

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

ALIGN TECHNOLOGY, INC.,

Petitioner,

vs.

Case No. IPR2024-00052

U.S. Patent No. 11,049,248

DENTAL MONITORING SAS,

Patent Owner.

The Remote Videoconference

Deposition of BUDI KUSNOTO, DDS, MS,

Taken at 444 West Lake Street,

Chicago, Illinois,

Commencing at 11:16 a.m.,

Friday, September 6, 2024,

Before Leisa M. Pastor, CSR-3500, RPR, CRR.

Veritext Job #6876129

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2

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TABLE OF CONTENTS

WITNESS	PAGE
BUDI KUSNOTO, DDS, MS	
EXAMINATION BY MR. ARGENTI	4
EXAMINATION BY MS. PARKS	56

EXHIBITS

EXHIBIT	PAGE
(Exhibits not offered.)	

1 Chicago, Illinois

2 Friday, September 6, 2024

3 11:16 a.m.

4

5 BUDI KUSNOTO, DDS, MS,

6 was thereupon called as a witness herein, and after

7 having first been duly sworn to testify to the truth,

8 the whole truth and nothing but the truth, was

9 examined and testified as follows:

10 EXAMINATION

11 BY MR. ARGENTI:

12 Q. Good morning, Dr. Kusnoto. Could you please state 11:16

13 your full name for the record. 11:16

14 A. Budi Kusnoto. 11:16

15 Q. Where are you currently located? 11:16

16 A. Chicago. 11:16

17 Q. Is there anyone else in the room with you today? 11:16

18 A. No. 11:16

19 Q. Do you have any notes with you today? 11:16

20 A. No notes except this two declaration, as well as these 11:16

21 references. 11:16

22 Q. And those references, are those the exhibits in these 11:16

23 prior -- in these IPRs? 11:17

24 A. Yes. 11:17

25 Q. Okay. All of those are clean copies; is that right? 11:17

Page 4

1	A.	Yes, they are clean copies.	11:17
2	Q.	So do you understand that you're here today with	11:17
3		regard to IPR proceedings?	11:17
4	A.	Yes.	11:17
5	Q.	Okay. And one of those IPRs is IPR 2024-00052 which	11:17
6		is related to US Patent No. 11,049,248, right?	11:17
7	A.	Yes.	11:17
8	Q.	And if I refer to that as the '248 Patent today, will	11:17
9		you understand what I'm talking about?	11:17
10	A.	Yes.	11:17
11	Q.	And the other IPR that's identified today is IPR	11:17
12		2024-00110 which relates to US Patent No. 11,109,945,	11:18
13		correct?	11:18
14	A.	Yes.	11:18
15	Q.	And if I refer to that as the '945 Patent, will you	11:18
16		understand what I'm talking about?	11:18
17	A.	Yes.	11:18
18	Q.	Do you recall that I also took your deposition about a	11:18
19		month ago?	11:18
20	A.	Yes.	11:19
21	Q.	And that previous --	11:19
22		(Court reporter interrupts for	11:19
23		clarification at 11:19 a.m.)	11:19
24	BY MR. ARGENTI:		11:19
25	Q.	The previous deposition, Dr. Kusnoto, that I took with	11:19

1 you about a month ago, that involved US Patent No. 11:19
2 10,755,409, right? 11:19
3 A. I don't remember the first few digits, only the '409. 11:19
4 Q. Okay. If I refer to that as the '409 Patent today, 11:19
5 you'll understand what I'm talking about? 11:19
6 A. Yeah. 11:19
7 Q. Okay. Have you had your deposition taken since that 11:19
8 one a month ago involving the '409 Patent? 11:20
9 A. You mean after the deposition? 11:20
10 Q. Yes. 11:20
11 A. No. 11:20
12 Q. So the same ground rules apply today as in that 11:20
13 previous deposition for the '409 Patent. I'm going to 11:20
14 run through them just so that they're clear for the 11:20
15 record. Okay? 11:20
16 A. Okay. 11:20
17 Q. Do you understand that you're providing testimony 11:20
18 under oath and you're expected to tell the truth? 11:20
19 A. Yes. 11:20
20 Q. Is there any reason you cannot provide complete and 11:20
21 accurate testimony today? 11:20
22 A. Not that I'm aware of, in regards to '248 and '945. 11:20
23 Q. Hopefully my questions are clear today. If you don't 11:20
24 understand any question, under the rules for this 11:20
25 proceeding, you must ask me for clarification. If you 11:20

