

Doc Code: PET.AUTO Document Description: Petition automatically granted by EFS-Web		PTO/SB/140 U.S. Patent and Trademark Office Department of Commerce
Electronic Petition Request	PETITION TO WITHDRAW AN APPLICATION FROM ISSUE AFTER PAYMENT OF THE ISSUE FEE UNDER 37 CFR 1.313(c)	
Application Number	16586528	
Filing Date	27-Sep-2019	
First Named Inventor	Avi Kopelman	
Art Unit	2128	
Examiner Name	BIJAN MAPAR	
Attorney Docket Number	11353.025US4	
Title	METHODS AND SYSTEMS FOR CREATING AND INTERACTING WITH THREE DIMENSIONAL VIRTUAL MODELS	
An application may be withdrawn from issue for further action upon petition by the applicant. To request that the Office withdraw an application from issue, applicant must file a petition under this section including the fee set forth in § 1.17(h) and a showing of good and sufficient reasons why withdrawal of the application from issue is necessary. APPLICANT HEREBY PETITIONS TO WITHDRAW THIS APPLICATION FROM ISSUE UNDER 37 CFR 1.313(c). A grantable petition requires the following items: (1) Petition fee; and (2) One of the following reasons: (a) Unpatentability of one or more claims, which must be accompanied by an unequivocal statement that one or more claims are unpatentable, an amendment to such claim or claims, and an explanation as to how the amendment causes such claim or claims to be patentable; (b) Consideration of a request for continued examination in compliance with § 1.114 (for a utility or plant application only); or (c) Express abandonment of the application. Such express abandonment may be in favor of a continuing application, but not a CPA under 37 CFR 1.53(d).		
Petition Fee		
☐ Small Entity		
☐ Micro Entity		
☒ Regular Undiscounted		
Reason for withdrawal from issue		

☐ One or more claims are unpatentable ☒ Consideration of a request for continued examination (RCE) (List of Required Documents and Fees) ☐ Applicant hereby expressly abandons the instant application (any attorney/agent signing for this reason must have power of attorney pursuant to 37 CFR 1.32(b)).	
RCE request, submission, and fee. ☐ I certify, in accordance with 37 CFR 1.4(d)(4) that : The RCE request ,submission, and fee have already been filed in the above-identified application on ☒ Are attached.	
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES I certify, in accordance with 37 CFR 1.4(d)(4) that I am: ☒ An attorney or agent registered to practice before the Patent and Trademark Office who has been given power of attorney in this application. ☐ An attorney or agent registered to practice before the Patent and Trademark Office, acting in a representative capacity. ☐ A sole inventor ☐ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application ☐ A joint inventor; all of whom are signing this e-petition	
Signature	/Charles C. Hagadorn, III/
Name	Charles C. Hagadorn, III
Registration Number	62367

Electronic Patent Application Fee Transmittal				
Application Number:		16586528		
Filing Date:		27-Sep-2019		
Title of Invention:		METHODS AND SYSTEMS FOR CREATING AND INTERACTING WITH THREE DIMENSIONAL VIRTUAL MODELS		
First Named Inventor/Applicant Name:		Avi Kopelman		
Filer:		Charles C. Hagadorn III/Jayna Lofgran		
Attorney Docket Number:		11353.025US4		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
PETITION FEE- 37 CFR 1.17(H) (GROUP III)	1464	1	140	140
RCE- 2ND AND SUBSEQUENT REQUEST	1820	1	1900	1900
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				2040



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Decision Date : July 28, 2020

In re Application of :

Avi Kopelman

DECISION ON PETITION

UNDER CFR 1.313(c)(2)

Application No : 16586528

Filed : 27-Sep-2019

Attorney Docket No : 11353.025US4

This is an electronic decision on the petition under 37 CFR 1.313(c)(2), filed July 28, 2020 , to withdraw the above-identified application from issue after payment of the issue fee.

The petition is **GRANTED**.

The above-identified application is withdrawn from issue for consideration of a submission under 37 CFR 1.114 (request for continued examination). See 37 CFR 1.313(c)(2).

Petitioner is advised that the issue fee paid in this application cannot be refunded. If, however, this application is again allowed, petitioner may request that it be applied towards the issue fee required by the new Notice of Allowance.

Telephone inquiries concerning this decision should be directed to the Patent Electronic Business Center (EBC) at 866-217-9197.

This application file is being referred to Technology Center AU 2128 for processing of the request for continuing examination under 37 CFR 1.114 .

Office of Petitions

Electronic Acknowledgement Receipt	
EFS ID:	40130218
Application Number:	16586528
International Application Number:	
Confirmation Number:	9600
Title of Invention:	METHODS AND SYSTEMS FOR CREATING AND INTERACTING WITH THREE DIMENSIONAL VIRTUAL MODELS
First Named Inventor/Applicant Name:	Avi Kopelman
Customer Number:	161191
Filer:	Charles C. Hagadorn III/Jayna Lofgran
Filer Authorized By:	Charles C. Hagadorn III
Attorney Docket Number:	11353.025US4
Receipt Date:	28-JUL-2020
Filing Date:	27-SEP-2019
Time Stamp:	19:17:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 2040
RAM confirmation Number	E20207RJ17154488
Deposit Account	506974
Authorized User	Jayna Lofgran

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:
 37 CFR 1.17 (Patent application and reexamination processing fees)

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Quick Path Information Disclosure Statement	11353-025US4_sb0009_QPIDS.pdf	197413	no	2
			c98d368c2be6f78ed242d36c5c4fc16d62ac47e4		
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	11353-025US4_IDS.pdf	612174	no	4
			dafdd055aa3b1ef21426879e6430831fea14774a		
Warnings:					
Information:					
A U.S. Patent Number Citation or a U.S. Publication Number Citation is required in the Information Disclosure Statement (IDS) form for autoloading of data into USPTO systems. You may remove the form to add the required data in order to correct the Informational Message if you are citing U.S. References. If you chose not to include U.S. References, the image of the form will be processed and be made available within the Image File Wrapper (IFW) system. However, no data will be extracted from this form. Any additional data such as Foreign Patent Documents or Non Patent Literature will be manually reviewed and keyed into USPTO systems.					
3	Non Patent Literature	IPR2019-00134_FWD.pdf	477822	no	61
			0a16d41f8862b0aee8e742b46284e0a823f3f5d4		
Warnings:					
Information:					
4	Non Patent Literature	20200601_1144_711567_Initial-Determination-on-Violation-of-337_PUBLIC.pdf	5269277	no	312
			7f0556cafa0d9d24d9c78943553f3c5c5bbc476b		
Warnings:					
Information:					
5	Request for Continued Examination (RCE)	11353-025US4_sb0030efs_RCE.pdf	1349949	no	3
			bc0dd2d50bb8798ec6c3ee32fa9e5581836529c8		
Warnings:					
Information:					

6	Petition automatically granted by EFS	petition-request.pdf	31649	no	2
			fdb915719772b383a21e4c1577e0a80013f60e23		
Warnings:					
Information:					
7	Fee Worksheet (SB06)	fee-info.pdf	32604	no	2
			4d4fe9f6e93f8ed3e0a4a3114952e9500672e78e		
Warnings:					
Information:					
Total Files Size (in bytes):			7970888		
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.					

