



APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/533,403	06/21/2022	11368667	0079124-000370-T1	9694

21839 7590 06/01/2022
BUCHANAN, INGERSOLL & ROONEY PC
1737 KING STREET
SUITE 500
ALEXANDRIA, VA 22314-2727

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional inventors):

Rune FISKER, Virum, DENMARK;
Henrik ØJELUND, Lyngby, DENMARK;
Rasmus KJAER, Kobenhavn K, DENMARK;
Mike VAN DER POEL, Rodovre, DENMARK;
Arish A. QAZI, Toronto, CANADA;

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

3SHAPE A/S, Copenhagen K, DENMARK

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.



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United States Patent and Trademark Office
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
17/533,403	11/23/2021	2484	2920	0079124-000370-T1	30	3

CONFIRMATION NO. 9694

CORRECTED FILING RECEIPT



0000000134029729

21839
BUCHANAN, INGERSOLL & ROONEY PC
1737 KING STREET
SUITE 500
ALEXANDRIA, VA 22314-2727

Date Mailed: 05/24/2022

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Rune FISKER, Virum, DENMARK;
Henrik ØJELUND, Lyngby, DENMARK;
Rasmus KJAER, Kobenhavn K, DENMARK;
Mike VAN DER POEL, Rodovre, DENMARK;
Arish A. QAZI, Toronto, CANADA;
Karl-Josef HOLLENBECK, Copenhagen O, DENMARK;

Applicant(s)

3SHAPE A/S, Copenhagen K, DENMARK

Assignment For Published Patent Application

3SHAPE A/S, Copenhagen K, DENMARK

Power of Attorney: The patent practitioners associated with Customer Number 21839

Domestic Priority data as claimed by applicant

This application is a CON of 17/340,806 06/07/2021
which is a CON of 17/206,581 03/19/2021 PAT 11076146
which is a CON of 16/774,843 01/28/2020 PAT 11051002
which is a CON of 16/433,369 06/06/2019 PAT 10595010
which is a CON of 16/217,943 12/12/2018 PAT 10326982
which is a CON of 15/974,105 05/08/2018 PAT 10349041
which is a CON of 14/502,230 09/30/2014 PAT 10097815
which is a CON of 13/376,427 12/06/2011 PAT 8878905
which is a 371 of PCT/DK2010/050148 06/17/2010

which claims benefit of 61/231,118 08/04/2009
and claims benefit of 61/187,744 06/17/2009

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 12/06/2021

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/533,403**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No
Title

INTRAORAL SCANNING APPARATUS

Preliminary Class

348

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application

serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

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NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/533,403	11/23/2021	Rune FISKER	0079124-000370-T1	9694
21839 7590 05/23/2022 BUCHANAN, INGERSOLL & ROONEY PC 1737 KING STREET SUITE 500 ALEXANDRIA, VA 22314-2727			EXAMINER MESA, JOSE M	
			ART UNIT 2484	PAPER NUMBER
			NOTIFICATION DATE 05/23/2022	DELIVERY MODE ELECTRONIC

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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPDOC1@BIPC.com

Response to Rule 312 Communication	Application No. 17/533,403	Applicant(s) FISKER et al.	
	Examiner JOSE M MESA	Art Unit 2484	AIA (FITF) Status No

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

1. ☒ The amendment filed on 25 April 2022 under 37 CFR 1.312 has been considered, and has been:

a) ☒ entered.

b) ☐ entered as directed to matters of form not affecting the scope of the invention.

c) ☐ disapproved because the amendment was filed after the payment of the issue fee.
Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.

d) ☐ disapproved. See explanation below.

e) ☐ entered in part. See explanation below.

f) ☐ not entered because the supplemental or corrected Application Data sheet (ADS)

☐ was not accompanied by a petition to accept an unintentionally delayed claim under 37 CFR 1.55 or 27 CFR 1.78;

☐ did not identify the information being changed in accordance with 37 CFR 1.76(c)(2);

☐ was not properly signed in accordance with 37 CFR 1.76(e) (or 37 CFR 1.33(b) for applications filed prior to September 16, 2012).

/JOSE M MESA/ Examiner, Art Unit 2484	/THAI Q TRAN/ Supervisory Patent Examiner, Art Unit 2484
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Application No.