1 don't tell me otherwise, I will assume that you 11:21
2 understand the question. Okay? 11:21
3 A. Okay. 11:21
4 Q. Please provide verbal answers rather than nodding your 11:21
5 head. Okay? 11:21
6 A. Okay. 11:21
7 Q. And we can take a break at any time that you'd like 11:21
8 one as long as there's no question pending. If there 11:21
9 is a question pending, you need to answer the question 11:21
10 before we take a break. Okay? 11:21
11 A. Okay. 11:21
12 Q. And just like last time, I will try to take a break 11:21
13 approximately every hour or so but if you'd like to 11:21
14 take one more frequently, just let me know. 11:21
15 A. Okay. 11:21
16 Q. Could you please pull out your declaration for the 11:21
17 '248 Patent. You have a copy of it there, right? 11:21
18 A. Yes. 11:21
19 Q. And for clarity, that is Exhibit 2030 in IPR 11:21
20 2024-00052; is that what you have there? 11:21
21 A. IPR 2024-00052. 11:21
22 Q. And it's Exhibit 2030? It should be marked at the 11:22
23 bottom right corner of the page, the first page. 11:22
24 A. Yes, Exhibit 2030. 11:22
25 Q. Okay. Turning to the last page of that exhibit, page 11:22

1	61, please.	11:22
2	A. Yes.	11:22
3	Q. Is that your electronic signature?	11:22
4	A. Yes.	11:22
5	Q. Did you type it?	11:22
6	A. I typed it.	11:22
7	Q. Sitting here today, is there anything about this	11:22
8	declaration that you would like to modify or correct?	11:22
9	A. Not at this moment.	11:22
10	Q. Now, let's take a look at your declaration for the	11:23
11	'945 Patent, which is Exhibit 2030 in IPR 2024-00110;	11:23
12	do you have that there?	11:23
13	A. Yes.	11:23
14	Q. And if you turn to page 58, is that your electronic	11:23
15	signature?	11:23
16	A. Yes.	11:23
17	Q. And did you type that signature as well?	11:23
18	A. Yes, I did.	11:23
19	Q. Is there anything about your declaration on the '945	11:23
20	Patent that you would like to change today?	11:23
21	A. Not at this moment.	11:23
22	Q. Did you do anything to prepare for this deposition?	11:23
23	A. Yes.	11:23
24	Q. What did you do?	11:23
25	A. I reviewed --	11:24

1 MS. PARKS: Sorry, Dr. Kusnoto, I just 11:24
2 caution you not to reveal any discussions you might 11:24
3 have had with counsel in relation to the deposition. 11:24
4 You can go ahead and answer. 11:24
5 A. I reviewed the two declarations as well as the 11:24
6 exhibits here, the references. 11:24
7 BY MR. ARGENTI: 11:24
8 Q. And those references, would that be the Kim reference? 11:24
9 A. One of them, yes, Kim reference. 11:24
10 Q. And did you also review the Invisalign reference in 11:24
11 preparation for this deposition? 11:24
12 A. Yes, I did. 11:24
13 Q. And did you review the Salah reference? 11:24
14 A. Yes. 11:24
15 Q. And did you review the Frey blog exhibit? 11:24
16 A. Yes, in the section pertaining to Dental Monitoring. 11:25
17 Q. Did you review any other exhibits in preparation for 11:25
18 this deposition? 11:25
19 A. I grabbed some of the other references. The one 11:25
20 that -- like Exhibit 2007, 2010, and a few others. 11:25
21 Q. Did you review Dr. Foroosh's declaration in any of the 11:25
22 IPRs in preparation for this deposition? 11:25
23 A. I glanced through it but I did not review them in 11:25
24 great detail. 11:26
25 Q. How about his deposition transcript and his IPRs? 11:26