CERTIFICATION AND REQUEST FOR CONSIDERATION OF AN INFORMATION DISCLOSURE STATEMENT FILED AFTER PAYMENT OF THE ISSUE FEE UNDER THE QPIDS PROGRAM	
Non-Provisional Application Number: 16/586,528	Filing Date: 09/27/2019
First Named Inventor: Avi KOPELMAN	Title of Invention: METHODS AND SYSTEMS FOR CREATING AND INTERACTING WITH THREE DIMENSIONAL V/P
THE UNDERSIGNED HEREBY CERTIFIES AND REQUESTS THE FOLLOWING FOR THE ABOVE-IDENTIFIED APPLICATION. 1. Consideration is requested of the information disclosure statement (IDS) submitted herewith, which is being filed after payment of the issue fee. 2. Check the box next to the appropriate selection: ☐ Each item of information contained in the IDS was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the IDS. See 37 CFR 1.97(e)(1). OR ☒ No item of information contained in the IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the IDS was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the IDS. See 37 CFR 1.97(e)(2). OR ☐ See attached certification statement in compliance with 37 CFR 1.97(e). 3. Please charge the IDS fee set forth in 37 CFR 1.17(p) to Deposit Account No. <u>506974</u>. 4. A Petition to Withdraw from Issue After Payment of the Issue Fee (37 CFR 1.313(c)(2)), including the petition fee set forth in 37 CFR 1.17(h), is submitted herewith as a Web-based ePetition. WARNING: Do not submit the petition as a follow-on paper via EFS-Web. Submit the petition as a Web-based ePetition by signing on to EFS-Web as a registered user, selecting the radio button next to "Existing application/patent," and then selecting the radio button next to "ePetition (for automatic processing and immediate grant, if all petitions requirements are met)." Failure to use the Web-based ePetition interface will result in automatic entry of the RCE. 5. A request for continued examination (RCE) under 37 CFR 1.114 and the RCE fee under 37 CFR 1.17(e) are submitted herewith. 6. The RCE will be treated as a "conditional" RCE. In the event the examiner determines that any item of information contained in the IDS necessitates the reopening of prosecution in the application, the undersigned understands that (i) the RCE will be processed and treated as an RCE under 37 CFR 1.114 and therefore (ii) the IDS fee under 37 CFR 1.17(p) will be returned in accordance with 37 CFR 1.97(b)(4). In the event that no item of information in the IDS necessitates reopening prosecution, the undersigned understands that the RCE will not be processed and the RCE fee under 37 CFR 1.17(e) will be returned. 7. This certification and request is being filed as a Web-based ePetition and is not accompanied by an amendment to the application. Inclusion of an amendment will result in automatic entry of the RCE.	
Signature <u>/Charles C. Hagadorn, III/</u>	Date <u>July 28, 2020</u>
Name (Print/Typed) Charles C. Hagadorn, III	Practitioner Registration Number (If applicable) 62367
Note: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required in accordance with 37 CFR 1.33 and 11.18. Please see 37 CFR 1.4(d) for the form of the signature. If necessary, submit multiple forms for more than one signature, see below.*	
☒ *Total of <u>3</u> forms are submitted.	

If you need assistance in completing the form call 1-800-PTO-9199 and select option 2.

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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16586528
	Filing Date	2019-09-27
	First Named Inventor	Avi KOPELMAN
	Art Unit	2128
	Examiner Name	Bijan Mapar
	Attorney Docket Number	11353.025US4

U.S.PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		
	1							
If you wish to add additional U.S. Patent citation information please click the Add button.							Add	
U.S.PATENT APPLICATION PUBLICATIONS							Remove	
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		
	1							
If you wish to add additional U.S. Published Application citation information please click the Add button.							Add	
FOREIGN PATENT DOCUMENTS							Remove	
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²ⁱ	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							
If you wish to add additional Foreign Patent Document citation information please click the Add button								Add
NON-PATENT LITERATURE DOCUMENTS								Remove
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.						T ⁵

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16586528
	Filing Date	2019-09-27
	First Named Inventor	Avi KOPELMAN
	Art Unit	2128
	Examiner Name	Bijan Mapar
	Attorney Docket Number	11353.025US4

1	Final Written Decision, 3Shape A/S and 3Shape Inc. v. Align Tech., Inc., IPR2019-00134, Paper 29 (PTAB June 20, 2020).
2	Initial Determination on Violation of Section 337 with Recommended Determination on Remedy and Bond, in the matter of Certain Dental and Orthodontic Scanners and Software, Inv. No. 337-TA-1144 (April 30, 2020), mailed June 1, 2020.

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE	
Examiner Signature	Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16586528
	Filing Date	2019-09-27
	First Named Inventor	Avi KOPELMAN
	Art Unit	2128
	Examiner Name	Bijan Mapar
	Attorney Docket Number	11353.025US4

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Charles C. Hagadorn, III/	Date (YYYY-MM-DD)	2020-07-28
Name/Print	Charles C. Hagadorn, III	Registration Number	62367

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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 the Freedom of Information Act requires disclosure of these records.
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 inspections 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.



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :66043

Sale Accounting Date:08/03/2020

Sale Item Reference Number	Effective Date
16586528	07/28/2020

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I202082C11209351	1806	SUBMISSION- INFORMATION DISCLOSURE STMT	\$240.00	Deposit Account



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/586,528	09/27/2019	Avi Kopelman	11353.025US4	9600
161191	7590	09/03/2020		
FisherBroyles, LLP - Align Technology, Inc. 945 East Paces Ferry Road NE Suite 2000 Atlanta, GA 30326			EXAMINER MAPAR, BUAN	
			ART UNIT	PAPER NUMBER
			2128	
			NOTIFICATION DATE	DELIVERY MODE
			09/03/2020	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):

docketing@fisherbroyles.com
patent@fisherbroyles.com

Corrected Notice of Allowability	Application No. 16/586,528	Applicant(s) Kopelman, Avi	
	Examiner BIJAN MAPAR	Art Unit 2128	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 the QPIDS filed 7/28/2020.
☐ 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 1-20. 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)	5. ☐ Examiner's Amendment/Comment
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date <u>5/29/2020, 7/28/2020</u> .	6. ☒ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. ☐ Other _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	

/BIJAN MAPAR/ Primary Examiner, Art Unit 2128	
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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.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 5/29/2020 was filed after the mailing date of the Notice of Allowance on 4/8/2020. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

The information disclosure statement (IDS) submitted on 7/28/2020 was filed after the mailing date of the Notice of Allowance on 4/8/2020. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Allowable Subject Matter

Claims 1-20 are allowed.

The following is an examiner's statement of reasons for allowance:

The reasons for allowance provided in the prior action remain applicable. They are reproduced below for convenience:

The claims are in effect equivalent to those recited in application 16/176,474 (subject of the newly filed terminal disclaimer), which was also indicated allowable. The reasoning set forth in that application applies equally to this application:

The claims as recited distinguish over the art of record, and the art as a whole via reciting the updating scans to be directed to scenarios where the intra-oral cavity (e.g. dentition) is modified in between the scans (e.g. subjected to a surface preparation). This distinguishes over the cited references (WIPO publication WO 2007084647 A2 and US Pre-Grant Publications 20070172112, 20020006217,

20070236494, and 20050283065), which deal only with recapturing scans of a static intra-oral region.

The scanning methodology disclosed by the closest prior art, the Kriveshko WIPO reference (WO 2007084647 A2), does not provide for (or suggest) generating a composite scan after intra-oral modifications are made. Rather, it teaches away from this, teaching that entirely new scans should be made.

In ¶121-122, the Kriveshko WIPO reference (WO 2007084647 A2) describes an iterative approach to managing a preparation where "a dentist may repeat steps of tooth removal and scanning until a satisfactory surface preparation is achieved." This has an important distinction from the instant applications' claims, which provide a composite scan based on both a first (initial) and second (post-change) scan. In the Kriveshko references new scan is being gathered each time a preparation is made. The user interface allows for rescanning areas that are subject to errors, equivalent to modifying the first scan with data, but does not disclose that this can be done while the intra-oral region is modified (e.g. via a surface preparation). Rather, the rescanning is done to correct errors with the first scan, and the iterative process disclosed by the reference involves complete rescans (generating an entirely new scan rather than generating a composite scan by using a second scan to update the changed region from the first). See for example the Kriveshko WIPO reference at ¶119, where it discusses the interface used in this process: "The user interface may be adapted for use by a dentist (or dental laboratory) to review a surface preparation... in this mode, new data is not being acquired. Rather, a stored model may be processed." This explicitly teaches away from the claimed process, which data is newly captured and composited to update for the intra-oral modification.

In view of the above, with the Kriveshko WIPO reference representing the closest prior art, the claims distinguish over the art as a whole. The claims further recite eligible subject matter under 35 USC 101, as under the most recent guidance (2019 PEG) they are not directed to a judicial exception.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BIJAN MAPAR whose telephone number is (571)270-3674. The examiner can normally be reached on Monday - Thursday, 11:00-8:30.