Applicant(s)

Examiner

Art Unit

AIA (FITF) Status	
1	Not Applicable
2	Not Applicable
3	Not Applicable
4	Not Applicable
5	Not Applicable
6	Not Applicable
7	Not Applicable
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10	Not Applicable
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93	Not Applicable
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97	Not Applicable
98	Not Applicable
99	Not Applicable
100	Not Applicable

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- a) ☒ entered.
- b) ☐ entered as directed to matters of form not affecting the scope of the invention.
- c) ☐ disapproved because the amendment was filed after the payment of the issue fee.
- Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.
- d) ☐ disapproved. See explanation below.
- e) ☐ entered in part. See explanation below.
- f) ☐ not entered because the supplemental or corrected Application Data sheet (ADS)
- ☐ was not accompanied by a petition to accept an unintentionally delayed claim under 37 CFR 1.55 or 27 CFR 1.78;
- ☐ did not identify the information being changed in accordance with 37 CFR 1.76(c)(2);
- ☐ was not properly signed in accordance with 37 CFR 1.76(e) (or 37 CFR 1.33(b) for applications filed prior to September 16, 2012).

/JOSE M MESA/
Examiner, Art Unit 2484

OK TO ENTER: /J.M.M/

Patent
Attorney Docket No. 0079124-000370-T1
Application No. 17/533,403
Page 2

AMENDMENTS TO THE SPECIFICATION:

Please amend the title as follows:

FOCUS INTRAORAL SCANNING APPARATUS



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :C46167

Sale Accounting Date:05/11/2022

Sale Item Reference Number

17533403

Effective Date

05/10/2022

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I20225A857564966	1501	UTILITY APPL ISSUE FEE	\$1,200.00	Salea

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

MAY 10 2022

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All fees for correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected or indicated otherwise in Block 1, by (a) specifying a new correspondence address, and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmittal.

21839 7590 05/10/2022
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Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY/AGENT NO.	CONFIRMATION NO.
17533403	11/23/2021	Russ FISHER	0079124-000370-T1	9694

TITLE OF INVENTION: FOCUS SCANNING APPARATUS

APPL. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$1200.00	\$0	08/10/2022

Issue Fee was previously paid

EXAMINER	ART. UNIT	CLASS-SUBCLASS
MESA, JOSE M	2484	348-016000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (for Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (for "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev. 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

BUCHANAN INGERSOLL
& ROONEY PC

2. _____
3. _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type):

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE (CITY and STATE OR COUNTRY)

3SHAPE A/S

COPENHAGEN K, DENMARK

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first certify any previously paid fee shown above)

☒ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. **02-4800**

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ /WCRoland/

Date **May 10, 2022**

Typed or printed name **William C. Rowland**

Registration No. **30,888**

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Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

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BUCHANAN INGERSOLL & ROONEY PC

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE (CITY and STATE OR COUNTRY)

3SHAPE A/S

COPENHAGEN K, DENMARK

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies

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Authorized Signature /WCRoland/

Date May 10, 2022

Typed or printed name William C. Rowland

Registration No. 30,888

Electronic Acknowledgement Receipt

EFS ID:	45680091
Application Number:	17533403
International Application Number:	
Confirmation Number:	9694
Title of Invention:	FOCUS SCANNING APPARATUS
First Named Inventor/Applicant Name:	Rune FISKER
Customer Number:	21839
Filer:	William C. Rowland/David Avila
Filer Authorized By:	William C. Rowland
Attorney Docket Number:	0079124-000370-T1
Receipt Date:	10-MAY-2022
Filing Date:	23-NOV-2021
Time Stamp:	17:03:15
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	Fees_Transmittal.pdf	535081	no	1
			3967423beb5d32aa929ae4a5e43cf3ed5fe414c7		

Warnings:

Information:	
Total Files Size (in bytes):	535081
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.	



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NOTICE OF ALLOWANCE AND FEE(S) DUE

21839 7590 05/10/2022
BUCHANAN, INGERSOLL & ROONEY PC
1737 KING STREET
SUITE 500
ALEXANDRIA, VA 22314-2727

EXAMINER	
MESA, JOSE M	
ART UNIT	PAPER NUMBER
2484	

DATE MAILED: 05/10/2022

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/533,403	11/23/2021	Rune FISHER	0079124-000370-T1	9694

TITLE OF INVENTION: FOCUS SCANNING APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$1200.00	\$0	08/10/2022

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

21839 7590 05/10/2022
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Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/533,403	11/23/2021	Rune FISKE	0079124-000370-T1	9694

TITLE OF INVENTION: FOCUS SCANNING APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$1200.00	\$0	08/10/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
MESA, JOSE M	2484	348-046000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