1 A. Dr. Foroosh's deposition? 11:26

2 Q. Yes. 11:26

3 A. No, I did not. 11:26

4 Q. Did you review the PTAB's institution decisions in 11:26

5 these IPRs in preparing for your deposition? 11:26

6 A. I don't think so. 11:26

7 Q. Did you review the PTAB's institution decisions in 11:26

8 preparing your declarations? 11:26

9 A. I'm -- I don't think I -- I'm not sure. I don't quite 11:26

10 remember. 11:27

11 Q. Have you ever reviewed Dr. Foroosh's deposition 11:27

12 transcript from these IPRs? 11:27

13 A. I -- not the transcript but I review his report. 11:27

14 Q. When preparing for your deposition today, did you 11:27

15 review any documents that are not cited in your 11:27

16 declaration? 11:27

17 A. No, I only review the document cited in my 11:27

18 declaration. 11:27

19 Q. Have you reviewed the declaration of Dr. John Mongan 11:27

20 that was submitted with Dental Monitoring's patent 11:27

21 owner response in the IPR on the '248 Patent? 11:27

22 A. No, I don't believe I did. 11:27

23 Q. Have you reviewed Dr. Mongan's declaration supporting 11:28

24 patent owner response in the IPR on the '945 Patent? 11:28

25 A. Not that I recall. 11:28

1 Q. Have you reviewed any declaration that Dr. Mongan has 11:28
2 provided in any of the IPRs between Align and Dental 11:28
3 Monitoring? 11:28
4 MS. PARKS: Objection to form. 11:28
5 A. Term of written declaration? I don't think I 11:28
6 reviewed. 11:28
7 BY MS. PARKS: 11:28
8 Q. Do you know whether Dr. Mongan has reviewed your 11:28
9 declaration submitted in the '248 IPR, Exhibit 2030? 11:29
10 A. I am not sure. I don't know. 11:29
11 Q. Do you know whether Dr. Mongan has reviewed your 11:29
12 declaration submitted in the '945 IPR as Exhibit 2030? 11:29
13 A. I don't have that interfacing. 11:29
14 Q. You also submitted declarations in these IPRs in 11:29
15 support of Dental Monitoring's preliminary responses, 11:29
16 correct? 11:29
17 A. My declaration -- can you rephrase the question? 11:29
18 Q. In addition to the declarations that are marked as 11:29
19 Exhibit 2030 that we just looked at -- 11:29
20 (Zoom audio drop due to cross-talk) 11:29
21 A. Mm-hmm. 11:29
22 BY MR. ARGENTI: 11:29
23 Q. -- those submitted earlier declarations in these IPRs, 11:30
24 correct? 11:30
25 A. From me, yes. 11:30

1 Q. Yes. Do you know whether Dr. Mongan has ever reviewed 11:30
2 those earlier declarations that you submitted in these 11:30
3 IPRs? 11:30
4 A. I -- I don't think I have that information. 11:30
5 Q. Have you spoken to Dr. Mongan about the '248 Patent 11:30
6 IPR? 11:30
7 A. Yes. 11:30
8 Q. Have you spoken to Dr. Mongan about the '945 Patent 11:30
9 IPR? 11:30
10 A. Yes. 11:30
11 Q. When did you speak to Dr. Mongan about these IPRs? 11:30
12 A. I cannot recall the exact time frame but few months 11:30
13 back. 11:31
14 Q. Did you speak to Dr. Mongan about these IPRs before 11:31
15 you signed your declarations that are both marked as 11:31
16 Exhibit 2030? 11:31
17 A. Yes, I believe so. 11:31
18 Q. About how many times did you speak to Dr. Mongan about 11:31
19 these IPRs? 11:31
20 A. Pertaining to '248 and '945? 11:31
21 Q. Yes. 11:31
22 A. One or twice. 11:31
23 Q. Have you spoken to Dr. Mongan about these IPRs on the 11:31
24 '248 and '945 Patent since the time that you signed 11:31
25 your declarations? 11:31