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, Omar F Fernandez Rivas can be reached on 5712722589. 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 <https://ppair-my.uspto.gov/pair/PrivatePair>. 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 USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 16/586,528
Art Unit: 2128

Page 5

/BIJAN MAPAR/
Primary Examiner, Art Unit 2128

Search Notes 	Application/Control No. 16/586,528	Applicant(s)/Patent Under Reexamination Kopelman, Avi
	Examiner BIJAN MAPAR	Art Unit 2128

CPC - Searched*		
Symbol	Date	Examiner

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Searched EAST for prior art (see query)	02/18/2020	Bijan Mapar
inventor search in PALM	02/18/2020	Bijan Mapar
partial search of CPC G06F17/50, G06T19/20, G06T7/0012, A61C7/002	02/18/2020	Bijan Mapar
Assignee search in EAST	02/18/2020	Bijan Mapar
IPR2019-00134 Reviewed Petition for Inter Partes Review of U.S. Patent No. 9,299,192	02/18/2020	Bijan Mapar
updated EAST search (see query)	03/29/2020	Bijan Mapar
reviewed references from two IDS dated 3/19/2020 (see 1449)	03/29/2020	Bijan Mapar
reviewed QPIDS IDS	06/28/2020	Bijan Mapar
reviewed QPIDS IDS	08/30/2020	Bijan Mapar

/BIJAN MAPAR/ Primary Examiner, Art Unit 2128	
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<i>Search Notes</i> 	Application/Control No. 16/586,528	Applicant(s)/Patent Under Reexamination Kopelman, Avi
	Examiner BIJAN MAPAR	Art Unit 2128

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
A61	C7/002 (keyword limited)	03/29/2020	Bijan Mapar
G06	F30/00 (keyword limited)	03/29/2020	Bijan Mapar
G06	T19/20 (keyword limited)	03/29/2020	Bijan Mapar
G06	T7/0012 (keyword limited)	03/29/2020	Bijan Mapar
	keyword search (see query)	03/29/2020	Bijan Mapar

/BIJAN MAPAR/ Primary Examiner, Art Unit 2128	
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Issue Classification 	Application/Control No. 16/586,528	Applicant(s)/Patent Under Reexamination Kopelman, Avi
	Examiner BIJAN MAPAR	Art Unit 2128

CPC						
Symbol					Type	Version
A61B	/	5	/	0088	F	2013-01-01
A61C	/	5	/	77	I	2017-02-01
G06T	/	19	/	20	I	2013-01-01
A61C	/	13	/	0004	I	2013-01-01
A61C	/	7	/	002	I	2013-01-01
G06F	/	30	/	00	I	2020-01-01
G06F	/	30	/	20	I	2020-01-01
G06T	/	19	/	00	I	2013-01-01
G06T	/	7	/	0012	I	2013-01-01
A61B	/	5	/	0062	I	2013-01-01
A61B	/	5	/	4547	I	2013-01-01
A61C	/	9	/	0053	I	2013-01-01
B33Y	/	80	/	00	A	2014-12-01
G16H	/	20	/	40	A	2018-01-01
G06T	/	2210	/	41	A	2013-01-01
G06T	/	2219	/	2021	A	2013-01-01
G06T	/	2200	/	04	A	2013-01-01
G06T	/	2207	/	30036	A	2013-01-01
G06T	/	2219	/	2004	A	2013-01-01
A61B	/	1	/	00039	A	2013-01-01
A61B	/	1	/	00172	A	2013-01-01
A61C	/	19	/	04	A	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/BIJAN MAPAR/ Primary Examiner, Art Unit 2128	30 August 2020	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	6

U.S. Patent and Trademark Office

Part of Paper No.: 20200830

Issue Classification 	Application/Control No. 16/586,528	Applicant(s)/Patent Under Reexamination Kopelman, Avi
	Examiner BIJAN MAPAR	Art Unit 2128

INTERNATIONAL CLASSIFICATION					
CLAIMED					
G06T19/20	/	19	/	20	
A61C7/00	/	7	/	00	
G06F30/00	/	30	/	00	
G06T19/00	/	19	/	00	
G06T7/00	/	7	/	00	
G06F30/20	/	30	/	20	

NON-CLAIMED					
A61B5/00	/	5	/	00	
A61C5/77	/	5	/	77	
A61C13/00	/	13	/	00	
A61C9/00	/	9	/	00	
B33Y80/00	/	80	/	00	
G16H20/40	/	20	/	40	
A61B1/00	/	1	/	00	
A61C19/04	/	19	/	04	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS
703	1

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/BIJAN MAPAR/ Primary Examiner, Art Unit 2128	30 August 2020	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	6

U.S. Patent and Trademark Office

Part of Paper No.: 20200830

Issue Classification 	Application/Control No. 16/586,528	Applicant(s)/Patent Under Reexamination Kopelman, Avi
	Examiner BIJAN MAPAR	Art Unit 2128

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	10	10	19	19										
2	2	11	11	20	20										
3	3	12	12												
4	4	13	13												
5	5	14	14												
6	6	15	15												
7	7	16	16												
8	8	17	17												
9	9	18	18												

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 20	
/BIJAN MAPAR/ Primary Examiner, Art Unit 2128 (Primary Examiner) _____ (Date) 30 August 2020		O.G. Print Claim(s) 1	O.G. Print Figure 6

Bibliographic Data

Application No: 16/586,528

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No ☐ Met After Allowance

Verified and Acknowledged:

/BIJAN MAPAR/

Examiner's Signature

Initials

Title:

METHODS AND SYSTEMS FOR CREATING AND
INTERACTING WITH THREE DIMENSIONAL VIRTUAL
MODELS

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
09/27/2019	703	2128	11353.025US4
RULE			

APPLICANTS

Align Technology, Inc., San Jose, CA,

INVENTORS

Avi Kopelman, Palo Alto, CA, UNITED STATES

CONTINUING DATA

This application is a CON of 15050673 02/23/2016

15050673 is a CON of 13574723 01/04/2013 PAT 9299192

13574723 is a 371 of PCT/IL11/00574 07/19/2011

PCT/IL11/00574 has PRO of 61365556 07/19/2010

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

10/10/2019

STATE OR COUNTRY

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ADDRESS

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Suite 2000

Atlanta, GA 30326

UNITED STATES

FILING FEE RECEIVED

\$5,860

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16586528
	Filing Date	2019-09-27
	First Named Inventor	Avi KOPELMAN
	Art Unit	2128
	Examiner Name	Bijan Mapar
	Attorney Docket Number	11353.025US4

U.S.PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16586528
	Filing Date	2019-09-27
	First Named Inventor	Avi KOPELMAN
	Art Unit	2128
	Examiner Name	Bijan Mapar
Attorney Docket Number		11353.025US4

1	Final Written Decision, 3Shape A/S and 3Shape Inc. v. Align Tech., Inc., IPR2019-00134, Paper 29 (PTAB June 20, 2020).
2	Initial Determination on Violation of Section 337 with Recommended Determination on Remedy and Bond, in the matter of Certain Dental and Orthodontic Scanners and Software, Inv. No. 337-TA-1144 (April 30, 2020), mailed June 1, 2020.

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE	
Examiner Signature	/BIJAN MAPAR/
Date Considered	08/30/2020

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16586528
	Filing Date	2019-09-27
	First Named Inventor	Avi KOPELMAN
	Art Unit	2128
	Examiner Name	Bijan Mapar
	Attorney Docket Number	11353.025US4

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Charles C. Hagadorn, III/	Date (YYYY-MM-DD)	2020-07-28
Name/Print	Charles C. Hagadorn, III	Registration Number	62367

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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 the Freedom of Information Act requires disclosure of these records.
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 inspections 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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application Number	16/586,528
	Filing Date	09/27/2019
	First Named Inventor	Avi Kopelman
	Art Unit	2128
	Client Number	11353
Page 1 of 1	Matter Number	025US4

U.S. PATENT/PUBLICATION DOCUMENTS					
Initials	Cite No.	Document Number	Issue/Publication Date	First Named Inventor	Relevant Pages, Columns, etc.

FOREIGN PATENT DOCUMENTS						
Initials	Cite No.	Document Number	Publication Date	Country	Relevant Pages, Columns, etc.	T

OTHER DOCUMENTS			
Initials	Cite No.	Author, Title, Date, Pages, etc.	T
	1	Notice of Issuance of Initial Determination on Violation of Section 337 with Recommendation on Remedy and Bond, in the matter of Certain Dental and Orthodontic Scanners and Software, Inv. No. 337-TA-1144 (April 30, 2020).	

Examiner Signature	/BIJAN MAPAR/	Date Considered	08/30/2020
Examiner: Please initial if citation considered, whether or not citation is in conformance with MPEP Section 609. Please draw a line through the citation if it is not in conformance and it is not considered. Please include a copy of this form with the next communication to the applicant.			