1 _____

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/533,403	11/23/2021	Rune FISKER	0079124-000370-T1	9694
21839	7590	05/10/2022	EXAMINER	
BUCHANAN, INGERSOLL & ROONEY PC			MESA, JOSE M	
1737 KING STREET			ART UNIT	
SUITE 500			PAPER NUMBER	
ALEXANDRIA, VA 22314-2727			2484	

DATE MAILED: 05/10/2022

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 17/533,403	Applicant(s) FISKER et al.	
	Examiner JOSE M MESA	Art Unit 2484	AIA (FITF) Status No

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02/21/2022.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 2-20 and 22-33. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892) 2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date <u>04/22/2022</u> . 3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____. 4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	5. ☐ Examiner's Amendment/Comment 6. ☒ Examiner's Statement of Reasons for Allowance 7. ☐ Other _____.
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/JOSE M MESA/ Examiner, Art Unit 2484	/THAI Q TRAN/ Supervisory Patent Examiner, Art Unit 2484
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DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

Terminal Disclaimer

The terminal disclaimers filed on 02/02/2022 and 02/22/2022 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 11,076,146 and U.S. Patent No. 10,595,010 have been reviewed and are accepted. The terminal disclaimers have been recorded.

Allowable Subject Matter

1. Claims 2-20 and 22-33 are allowed.

The following is an examiner's statement of reasons for allowance: **Independent claim 2** recites the uniquely distinct features for: "...a pattern generator configured to generate, using a light source, a probe light with a plurality of configurations in the form of a time-varying illumination pattern; an optical system configured to transmit the probe light, via the tip, towards the object along an optical path thereby illuminating at least a part of the object with the time-varying illumination pattern, and to transmit at least a part of the light returned from the object to the at least one camera to form a plurality of 2D images, wherein the 3D geometry is determined based on the plurality of 2D images and the time-varying illumination pattern;..." **And independent claim 15** recites the uniquely distinct features for: "...a pattern generator configured to generate, using a light source, a probe light with a plurality of configurations in the form of a time-varying illumination pattern; an optical system configured to transmit the probe light, via the tip,

towards the object along an optical path thereby illuminating at least a part of the object with the time-varying illumination pattern, and to transmit at least a part of the light returned from the object to the at least one camera to form a plurality of 2D images, wherein the 3D geometry is determined based on the plurality of 2D images and the time-varying illumination pattern,...” **And independent claim 28** recites the uniquely distinct features for: “...a pattern generator configured to generate, using a light source, a probe light with a plurality of configurations in the form of a time-varying illumination pattern; an optical system configured to transmit the probe light, via the tip, towards the object along an optical path thereby illuminating at least a part of the object with the time-varying illumination pattern, and to transmit at least a part of the light returned from the object to the at least one camera to form a plurality of 2D images, wherein the 3D geometry is determined based on the plurality of 2D images and the time-varying illumination pattern;...” The closest prior art in Babayoff et al. (US 2005/0283065) teaches a device 100 comprises a main illumination source 31 for illuminating the object of interest 26, typically a part of the intraoral cavity, and is optically coupled to main optics 41 to provide depth Z values for an array range of X-Y points (according to a known frame of reference) along the surface of the object 26. Detection optics 60 comprises an image sensor, typically a CCD, that is preferably monochromatic to maximise the resolution of the device, and which typically defines the X-Y frame of reference. Alternatively, the CCD may be adapted to receive color images. The detection optics 60 receives image data from the main optics 41 and the image processor 24 determines the depth Z values for each X-Y point illuminated on the object 26 based on this image data, Heinz et al. (US 2007/0041729) teaches an illustrative illumination arrangement 800 using a multimode optical fiber 802 to monitor a surface 804 with a detector 805 (e.g., detector 104 of FIG. 1,

detector 302 of FIG. 3A, or detector A of FIG. 7, 7A). Optical radiation 806 that reflects from surface 804 will exhibit time-varying changes if surface 804 vibrates, if fiber 802 moves across surface 804, or if distance d changes (e.g., through tilt or movement of surface 804). The multimode interference pattern that illuminates detector 805 is time-varying in accordance with the movement of surface 804 (or end 814 or d), however, either singular or in combination, fails to anticipate or render the above underlined limitations obvious.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSE M MESA whose telephone number is (571)270-1706. The examiner can normally be reached on Monday-Friday 8:30AM-6:00PM ET.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

Application/Control Number: 17/533,403
Art Unit: 2484

Page 5

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

4/27/2022

**/JOSE M MESA/
Examiner, Art Unit 2484**

/THAI Q TRAN/
Supervisory Patent Examiner, Art Unit 2484

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	)	
Rune FISKER	)	Group Art Unit: Unassigned
Application No.: Unassigned	)	Examiner: Unassigned
Filed: November 23, 2021	)	Confirmation No.: Unassigned
For: FOCUS SCANNING APPARATUS	)	
	)	
	)	
	)	
	)	

PRELIMINARY AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

Prior to examination of the above-captioned patent application, kindly amend the application as follows:

AMENDMENTS TO THE CLAIMS:

The following listing of claims will replace all prior versions and listings of claims in this application.