1 A. Since July of -- declaration was signed July 12th, is 11:31
2 that correct? Is that what you mean? 11:32
3 Q. Yes. 11:32
4 A. No. 11:32
5 Q. When you spoke to Dr. Mongan about these IPRs, was 11:32
6 anyone else present? 11:32
7 A. Legal counsel was there, but the interaction is mainly 11:32
8 with me and him. 11:32
9 Q. When you refer to legal counsel, was that Ms. Parks? 11:32
10 A. Not quite sure actually. I don't think so. 11:32
11 Q. Do you recall who it was? 11:32
12 A. If I'm not mistaken, it's -- it's Mr. Clyde, yeah. 11:32
13 Q. Have you discussed Dr. Foroosh's declaration regarding 11:33
14 the '248 Patent with Dr. Mongan? 11:33
15 A. It's -- in a way, yes, but mainly Dr. Mongan asking me 11:33
16 questions. 11:33
17 Q. Have you discussed Dr. Foroosh's declaration regarding 11:33
18 your '945 Patent with Dr. Mongan? 11:33
19 A. Similar, yes. 11:33
20 Q. When you say was mainly Dr. Mongan asking you 11:33
21 questions, was he asking you questions of specific 11:34
22 portions of Dr. Foroosh's declaration? 11:34
23 A. No, asking questions mainly pertaining to my point of 11:34
24 view, from the orthodontist point of view. 11:34
25 Q. And when you gave your point of view in response to 11:34

1 his questions, were you making specific reference to 11:34
2 any portion of Dr. Foroosh's declaration? 11:34
3 A. Not that I can remember. I make references to the one 11:34
4 that I remember is, for instance, to my own references 11:35
5 here in term of standardized orthodontics photography. 11:35
6 Q. So when you spoke to Dr. Mongan, there was never a 11:35
7 point then where he pointed your attention to a 11:35
8 specific paragraph or sentence of Dr. Foroosh's 11:35
9 declaration and said "do you agree with this?" and you 11:35
10 explained why you didn't agree; is that right? 11:35
11 MS. PARKS: Objection to form. 11:35
12 A. I don't remember exactly. It's been months. You 11:35
13 know, as I mentioned, the one that I remember is 11:35
14 talking and discussing the standardized orthodontic 11:35
15 photography. 11:35
16 BY MR. ARGENTI: 11:36
17 Q. Have you reviewed the '248 Patent? 11:36
18 A. Yes. Maybe not in great detail, but I am aware of the 11:36
19 '248 Patents. 11:36
20 Q. Did you review the '248 Patent when preparing your IPR 11:36
21 declaration filed in that patent? 11:36
22 A. Yes, I did. 11:36
23 Q. And I want to be clear. When I refer to your 11:36
24 declaration on the '248 Patent, I'm referring to that 11:36
25 declaration that you have a copy of there, Exhibit 11:36

1	2030.	11:36
2	A. This one, right?	11:36
3	Q. Yeah, yeah, not an earlier -- not the first --	11:36
4	A. Yes.	11:36
5	Q. So, Dr. Kusnoto, unless I specifically refer to your	11:36
6	earlier declarations that you put in in these IPRs,	11:37
7	all my questions will be about the Exhibits 2030	11:37
8	today. Okay?	11:37
9	A. Okay.	11:37
10	Q. Have you reviewed the '248 Patent since signing your	11:37
11	declaration, Exhibit 2030?	11:37
12	A. I took a quick glance a couple days ago.	11:37
13	Q. Similar question for the '945 Patent. Have you	11:37
14	reviewed the '945 Patent?	11:38
15	A. Yes.	11:38
16	Q. Did you review the '945 Patent when preparing your IPR	11:38
17	declaration Exhibit 2030 in that IPR?	11:38
18	A. Yes.	11:38
19	Q. Have you reviewed the '945 Patent since signing your	11:38
20	declaration?	11:38
21	A. Similar to '248, I took a quick glance, again, on the	11:38
22	patent couple days ago.	11:38
23	Q. It's your opinion that the relevant field of both the	11:38
24	'248 Patent and the '945 Patent is aligner treatment,	11:38
25	correct?	11:38