SyncIDS.com

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /B.M/

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	"15050673".apnr.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L2	3	"7476100".pn. or "7347686".pn. or "20030215764".pn.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L3	3	"20060263738".pn. or "20040029078".pn. or "20030215764".pn.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
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L5	1	"20050177266".pn.	US- PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L6	1	"20020006217".pn.	US- PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L7	1,804	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three- dimensional or (three adj dimensional)) same (scan or image or model)	US- PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L8	499	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three- dimensional or (three adj dimensional)) same (scan or image or model) and (remove or replace or modify) with (model or image)	US- PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L9	1,103	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three- dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image)	US- PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L10	1,057	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D	US- PGPUB; USPAT	OR	OFF	2020/08/30 21:31

		or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface				
L11	817	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface and (obscur\$5 or block\$4 or occlude\$4)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L12	355	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface same (obscur\$5 or block\$4 or occlude\$4)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L13	249	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface same (obscur\$5 or block\$4 or occlude\$4) and cavity	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L14	0	(G06F17/50.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L15	108	(G06T19/20.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L16	128	(G06T7/0012.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31

L17	444	(A61C7/002.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L18	1,282	"align technology".as. or "align technology".aanm.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L19	996	"align technology".as. or "align technology".aanm. and (scan or image) with (composit\$4 or combin\$6 or regist\$6)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L20	950	"align technology".as. or "align technology".aanm. and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (remov\$3 or replac\$3 or modif\$8) with (model or image)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L21	104	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and finish adj line	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L22	14	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and finish adj line and @PD<"20100719"	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L23	1	"15050673".apnr.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L24	3	"7476100".pn. or "7347686".pn. or "20030215764".pn.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L25	3	"20060263738".pn. or "20040029078".pn. or "20030215764".pn.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L26	168	("20020006597" "20030009252" "20030139834" "20030224311" "20040128010" "20050055118" "20100114351" "20130110469" "2467432" "3407500" "3600500" "3600808" "3660900" "3683502" "3738005" "3860803" "3916526" "3922786" "3950851" "3983628" "4014096" "4195046" "4253828" "4324546" "4324547" "4348178" "4478580"	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31

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L27	1	"20050177266".pn.	US- PGPUB; USPAT	OR	OFF	2020/08/30 21:31

L28	1	"20020006217".pn.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L29	1,804	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L30	499	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remove or replace or modify) with (model or image)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L31	1,103	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L32	1,057	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L33	817	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface and (obscur\$5 or block\$4 or occlude\$4)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L34	355	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface same (obscur\$5 or block\$4 or occlude\$4)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31

L35	249	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface same (obscur\$5 or block\$4 or occlude\$4) and cavity	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L36	0	(G06F17/50.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L37	108	(G06T19/20.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L38	128	(G06T7/0012.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L39	444	(A61C7/002.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L40	1,282	"align technology".as. or "align technology".aanm.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L41	996	"align technology".as. or "align technology".aanm. and (scan or image) with (composit\$4 or combin\$6 or regist\$6)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L42	950	"align technology".as. or "align technology".aanm. and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (remov\$3 or replac\$3 or modif\$8) with (model or image)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31
L43	104	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:31

		dimensional or (three adj dimensional)) same (scan or image or model) and finish adj line				
L44	14	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and finish adj line and @PD<"20100719"	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L51	1	"15050673".apnr.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L52	3	"7476100".pn. or "7347686".pn. or "20030215764".pn.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L53	3	"20060263738".pn. or "20040029078".pn. or "20030215764".pn.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L54	168	("20020006597" "20030009252" "20030139834" "20030224311" "20040128010" "20050055118" "20100114351" "20130110469" "2467432" "3407500" "3600500" "3600808" "3660900" "3683502" "3738005" "3860803" "3916526" "3922786" "3950851" "3983628" "4014096" "4195046" "4253828" "4324546" "4324547" "4348178" "4478580" "4500294" "4504225" "4505673" "4526540" "4575330" "4575805" "4591341" "4609349" "4611288" "4656860" "4663720" "4664626" "4676747" "4742464" "4755139" "4763791" "4793803" "4798534" "4836778" "4837732" "4850864" "4850865" "4856991" "4877398" "4880380" "4889238" "4890608" "4935635" "4936862" "4937928" "4941826" "4964770" "4975052" "4983334" "5011405" "5017133" "5027281" "5035613" "5055039" "5059118" "5100316" "5121333" "5125832" "5128870" "5130064" "5131843" "5131844" "5139419" "5142364" "5145364" "5176517" "5184306" "5186623" "5257203" "5273429" "5278756" "5328362" "5338198" "5340309" "5342202" "5368478" "5382164" "5395238" "5431562" "5440326" "5440496" "5447432" "5452219" "5454717"	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32

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L55	1	"20050177266".pn.	US- PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L56	1	"20020006217".pn.	US- PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L57	1,804	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three- dimensional or (three adj dimensional)) same (scan or image or model)	US- PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L58	499	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three- dimensional or (three adj dimensional)) same (scan or image or model) and (remove or replace or modify) with (model or image)	US- PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L59	1,103	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three- dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image)	US- PGPUB; USPAT	OR	OFF	2020/08/30 21:32

L60	1,057	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L61	817	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface and (obscur\$5 or block\$4 or occlude\$4)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L62	355	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface same (obscur\$5 or block\$4 or occlude\$4)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L63	249	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface same (obscur\$5 or block\$4 or occlude\$4) and cavity	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L64	0	(G06F17/50.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L65	108	(G06T19/20.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L66	128	(G06T7/0012.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32

		regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)				
L67	444	(A61C7/002.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L68	1,282	"align technology".as. or "align technology".aanm.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L69	996	"align technology".as. or "align technology".aanm. and (scan or image) with (composit\$4 or combin\$6 or regist\$6)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L70	950	"align technology".as. or "align technology".aanm. and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (remov\$3 or replac\$3 or modif\$8) with (model or image)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L71	104	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and finish adj line	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L72	14	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and finish adj line and @PD<"20100719"	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L73	1	"15050673".apnr.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L74	3	"7476100".pn. or "7347686".pn. or "20030215764".pn.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L75	3	"20060263738".pn. or "20040029078".pn. or "20030215764".pn.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
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L77	1	"20050177266".pn.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L78	1	"20020006217".pn.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L79	1,804	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L80	499	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remove or replace or modify) with (model or image)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L81	1,103	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L82	1,057	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L83	817	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface and (obscur\$5 or block\$4 or occlude\$4)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L84	355	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32

		and surface same (obscur\$5 or block\$4 or occlude\$4)				
L85	249	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and (remov\$3 or replac\$3 or modif\$8) with (model or image) and surface same (obscur\$5 or block\$4 or occlude\$4) and cavity	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L86	0	(G06F17/50.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L87	108	(G06T19/20.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L88	128	(G06T7/0012.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L89	444	(A61C7/002.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L90	1,282	"align technology".as. or "align technology".aanm.	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L91	996	"align technology".as. or "align technology".aanm. and (scan or image) with (composit\$4 or combin\$6 or regist\$6)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L92	950	"align technology".as. or "align technology".aanm. and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (remov\$3 or replac\$3 or modif\$8) with (model or image)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L93	104	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32

		or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and finish adj line				
L94	14	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and finish adj line and @PD<"20100719"	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L45	444	(A61C7/002.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L46	0	(G06F17/50.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L47	108	(G06T19/20.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L48	128	(G06T7/0012.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L49	14	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and finish adj line and @PD<"20100719"	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L50	104	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32

		or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and finish adj line				
L95	444	(A61C7/002.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L96	0	(G06F17/50.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L97	108	(G06T19/20.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L98	128	(G06T7/0012.cpc.) and (dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model)	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L99	14	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and finish adj line and @PD<"20100719"	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32
L100	104	(dental or dentition or oral or intra-oral) with model\$5 and (scan or image) with (composit\$4 or combin\$6 or regist\$6) and (3D or 3-D or 3-dimensional or three-D or three-dimensional or (three adj dimensional)) same (scan or image or model) and finish adj line	US-PGPUB; USPAT	OR	OFF	2020/08/30 21:32

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/586,528	10/06/2020	10791936	11353.025US4	9600

161191 7590 09/16/2020
FisherBroyles, LLP - Align Technology, Inc.
945 East Paces Ferry Road NE
Suite 2000
Atlanta, GA 30326

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 Data Management (ODM) at (571)-272-4200.

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

Avi Kopelman, Palo Alto, CA;
Align Technology, Inc., San Jose, CA;

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IR 103 (Rev. 10/09)

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

3SHAPE A/S and 3SHAPE INC.,
Petitioner,

v.

ALIGN TECHNOLOGY, INC.,
Patent Owner.

IPR2021-01241
Patent 10,791,936 B2

Before NEIL T. POWELL, JAMES J. MAYBERRY, and
ELIZABETH M. ROESEL, *Administrative Patent Judges*.

ROESEL, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. *Background and Summary*

3Shape A/S and 3Shape Inc. (“Petitioner”) filed a Petition (Paper 3, “Pet.”) seeking an *inter partes* review of claims 1–20 of U.S. Patent No. 10,791,936 B2 (Ex. 1001, “the ’936 Patent”). Align Technology Inc. (“Patent Owner”) filed a Preliminary Response. Paper 10 (“Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2021). An *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). After considering the information presented in the Petition and the Preliminary Response, we determine that the reasonable likelihood standard is not met. Accordingly, we deny institution of an *inter partes* review.

