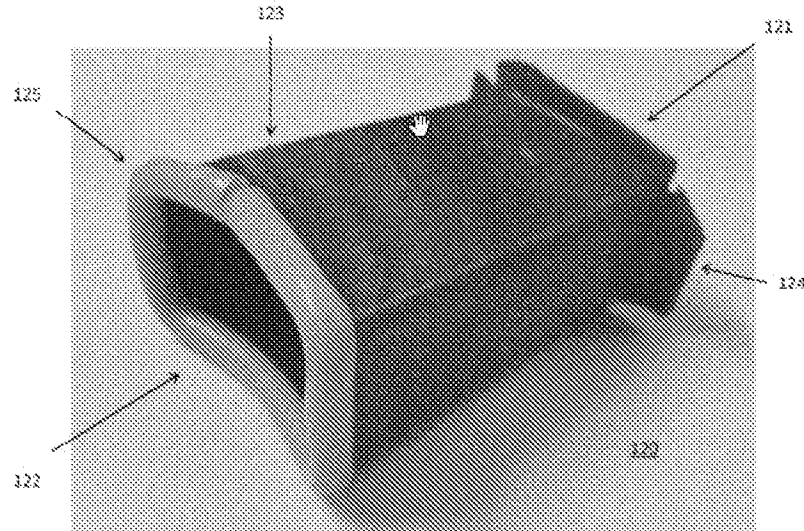


Fig 2

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.

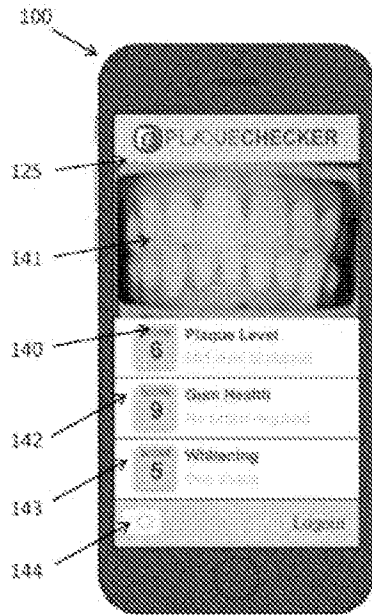


Fig 5a

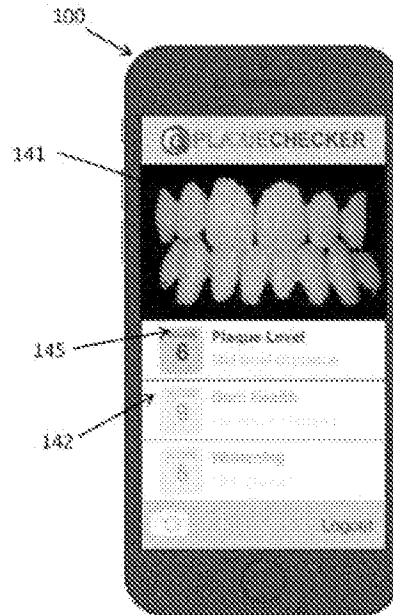


Fig 5b

The Examiner notes that the above citations, which addresses teachings directed to “through which, in a service position, front teeth of the patient are visible” 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, 3, 12-16, and 19-28.

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

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

## **IX. Conclusion**

**20. For the reasons given above, the present request for ex parte reexamination raises a substantial new question affecting claims 1, 3, 12-16, and 19-28 of the '997 patent.**

21. Claims 1, 3, 12-16, and 19-28 are 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. 11,599,997 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.

22. **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

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.

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Supervisory Patent Examiner, Art Unit 3992