1 A. It's not entirely for aligner treatment but the 11:38
2 aligner treatment is part of it. 11:39
3 Q. When you say it's not entirely for aligner treatment, 11:39
4 what do you mean? 11:39
5 A. When, okay, I -- okay. 11:39
6 For the patent that I take a quick glance 11:39
7 to review and recall my memory, the patent, I don't 11:39
8 think it's -- it is more wider than just only for 11:39
9 aligners, that's my understanding, but aligner is part 11:39
10 of it. 11:40
11 Q. And when you say it's more wider than only for 11:40
12 aligners, what do you mean? 11:40
13 A. It's not only, you know, assessing the aligner 11:40
14 treatment but also, you know, providing other 11:40
15 informations. 11:40
16 Q. What informations? 11:40
17 A. Such as the tooth construct, different alignment of -- 11:40
18 of identification of teeth, not necessarily only for 11:40
19 the aligner treatment, but aligner treatment is part 11:40
20 of this patent. 11:41
21 Q. So how then would you characterize the relevant field 11:41
22 of the '248 and '945 Patents? 11:41
23 MS. PARKS: Objection to form. 11:41
24 A. Not quite clear about the questions. 11:41
25 BY MR. ARGENTI: 11:41

1 Q. Could you turn to paragraph 57 of your '248 11:41
2 declaration, please, that's on page 36. 11:41
3 A. Mm-hmm. 11:41
4 Q. Can you read the first sentence for me. 11:41
5 A. What's the paragraph again? I'm sorry. 11:41
6 Q. Paragraph 57 on page 36. 11:41
7 A. Yes. 11:42
8 Q. So that's -- 11:42
9 A. The one that says the relevant field is -- the 11:42
10 relevant field of the '248 Patent is aligner 11:42
11 treatment, that's in my opinion, etcetera. 11:42
12 Q. Right, and are you saying now today that that 11:42
13 statement is not accurate in your declaration? 11:42
14 A. No, it is accurate, so that's what I'm saying. I -- 11:42
15 because I thought you are asking me about the patent 11:42
16 itself, not the declaration. 11:43
17 You know, the patent, it is aligners but 11:43
18 there is other stuff besides the aligners that was 11:43
19 discussed in here, such as segmenting the tooth, 11:43
20 positioning of the tooth; so I guess I misunderstood 11:43
21 your questions. 11:43
22 Q. Why does it matter whether I was asking you about your 11:43
23 '248 Patent or your declaration, isn't that sentence 11:43
24 in your declaration addressing the '248 Patent? 11:43
25 A. Yes. 11:43