B. *Related Matters*

The parties identify the following as related matters: *Align Technology, Inc. v. 3Shape A/S*, No. 6:20-cv-00979 (W.D. Tex.); *3Shape A/S v. Align Technology, Inc.*, No. 1:20-cv-01492 (D. Del.); *Align Technology, Inc. v. 3Shape A/S*, No. 1:17-cv-01646 (D. Del.); and *3Shape A/S v. Align Technology, Inc.*, IPR2019-00134 (PTAB). Pet. 2; Paper 6, 2 (Patent Owner’s mandatory notices).

C. *The ’936 Patent (Ex. 1001)*

The ’936 Patent discloses methods and systems for creating and interacting with three dimensional (“3D”) virtual models that are useful in dentistry, orthodontics, and prosthodontics. Ex. 1001, codes (54), (57),

1:20–22. The disclosed method includes scanning a patient’s teeth to obtain a virtual model; removing a portion of the virtual model where a tooth surface is obscured by saliva, blood, or debris; removing the saliva, blood, or debris from the patient’s intraoral cavity; re-scanning the previously obscured portion of the tooth surface; and replacing the removed portion of the virtual model with the re-scanned portion. *Id.* at code (57), 14:43–15:32, 17:4–11, 20:64–21:11, 22:30–40, 23:41–55. The ’936 Patent discloses that a feature of this method is that “the user only needs to ‘correct’ parts of the original virtual model of the dental surface, and does not need to rescan everything, should part of the virtual model not be acceptable.” *Id.* at 15:33–36.

D. Illustrative Claim

Petitioner challenges claims 1–20 of the ’936 Patent. Pet. 1. Claims 1, 9, and 17 are independent claims. Claim 1 is illustrative of the claimed subject matter and is reproduced below.

1. [Preamble] A system for scanning a patient’s teeth for a dental procedure, the system comprising:

[1.1] a hand-held intraoral scanner; and

[1.2] a computer readable medium including instructions that when executed by a computer system, cause the computer system to:

[1.3] receive first scan data of the patient’s teeth from the hand-held intraoral scanner;

[1.4] display, to a display, a model of the patient’s teeth, wherein the model of the patient’s teeth is based on the received first scan data of the patient’s teeth;

[1.5] receive user input defining a portion of the model to be removed;

[1.6] remove, from the displayed model, a removed surface portion of the model to be removed according to the user input;

[1.7] receive second scan data of the patient's teeth from the hand-held intraoral scanner, the second scan data including surface data of a physically changed portion of the patient's intraoral cavity;

[1.8] replace at least a portion of the removed surface portion of the model using the received second scan data of the patient's teeth including surface data of a physically changed portion of the patient's intraoral cavity; and

[1.9] output, to the display, the model of the patient's teeth with the portion of the removed surface portion replaced using the received second scan data.

Ex. 1001, 30:24–50 (with bracketed additions to identify claim elements).

E. Asserted Grounds and Evidence

Petitioner asserts the following grounds of unpatentability:

Claims	35 U.S.C. § ¹	Reference(s)
1, 4–7, 9, 11–13	102(b)	Rubbert ²
1, 4–13, 17, 20	103(a)	Rubbert
2, 3, 18, 19	103(a)	Rubbert, Babayoff ³

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102, 103, effective March 16, 2013. Because the '936 Patent has an effective filing date before this date, the pre-AIA version of §§ 102, 103 applies. Ex. 1001, code (63).

² Ex. 1005, Rubbert et al., WO 03/094102 A1, published November 13, 2003.

³ Ex. 1006, Babayoff et al., WO 00/08415, published February 17, 2000.

Claims	35 U.S.C. § ¹	Reference(s)
14–16	103(a)	Rubbert, Rosenstiel ⁴

Pet. 5. Petitioner relies on the Declaration of Dr. J.P. Mellor to support its challenges. Ex. 1002 (the “Mellor Declaration”).

II. ANALYSIS

A. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)); *see also* 37 C.F.R. § 42.104(b) (requiring a petition for *inter partes* review to identify how the challenged claim is to be construed and where each element of the claim is found in the prior art patents or printed publications relied upon).

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. Inc., v. Union Oil Co. of Calif.*, 814 F.2d 628, 631 (Fed. Cir. 1987).

A patent claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

⁴ Ex. 1017, Rosenstiel et al., *Contemporary Fixed Prosthodontics* (2nd ed. 1995).

subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved based on underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when presented, objective evidence of nonobviousness, i.e., secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

Additionally, the obviousness inquiry typically requires an analysis of “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (requiring “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)). Petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements,” but “must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.” *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

B. Level of Ordinary Skill in the Art

Relying on the Mellor Declaration, Petitioner contends that a person of ordinary skill in the art (“POSA”) would have had “at least a bachelor’s degree in electrical engineering, computer engineering, or computer science (or equivalent course work) and two to three years of work experience in 3D imaging and modeling of physical structures.” Pet. 9 (citing Ex. 1002 ¶¶ 34–37). Petitioner asserts that, alternatively, a POSA would have had “a master’s degree in electrical engineering, computer engineering, or computer

science (or equivalent course work) with a focus in 3D imaging and modeling of physical structures.” Pet. 9–10.

For purposes of the Preliminary Response, Patent Owner does not dispute Petitioner’s definition of a POSA. *See, generally* Prelim. Resp.

We find that Petitioner’s definition of a POSA is consistent with the scope and content of the ’936 Patent and the asserted prior art, and we apply this definition for purposes of this Decision.

C. Claim Construction

In an *inter partes* review, we apply the same claim construction standard as would be used by a district court to construe a claim in a civil action involving the validity or infringement of a patent. 37 C.F.R. § 42.100(b). Under that standard, claim terms are given their ordinary and customary meaning, as would have been understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history of record. *Id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–19 (Fed. Cir. 2005) (en banc); *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365–66 (Fed. Cir. 2012).

Below we discuss the meaning of “first scan data” and “second scan data.” We determine that we do not need to resolve any other claim construction disputes for purposes of this Decision. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”); *see also Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (applying *Vivid Techs.* in the context of *inter partes* review).

first scan data; second scan data

These phrases are recited in independent claims 1, 9, and 17, which recite “first scan data of the patient’s teeth from [a/the] intraoral scanner” and “second scan data of the patient’s teeth from the hand-held intraoral scanner.” Ex. 1001, 30:31–32, 30:40–41, 31:25–26, 31:33–34, 32:25–26, 32:35–37. Claims 1 and 9 additionally recite: “the second scan data including surface data of a physically changed portion of the patient’s intraoral cavity.” *Id.* at 30:41–43, 31:34–36.

Petitioner asserts that no express claim constructions are necessary. Pet. 12. Nevertheless, when applying the claim language to the prior art, Petitioner contends that “no particular order is required based on the claim wording choice” and no “temporal aspect” is required. Pet. 28 (addressing anticipation ground).

Patent Owner disagrees. According to Patent Owner, “the language of the claims provides a temporal relationship between the first and second scans: specifically, it indicates that the ‘second scan’ is a ‘post-change’ scan while the ‘first scan’ is an ‘initial’ scan.” Prelim. Resp. 6 (addressing Examiner’s understanding of the claim); *see also id.* at 15 (addressing claim construction and asserting that “the second scan data is from a post-change scan and the first scan data is from an earlier scan”).

We agree with Patent Owner that the claim language provides a temporal relationship between “first scan data” and “second scan data.” We determine that, in claims 1 and 9, “first scan data” pertains to an earlier scan than “second scan data,” and “second scan data” includes surface data of a physically changed portion of the intra-oral cavity, where the physical change occurs after the first scan and before the second scan.

Our interpretation is based on the plain language of claims 1 and 9, which recite that “second scan data” includes “surface data of a physically changed portion of the patient’s intraoral cavity.” The claim language as a whole makes clear that a physical change occurs between the first scan and the second scan. Petitioner implicitly agrees with this interpretation by characterizing its arguments as showing that “a dentist or orthodontist makes a physical change to the tooth *between scans*.” Pet. 12 (emphasis added). In other words, claims 1 and 9 require the following order of steps: first scan, physical change, second scan.

Our interpretation of claims 1 and 9 is supported by the Specification, which discloses examples in which a physical change occurs between an initial scan and a second, later scan. In Embodiment A, for example, a “first virtual model (computer 3D model)” is created, where “during the initial scan” a part of the dental surface “was covered with saliva, blood, debris, or otherwise obscured.” Ex. 1001, 14:43–52, 45:58–67. This part of the model is deleted by the user “resulting in a modified first virtual model.” *Id.* at 14:55–57. A “second virtual model” is created from second scan data after the obscured part of the dental surface “is cleaned up and/or unobstructed, and then rescanned.” *Id.* at 15:4–11. The second virtual model “is then manipulated in the computer system to register it onto the modified first virtual model.” *Id.* at 15:12–14. In this example, first scan data is generated in an initial scan, and second scan data is generated by rescanning a portion of the intra-oral cavity after cleaning it up or removing an obstruction.⁵

⁵ Petitioner does not dispute that removing saliva from a patient’s teeth creates “a physically changed portion of the patient’s intraoral cavity.” Pet. 43.