LISTING OF CLAIMS:

1. (Cancelled)

2. (New) An intraoral scanner for determining the 3D geometry and color of at least a part of the surface of an object in an oral cavity, the intraoral scanner comprising:
 - a tip configured to be inserted into the oral cavity;
 - at least one camera accommodating an array of sensor elements;
 - a pattern generator configured to generate, using a light source, a probe light with a plurality of configurations in the form of a time-varying illumination pattern;
 - an optical system for transmitting the probe light, via the tip, towards the object along an optical path thereby illuminating at least a part of the object with the time-varying illumination pattern, and for transmitting at least a part of the light returned from the object to the at least one camera to form a plurality of 2D images, wherein the 3D geometry is determined based on the plurality of 2D images and the time-varying illumination pattern;
 - one or more motion sensors located on the intraoral scanner to measure three-dimensional motion of the intraoral scanner, wherein the intraoral scanner is wireless; and
 - a hardware processor, located within the wireless intraoral scanner, configured to:

- selectively switch a color of the probe light to illuminate the object with different colors at different times; and
- record images of the object with different colors by recording different images by the at least one camera at the different times.

3. (New) The intraoral scanner according to claim 2, wherein the different colors are provided by at least three monochromatic light sources of the light source.

4. (New) The intraoral scanner according to claim 3, wherein the hardware processor is configured to selectively switch the color of the probe light by switching on and off the at least three monochromatic light sources.

5. (New) The intraoral scanner according to claim 2, wherein the optical system is substantially achromatic.

6. (New) The intraoral scanner according to claim 2, wherein the probe light is directed towards the object in a direction substantially parallel with the longitudinal axis of the tip, and wherein the probe light is further reflected towards the object by a single reflective mirror located in the tip.

7. (New) The intraoral scanner according to claim 2, wherein the hardware processor is further configured to:

process raw 3D data into data for the 3D geometry, wherein the raw 3D data is based on the plurality of 2D images; and

transmit, via a wireless connection, the processed data for the 3D geometry.

8. (New) The intraoral scanner according to claim 2, wherein the hardware processor is further configured to:

process raw 3D data into data for the 3D geometry, wherein the raw 3D data is based on the plurality of 2D images; and

transmit, via a wireless connection, the data for the 3D geometry at a reduced data rate in comparison with transmission of the raw 3D data.

9. (New) The intraoral scanner according to claim 7, wherein the hardware processor processes the raw 3D data into data for the 3D geometry in real time.

10. (New) The intraoral scanner according to claim 2, wherein the intraoral scanner comprises at least two light sources, each of the light sources configured to operate with the pattern generator.

11. (New) The intraoral scanner according to claim 10, wherein the at least two light sources are configured to operate with different wavelengths.

12. (New) The intraoral scanner according to claim 11, wherein the intraoral oral scanner is configured such that the different wavelengths can be manually selected, whereby the 3D geometry is dependent on which light source is being manually selected.

13. (New) The intraoral scanner according to claim 2, wherein the hardware processor is further configured to:

output data from the one or more motion sensors for remotely controlling an image displayed on a display device based on acquired scan data.

14. (New) The intraoral scanner according to claim 2, wherein the hardware processor is further configured to:

output data from the one or more motion sensors for stitching and/or registering partial scans to one another.