The '936 Patent describes additional embodiments in which a physical change occurs between an initial scan and a second, later scan. For example, when describing the Figure 1 embodiment, the '936 Patent discloses that, “during the initial 3D data collection step, for example via scanning, . . . part . . . of the physical dental surface was covered with foreign material, such as for example saliva, blood, debris, or was otherwise obscured.” Ex. 1001, 21:4–11. Further describing the Figure 1 embodiment, the '936 Patent discloses that part “of the physical dental surface is cleaned up and/or unobstructed, and for example rescanned to obtain second virtual model.” *Id.* at 22:38–40. The '936 Patent includes the same disclosure for the Figure 9 embodiment. *Id.* at 23:53–55. In these examples, first scan data is generated in an initial scan, and second scan data is generated by rescanning a portion of the intra-oral cavity after cleaning it up or removing an obstruction.

The Specification does not support Petitioner’s contention that “no particular order is required.” Pet. 28 (citing Ex. 1001, 30:10–21). The cited passage states: “In the method claims that follow, alphanumeric characters and Roman numerals used to designate claim steps are provided for convenience only and do not imply any particular order of performing the steps.” Ex. 1001, 30:10–21. Our claim construction is based on the claim language, not any alphanumeric characters and Roman numerals used to designate claim steps. More particularly, for claims 1 and 9, we rely on the part of the claim that recites “the second scan data including surface data of a physically changed portion of the patient’s intraoral cavity.” When read in the context of the claims as a whole, this phrase requires that a first scan, a physical change, and a second scan occur in that order.

Our claim interpretation is consistent with the Examiner's Reasons for Allowance. The Examiner stated that the claims distinguish over the cited art by reciting "updating scans to be directed to scenarios where the intra-oral cavity (e.g. dentition) is modified in between the scans (e.g. subjected to surface preparation)." Ex. 1004, 4. According to the Examiner, the cited art "does not provide for (or suggest) generating a composite scan after intra-oral modifications are made." *Id.* at 5. When distinguishing the cited art, the Examiner stated that "the instant applications' claims . . . provide a composite scan based on both a first (initial) and second (post-change) scan." *Id.* The Examiner characterized the claimed process as follows: "generating a composite scan by using a second scan to update the changed region from the first" and "data is newly captured and composited to update for the intra-oral modification." *Id.*

Claim 17 likewise provides a temporal relationship between "first scan data" and "second scan data." In claim 17, "first scan data" is received by the computer before "second scan data." Our interpretation is based on express recitations of the claim, which uses the word "after" and other claim language to describe a particular order of steps. In particular, claim 17 recites instructions for causing a computer system to, among other things:

receive first scan data of the patient's teeth from the hand-held intraoral scanner;

display, to a display, a model of the patient's teeth, wherein the model of the patient's teeth is based on the received first scan data of the patient's teeth;

receive user input defining a portion of the model to be removed;

after receiving the user input, remove, from the displayed model, a removed surface portion of the model to be removed according to the user input;

after removing the portion of the model, *receive second scan data* of the patient's teeth from the hand-held intraoral scanner.

Ex. 1001, 32:25–40 (emphasis added). Based on the foregoing recitations in claim 17, it is clear that the computer receives “first scan data” before it receives “second scan data.” More particularly, the claim recites that “first scan data” is received by the computer and then, after a series of other steps, “second scan data” is received by the computer. *Id.*

D. Petitioner's Anticipation Ground

Petitioner contends that claims 1, 4–7, 9, and 11–13 are unpatentable as anticipated by Rubbert. Pet. 16–40. Patent Owner opposes. Prelim. Resp. 17–25. We provide an overview of Rubbert before addressing the parties' arguments.

1. Rubbert (Ex. 1005)

Rubbert discloses monitoring the movement and position of the teeth during orthodontic treatment by performing monitoring scans to provide a 3D virtual image of the dentition, including the teeth and orthodontic appliances, such as brackets bonded to the teeth. Ex. 1005, 2:16–21. Rubbert discloses that, after a monitoring scan is performed, a bracket registration step may be carried out, whereby scan data for a bracket is replaced by a stored 3D model of the bracket, so as to provide a more complete and accurate representation of the bracket. *Id.* at 20:26–21:9, Fig. 6 (steps 90, 92).

Of particular relevance to the parties' dispute is Figure 16 of Rubbert, which is reproduced below.

FIG. 16

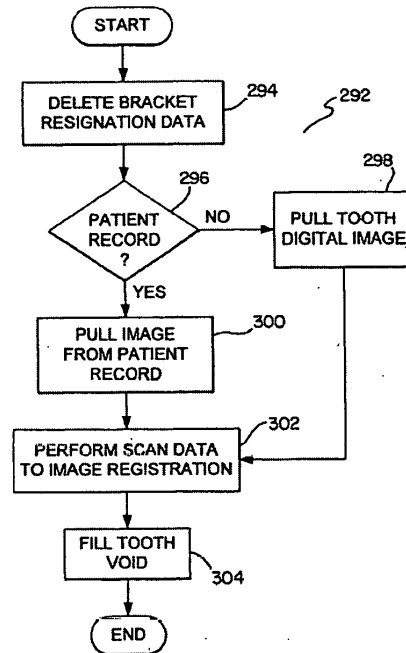


Figure 16 is a flow chart of “a process for finding a best fit between a virtual tooth model and the tooth scan data.” Ex. 1005, 9:10–11. Rubbert discloses that, after bracket registration, there may be a need to obtain a new or revised virtual model of the tooth underlying the registered bracket, for example, to enable the orthodontist to see if the tooth has undergone movement since the previous scan. *Id.* at 29:28–31. As shown in Figure 16 at step 294, scan data in the vicinity of the registered bracket model is deleted, leaving a data void in the virtual tooth model. *Id.* at 30:8–11. At steps 296, 298, and 300, a preexisting digital tooth model is pulled either from a patient data record or from a digital library, and at step 302, the tooth scan data is registered to the digital tooth model. *Id.* at 30:16–27. At step 304, the void in the scan data is filled with the 3D surface resulting from the registration process. *Id.* at 30:27–29.

2. Independent Claim 1

Our analysis focuses on claim element 1.7, which recites: “receive second scan data of the patient’s teeth from the hand-held intraoral scanner, the second scan data including surface data of a physically changed portion of the patient’s intraoral cavity.” Ex. 1001, 30:40–43.

Petitioner contends that Rubbert discloses claim element 1.7. Pet. 26–28. Petitioner contends that “second scan data,” as recited in the claim, is scan data of the patient’s tooth without a bracket, as disclosed by Rubbert in step 300 of Figure 16. Pet. 26–27. Petitioner contends that this data is “surface data of a physically changed portion of the patient’s intraoral cavity” as recited in claim 1 “because the second scan data (without a bracket) is a physically changed portion in the oral cavity relative to the first scan data (with a bracket).” Pet. 28.

Patent Owner argues that, under a correct claim construction, Rubbert does not disclose claim element 1.7. Prelim. Resp. 18–25. On this record, we agree with Patent Owner.

For the reasons discussed above, we determine that claim 1 requires a temporal relationship between “first scan data” and “second scan data.” More specifically, we determine that “first scan data” pertains to an earlier scan than “second scan data,” and “second scan data” includes surface data of a physically changed portion of the intra-oral cavity, where the physical change occurs after the first scan and before the second scan.

Petitioner contends that “Rubbert’s original scan of the patient’s teeth (without brackets) satisfies the ‘second’ scan data limitation, and the monitoring scan of the patient’s teeth (with brackets) satisfies the ‘first’ scan data limitation, with the teeth without brackets being a ‘physically changed portion’ relative to the teeth with brackets.” Pet. 28. Petitioner’s contention

does not satisfy our claim construction for “first scan data” and “second scan data.” Although Petitioner contends that “first scan data” is disclosed by Rubbert’s “monitoring scan of the patient’s teeth (with brackets)” (*id.*), Petitioner does not show that Rubbert’s monitoring scan is an earlier scan than the one that produces “second scan data.” Instead, Petitioner contends that “second scan data” is disclosed by Rubbert’s earlier scan—an original scan of the patient’s teeth without brackets retrieved from a stored patient record. Pet. 26–28. The temporal relationship between “first scan data” and “second scan data,” as identified by Petitioner in Rubbert, is the reverse of the temporal relationship required by claim 1. According to Petitioner’s contentions, Rubbert’s “second scan data” pertains to an earlier scan than “first scan data.” As properly construed, claim 1 requires the opposite.

Furthermore, Petitioner does not show that Rubbert discloses “surface data of a physically changed portion of the patient’s intra-oral cavity,” as recited in claim 1. Petitioner contends that Rubbert discloses this limitation “because the second scan data (without a bracket) is a physically changed portion in the oral cavity relative to the first scan data (with a bracket).” Pet. 28. Petitioner’s contention does not satisfy our claim construction. Petitioner does not identify any disclosure in Rubbert of a physical change that takes place after the alleged first scan (with a bracket) and before the alleged second scan (without a bracket). Rubbert does not disclose physically removing a bracket from the patient’s tooth and then rescanning the tooth after removal of the bracket. Petitioner does not assert otherwise.

Although Petitioner asserts that “installing a bracket” is a “physical change to the tooth between scans” (Pet. 12), Rubbert discloses that bracket installation occurs *before*, not after, the monitoring scans that Petitioner relies upon to teach “first scan data.” Pet. 22, 28; Ex. 1005, 19:12–14

(“Once the actual brackets have been bonded to the teeth, an orthodontist will proceed with the treatment process by initiating monitoring scans of the dentition to obtain bracket position and tooth movement information.”).

Accordingly, we find that Petitioner does not show that Rubbert discloses “second scan data” that includes surface data of a physically changed portion of the intra-oral cavity, where the physical change occurs after the first scan and before the second scan, as required by our claim construction.

Accordingly, we find that Petitioner does not show that Rubbert discloses claim element 1.7.

3. Independent Claim 9

Claim element 9.4 recites the same limitations as claim element 1.7, except that claim element 9.4 recites “receiving” instead of “receive.” Both claim elements recite “second scan data of the patient’s teeth from the hand-held intraoral scanner, the second scan data including surface data of a physically changed portion of the patient's intraoral cavity.” Ex. 1001, 30:40–43, 31:33–36.

Petitioner relies on the same contentions for claim element 9.4 as it presents for claim element 1.7. Pet. 39. We find that Petitioner does not show that Rubbert discloses claim element 9.4 for the same reasons as set forth above for claim element 1.7

4. Dependent claims 4–7 and 11–13

Claims 4–7 each depend directly or indirectly from claim 1, and claims 11–13 each depend directly or indirectly from claim 9. Petitioner contends that claims 4–7 and 11–13 are anticipated by Rubbert. Pet. 31–36, 40. We find that Petitioner’s arguments and evidence for dependent claims 4–7 and 11–13 do not remedy the shortcomings in Petitioner’s arguments

and evidence for independent claims 1 and 9 and that Petitioner does not show anticipation of the dependent claims for the same reasons as set forth above for the independent claims.

E. Petitioner's Obviousness Ground based on Rubbert Alone

Petitioner contends that claims 1, 4–13, 17, and 20 are unpatentable as obvious in view of Rubbert. Pet. 40–53. Patent Owner opposes. Prelim. Resp. 25–37. We address the parties' contentions below.

1. Independent Claim 1

Petitioner contends that claim 1 would have been obvious, even if claim element 1.7 is construed to require a temporal aspect. Pet. 28, 42. According to Petitioner, a POSA “would have recognized that physically changing the patient's oral cavity and then re-scanning that area would have been an obvious variation of Rubbert.” Pet. 42. Petitioner asserts that “it would have been obvious to re-scan the patient's teeth and use that scan data to replace Rubbert's tooth void in the same manner as disclosed in Rubbert of using the tooth data from the patient's record.” Pet. 43–44.

Patent Owner argues that Petitioner's proposal to use “a new scan instead of Rubbert's pre-treatment patient scans . . . makes no sense” and “would fail to provide the information Rubbert requires.” Prelim. Resp. 25–26. In addition, Patent Owner argues that Petitioner engages in “hindsight reasoning” and relies on “generic objectives from Rubbert” that “do not supply any direction toward the particular modifications” Petitioner proposes. *Id.* at 31.

After considering the parties' arguments and evidence, we are not persuaded that Petitioner's obviousness rationale is sufficient to support

institution. At the heart of Petitioner's obviousness case for claim element 1.7 is the following contention:

[A POSA] would have recognized that after cleaning or performing a simple, conventional dental operation to adjust the position of the bracket on the tooth (which would result in a "physically changed portion of the patient's intraoral cavity" as a bracket on a tooth is within the patient's oral cavity), it would have been obvious to re-scan the patient's teeth and use that scan data to replace Rubbert's tooth void in the same manner as disclosed in Rubbert of using the tooth data from the patient's record. For example, a [POSA] would have understood that re-scanning the patient's teeth after correcting a physical impediment, such as saliva, would have provided an accurate representation of the patient's intraoral cavity.

Pet. 43–44. Petitioner's contention suffers from the flaws identified by Patent Owner. Prelim. Resp. 25–32.

First, we agree with Patent Owner that Petitioner's proposed substitution makes no sense in the context of Rubbert's disclosure. Prelim. Resp. 26, 28–29. Petitioner proposes "to re-scan the patient's teeth and use that scan data to replace Rubbert's tooth void in the same manner as disclosed in Rubbert of using the tooth data from the patient's record." Pet. 43–44. As discussed above, Rubbert discloses performing monitoring scans during orthodontic treatment, where the scans include teeth and orthodontic appliances, such as brackets. Ex. 1005, 2:16–21. To enable the orthodontist to see if a bracketed tooth has undergone movement, Rubbert discloses deleting scan data that includes the bracket and filling the void with pre-treatment scan data of the underlying tooth without a bracket. *Id.* at 29:28–30:29, Fig. 16. The objective of Rubbert's void-filling disclosure is to provide a virtual model of the teeth during orthodontic treatment and to

show the tooth surface as it appeared before an orthodontic bracket was attached to the tooth. *Id.*

Petitioner's proposed modification—using a new scan instead of a pre-treatment patient scan—would not accomplish Rubbert's objective for void-filling. Rescanning the bracketed tooth after cleaning it or adjusting the bracket as Petitioner proposes (Pet. 43–44) would not provide scan data for the tooth surface under the bracket to fill the void created by deleting the bracket from the virtual model. Thus, contrary to Rubbert's objective, Petitioner's modification would not show the tooth surface as it appeared before an orthodontic bracket was attached to the tooth.

Moreover, we agree with Patent Owner that Petitioner does not provide a sufficient non-hindsight biased rationale for its proposed modification of Rubbert's disclosure. Prelim. Resp. 29–32. As support for its obviousness rationale, Petitioner relies on four categories of evidence: (1) the '936 Patent, Ex. 1001; (2) Patent Owner's district court claim construction arguments, Ex. 1022; (3) Rubbert, Ex. 1005; and (4) the Mellor Declaration (Ex. 1002). Pet. 42–44. We discuss each category below.

First, Petitioner's reliance on the '936 Patent shows hindsight bias, and Petitioner does not accurately characterize the cited disclosures. Petitioner asserts that the '936 Patent "admits" that "soft tissues such as the gums or other agents such as saliva *were known* to obscure intraoral structures such as the finish line during intraoral scanning." Pet. 42–43 (citing Ex. 1001, 1:62–67; emphasis added). The '936 Patent states that such obscuring of the finish line "is often the case," but does not admit that such problems were known. Ex. 1001, 1:60–2:5. Next Petitioner asserts that the '936 Patent "admits . . . that a dental practitioner would have used their dental training to remove obscuring agents (such as gums or saliva)

such that the finish line is no longer obscured.” Pet. 42–43 (citing Ex. 1001, 14:12–38). The cited passage discusses user and automated analysis of a 3D virtual model “to determine the suitability of the first physical part for the purpose of allowing a prosthesis to be seated thereon.” Ex. 1001, 14:12–17. The cited passage discloses that “the user can rework the physical part” to allow for good prosthesis seating (*id.* at 14:23–35) but says nothing about “remov[ing] obscuring agents (such as gums or saliva),” as asserted by Petitioner. Pet. 43.

Second, Petitioner relies on Patent Owner’s district court claim construction argument that “removing saliva or even a piece of spinach from a patient’s teeth creates ‘a physically changed portion of the patient’s intraoral cavity.’” Pet. 43 (citing Ex. 1022, 29–31). The cited excerpt from Patent Owner’s district court claim construction brief addresses the “physically changed” limitation of claims 1 and 9 and argues that it does not require action by a dental practitioner, as opposed to a patient. After reviewing Patent Owner’s claim construction argument, we find that it provides little or no support for Petitioner’s obviousness rationale. More particularly, Patent Owner’s district court claim construction argument has little bearing on whether it would have been obvious to modify Rubbert to replace a portion of the 3D virtual model with second scan data that includes surface data of physically changed portion of the patient’s intraoral cavity.