15. (New) An intraoral scanner for determining the 3D geometry and color of at least a part of the surface of an object in an oral cavity, the intraoral scanner comprising:

- a tip configured to be inserted into the oral cavity;
- at least one camera accommodating an array of sensor elements;
- a pattern generator configured to generate, using a light source, a probe light with a plurality of configurations in the form of a time-varying illumination pattern;
- an optical system for transmitting the probe light, via the tip, towards the object along an optical path thereby illuminating at least a part of the object with the time-varying illumination pattern, and for transmitting at least a part of the light returned from the object to the at least one camera to form a plurality of 2D images, wherein the 3D geometry is determined based on the plurality of 2D images and the time-varying illumination pattern, wherein the intraoral scanner is wireless; and

- a hardware processor, located within the wireless intraoral scanner, configured to:
 - o selectively switch a color of the probe light to illuminate the object with different colors at different times;
 - o record images of the object with different colors by recording different images by the at least one camera at the different times;
 - o process raw 3D data into data for the 3D geometry, wherein the raw 3D data is based on the plurality of 2D images; and
 - o transmit, via a wireless connection, the data for the 3D geometry at a reduced data rate in comparison with transmission of the raw 3D data.

16. (New) The intraoral scanner of claim 15, wherein the hardware processor processes the raw 3D data into data for the 3D geometry in real time.

17. (New) The intraoral scanner of claim 15, further comprising:
one or more motion sensors located on the intraoral scanner to measure three-dimensional motion of the intraoral scanner.

18. (New) The intraoral scanner according to claim 17 wherein the hardware processor is further configured to:
output data from the one or more motion sensors for remotely controlling an image displayed on a display device based on acquired scan data.

19. (New) The intraoral scanner according to claim 17, wherein the hardware processor is further configured to:

output data from the one or more motion sensors for stitching and/or registering partial scans to one another.

20. (New) The intraoral scanner according to claim 15, wherein the different colors are provided by at least three monochromatic light sources of the light source.

21. (New) The intraoral scanner according to claim 15, wherein the different colors are provided by at least three monochromatic light sources of the light source.

22. (New) The intraoral scanner according to claim 21, wherein the hardware processor is configured to selectively switch the color of the probe light by switching on and off the at least three monochromatic light sources.

23. (New) The intraoral scanner according to claim 15, wherein the optical system is substantially achromatic.

24. (New) The intraoral scanner according to claim 15, wherein the probe light is directed towards the object in a direction substantially parallel with the longitudinal axis of the tip, and wherein the probe light is further reflected towards the object by a single reflective mirror located in the tip.

25. (New) The intraoral scanner according to claim 15, wherein the intraoral scanner comprises at least two light sources, each of the light sources configured to operate with the pattern generator.

26. (New) The intraoral scanner according to claim 25, wherein the at least two light sources are configured to operate with different wavelengths.

27. (New) The intraoral scanner according to claim 26, wherein the intraoral oral scanner is configured such that the different wavelengths can be manually selected, whereby the 3D geometry is dependent on which light source is being manually selected.

28. (New) An intraoral scanner for determining the 3D geometry and color of at least a part of the surface of an object in an oral cavity, the intraoral scanner comprising:

- a tip configured to be inserted into the oral cavity;
- at least one camera accommodating an array of sensor elements;
- a pattern generator configured to generate, using a light source, a probe light with a plurality of configurations in the form of a time-varying illumination pattern;
- an optical system for transmitting the probe light, via the tip, towards the object along an optical path thereby illuminating at least a part of the object with the time-varying illumination pattern, and for transmitting at least a part of the light returned from the object to the at least one camera to form a plurality of 2D images, wherein the 3D geometry is determined based on the plurality of 2D images and the time-varying illumination pattern;

- one or more motion sensors located on the intraoral scanner to measure three-dimensional motion of the intraoral scanner; and
- a hardware processor configured to:
 - o selectively switch a color of the probe light to illuminate the object with different colors at different times; and
 - o record images of the object with different colors by recording different images by the at least one camera at the different times.

29. (New) The intraoral scanner according to claim 28, wherein the hardware processor is further configured to:

output data from the one or more motion sensors for remotely controlling an image displayed on a display device based on acquired scan data.

30. (New) The intraoral scanner according to claim 28, wherein the hardware processor is further configured to:

output data from the one or more motion sensors for stitching and/or registering partial scans to one another.

31. (New) The intraoral scanner according to claim 28, wherein the intraoral scanner is wireless and the hardware processor is further configured to:

process raw 3D data into data for the 3D geometry, wherein the raw 3D data is based on the plurality of 2D images; and

transmit, via a wireless connection, the data for the 3D geometry at a reduced data rate in comparison with transmission of the raw 3D data.

REMARKS

By way of the foregoing amendment, claim 1 was cancelled and claims 2 – 31 were added. No new matter has been introduced by these changes.

It is requested that the application be examined on the basis of the amendments presented herein. Early and favorable consideration of this application is respectfully requested.

Should any questions arise in connection with this application, it is respectfully requested that the undersigned be contacted at the number indicated below.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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