Third, Petitioner relies on general statements from Rubbert, but these statements are taken out of context and are insufficient to support the particular modification proposed by Petitioner. Petitioner argues that the same type of changes discussed in Patent Owner’s district court claim construction brief “would have been obvious to implement as part Rubbert’s scanning process to facilitate Rubbert’s aim to ‘acquire accurate and

complete scan results of dental devices having small or minute geometrical structures.” Pet. 43 (quoting Ex. 1005, 3:16). In the quoted text, Rubbert is discussing the difficulty of acquiring accurate and complete scan results of small or minute geometrical structures, such as orthodontic brackets that are bonded to a patient’s tooth. Ex. 1005, 3:16–4:10. Rubbert’s discussion provides virtually no support for Petitioner’s contention that it would have been obvious to modify Rubbert to re-scan the patient’s teeth and use that scan data to replace a void in the 3D model in the same way that Rubbert teaches to use data from the patient’s record. Pet. 43–44. Next, Petitioner relies on Rubbert’s disclosure that “there is a general need for a process that can generate an accurate virtual model of the teeth and the appliance and thereby locate manually bonded brackets.” Pet. 43 (quoting Ex. 1005, 5:11–13). Here, Rubbert is discussing a need for the disclosed solution, which involves replacing scan data of a bracket bonded to a tooth with a stored 3D model of the bracket so as to provide a more complete and accurate representation of the bonded bracket. Ex. 1005, 20:26–21:9, Fig. 6 (steps 90, 92). Petitioner does not show sufficiently that Rubbert’s disclosure would have led a POSA to modify Rubbert such that it satisfies claim element 1.7.

Fourth, Petitioner relies on the Mellor Declaration. Pet. 42–45 (citing Ex. 1002 ¶¶ 129–135). The cited paragraphs of the Mellor Declaration are substantively identical to the Petition and suffer from the same deficiencies.

Accordingly, we find that Petitioner does not show sufficiently that it would have been obvious to modify Rubbert in a way that satisfies claim element 1.7.

2. Independent Claim 9

Petitioner relies on the same obviousness rationale for claim element 9.4 as it presents for claim element 1.7. Pet. 47. We find that Petitioner's obviousness rationale for claim element 9.4 is insufficient for the same reasons as set forth above for claim element 1.7.

3. Independent Claim 17

Claim element 17.7 recites: "after removing the portion of the model, receive second scan data of the patient's teeth from the hand-held intraoral scanner." Ex. 1001, 32:35–37.

Petitioner relies on the same obviousness rationale for claim element 17.7 as it presents for claim element 1.7. Pet. 50. We find that Petitioner's obviousness rationale for claim element 17.7 is insufficient for the same reasons as set forth above for claim element 1.7.

4. Dependent claims 4–8, 10–13, and 20

Claims 4–8, 10–13, and 20 each depend directly or indirectly from one of claims 1, 9, and 17. Petitioner contends that claims 4–8, 10–13, and 20 are unpatentable as obvious in view of Rubbert. Pet. 45–48, 51–53. We find that Petitioner's arguments and evidence for dependent claims 4–8, 10–13, and 20 do not remedy the shortcomings in Petitioner's arguments and evidence for independent claims 1, 9, and 17 and that Petitioner does not show obviousness of the dependent claims for the same reasons as set forth above for the independent claims.

F. Petitioner's Obviousness Grounds based on Rubbert in Combination with Babayoff or Rosenstiel

Petitioner contends that claims 2, 3, 18, and 19 are unpatentable as obvious in view of Rubbert and Babayoff and that claims 14–16 are

unpatentable as obvious in view of Rubbert and Rosenstiel. Pet. 53–74. Claims 2 and 3 each depend directly or indirectly from claim 1, claims 14–16 each depend directly or indirectly from claim 9, and claims 18 and 19 each depend directly or indirectly from claim 17. We find that Petitioner’s arguments and evidence for dependent claims 2, 3, 14–16, 18, and 19 do not remedy the shortcomings in Petitioner’s arguments and evidence for independent claims 1, 9, and 17 and that Petitioner does not show obviousness of the dependent claims for the same reasons as set forth above for the independent claims.

G. Discretion under 35 U.S.C. § 325(d)

Patent Owner argues that the Board should exercise its discretion to deny the Petition under 35 U.S.C. § 325(d). Prelim. Resp. 3–12. In view of our determination that Petitioner does not meet the threshold for instituting review on the merits, we need not consider Patent Owner’s arguments for a discretionary denial of institution.

III. CONCLUSION

For the above reasons, we determine that Petitioner does not establish a reasonable likelihood that it would prevail in showing that claims 1–20 of the ’936 Patent are unpatentable on the grounds asserted in the Petition.

IV. ORDER

It is

ORDERED that, the Petition is *denied*, and no trial is instituted.

IPR2021-01241
Patent 10,791,936 B2

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AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court _____ for the District of Delaware _____ on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 20-1492-LPS	DATE FILED 11/2/2020	U.S. DISTRICT COURT for the District of Delaware
PLAINTIFF 3SHAPE A/S, 3SHAPE TRIOS A/S, and 3SHAPE, INC.		DEFENDANT ALIGN TECHNOLOGY, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 9,101,433	8/11/2015	Align Technology, Inc.
2 10,728,519	7/28/2020	Align Technology, Inc.
3 10,750,151	8/18/2020	Align Technology, Inc.
4 10,750,152	8/18/2020	Align Technology, Inc.
5 10,791,934	10/6/2020	Align Technology, Inc.

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT <i>Stip Order of Dismissal</i>
--

CLERK <i>John A. Cerino</i>	(BY) DEPUTY CLERK	DATE <i>3-3-2022</i>
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

1 of 2

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 10,791,936	10/6/2020	Align Technology, Inc.
2 10,709,527	7/14/2020	Align Technology, Inc.
3		
4		
5		

In the above--entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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In the above--entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

2 of 2

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

3SHAPE A/S, 3SHAPE TRIOS A/S, AND
3SHAPE INC.,

Plaintiffs,

v.

ALIGN TECHNOLOGY, INC.,

Defendant.

C.A. No. 20-1492-LPS

STIPULATED ORDER OF DISMISSAL

Pursuant to Federal Rule of Civil Procedure 41(a)(2), Align Technology, Inc., 3Shape A/S, 3Shape, Inc., and 3Shape Trios A/S, by and through their counsel of record, stipulate to the dismissal with prejudice of all claims and defenses in this action, each party to bear its own attorneys' fees and costs. The Court shall retain jurisdiction over the parties' settlement agreement.

Dated: March 2, 2022

/s/ James H.S. Levine

/s/ John W. Shaw

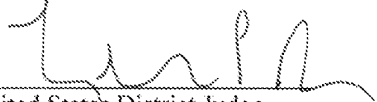
Joanna Cline (No. 5873)
James H.S. Levine (No. 5355)
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Attorneys for Defendant

SO ORDERED this 30 day of May, 2022:


United States District Judge

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court _____ for the District of Delaware _____ on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 20-1492-LPS	DATE FILED 11/2/2020	U.S. DISTRICT COURT for the District of Delaware
PLAINTIFF 3SHAPE A/S, 3SHAPE TRIOS A/S, and 3SHAPE, INC.		DEFENDANT ALIGN TECHNOLOGY, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 9,101,433	8/11/2015	Align Technology, Inc.
2 10,728,519	7/28/2020	Align Technology, Inc.
3 10,750,151	8/18/2020	Align Technology, Inc.
4 10,750,152	8/18/2020	Align Technology, Inc.
5 10,791,934	10/6/2020	Align Technology, Inc.

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT <i>Stip Order of Dismissal</i>
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CLERK <i>John A. Cerino</i>	(BY) DEPUTY CLERK	DATE <i>3-3-2022</i>
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
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1 of 2

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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DECISION/JUDGEMENT

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Dated: March 2, 2022

/s/ James H.S. Levine

/s/ John W. Shaw

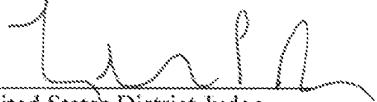
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Wilmington, DE 19801
Tel: (302) 298-0700
jshaw@shawkeller.com
kkeller@shawkeller.com
jcastellano@shawkeller.com

Attorneys for Defendant

SO ORDERED this 30 day of May, 2022:


United States District Judge