1 MS. PARKS: Objection to form. 11:43

2 BY MR. ARGENTI: 11:43

3 Q. So are you saying that your opinion in your 11:43

4 declaration about the relevant field is different than 11:43

5 the relevant field in the patent itself? 11:43

6 A. No, I am not saying that. 11:43

7 MS. PARKS: Objection to form. 11:43

8 BY MR. ARGENTI: 11:44

9 Q. Is it your opinion that the relevant field of the '248 11:44

10 Patent is aligner treatment? 11:44

11 A. In my declaration, yes, it is aligner treatment. 11:44

12 Q. And if we look at the '248 Patent, is it your 11:44

13 understanding that the relevant field of that patent 11:44

14 is aligner treatment? 11:44

15 A. The relevant -- the main idea is aligner treatment, 11:44

16 but there are few other things with preceding the 11:44

17 aligner treatment. This is what I'm trying to say. 11:44

18 You know, if the end goal is aligner 11:44

19 treatment, but the way to do it as an aligner 11:44

20 treatment, they go through different steps that's not 11:44

21 necessarily using aligner at that time. 11:44

22 I think that's what -- so it's -- it's 11:45

23 broader than just aligner treatment, but the main 11:45

24 idea, the main goal, is aligner treatment. 11:45

25 Q. Let me ask you this. If we look at that first 11:45

1 sentence in the paragraph 57 of your declaration. 11:45

2 A. Mm-hmm. 11:45

3 Q. You say that the relevant field of the '248 Patent is 11:45

4 an aligner treatment. What is the basis of that 11:45

5 understanding that you have? 11:45

6 A. The basis is on the claim of the patent itself. It 11:45

7 says the shape of aligner and then it's about the 11:45

8 aligners. That's -- that's how I read that. 11:45

9 Q. Did Dental Monitoring's counsel provide you with an 11:45

10 understanding of a legal principle to apply when 11:46

11 determining the relevant field of a patent? 11:46

12 A. May, but I don't recall exactly. 11:46

13 Q. How did you reach your conclusion about the relevant 11:46

14 field of the '248 Patent that you have in paragraph 57 11:46

15 of your declaration? 11:46

16 A. It's based on my understanding on the claim of the 11:46

17 patents here, and the patent claim it says about the 11:46

18 aligners. 11:46

19 Q. So it looks like you had the '248 Patent in your hands 11:46

20 there. Is that Exhibit 1001 in the '248 -- 11:46

21 A. It is 2-4, it's -- let me check, yes, it's 101, 1001. 11:46

22 Q. So you mentioned that your understanding of the 11:47

23 relevant field is based on the claims of this patent, 11:47

24 right? 11:47

25 A. Yes. 11:47

1 Q. Did you consider the remainder of the description in 11:47
2 this patent when forming your opinions about the 11:47
3 relevant field? 11:47
4 A. I did a little bit, yes. 11:47
5 Q. Can you turn to column 1, please. 11:47
6 A. What is -- which one of the follow one here? 11:47
7 Q. Column 1 of -- 11:47
8 A. Oh. 11:47
9 Q. -- the '248 Patent. 11:47
10 A. Oh. 11:47
11 Q. Exhibit 1001. 11:47
12 A. Okay. 1001. You're talking about the abstract. 11:48
13 Q. No, not page 1. It's -- I don't know what page of 11:48
14 the -- of the file it is, but if you go past the 11:48
15 figures, you'll get to the part that has the text of 11:48
16 the patent, and there are numbered columns. The 11:48
17 numbering is at the top of the page and there are two 11:48
18 columns per page. Do you see that? 11:48
19 A. Yes, yes, I found it. Yeah, so it's -- so is this the 11:48
20 one that -- column 1. Okay. Okay. So the one that 11:48
21 says methods for analyzing an image of a dental arch? 11:48
22 Q. That's the one, yeah, and you see the heading right 11:48
23 under that that says technical field? 11:49
24 A. Mm-hmm. 11:49
25 Q. Could you read the sentence under that technical field 11:49

1 heading out loud for me. 11:49

2 A. The present invention relates to the field of dental 11:49

3 arch image analysis. 11:49

4 Q. So '248 Patent doesn't say that its relevant field is 11:49

5 aligner treatment, does it? 11:49

6 MS. PARKS: Objection to form. 11:49

7 A. That's -- I think that's why in the beginning when 11:49

8 you -- I misunderstood your questions. I'm referring 11:49

9 to the patent. So I -- I tell you that, you know, it 11:49

10 is relevant for aligners, as I mentioned in my 11:49

11 declaration, but there are many more nuance that is 11:49

12 not specific for aligners, but at the end it leads 11:50

13 to -- it leads to an aligners as the claim stated. 11:50

14 But there are many other nuance here of the 11:50

15 invention that not directly related to the aligners, 11:50

16 even though at the end it relates to it; so maybe I'm 11:50

17 not explaining it too well but... 11:50

18 BY MR. ARGENTI: 11:50

19 Q. What's your basis for concluding that the relevant 11:50

20 field of the '248 Patent is different than what the 11:50

21 '248 Patent says it is? 11:50

22 A. It's -- 11:50

23 MS. PARKS: Objection to form. 11:50

24 A. It's my opinion as orthodontist that was -- make me 11:50

25 form this, because I was asked to -- to provide an 11:50

1 opinion as an orthodontist, as a clinician, so where 11:50
2 is the clinical -- clinical application of -- of this. 11:51
3 BY MR. ARGENTI: 11:51
4 Q. So when forming your opinions -- 11:51
5 (Audio interference via Zoom.) 11:51
6 MR. ARGENTI: It's pretty quiet on my end. 11:52
7 It's a little hard to hear. Can we move it up a 11:52
8 little? 11:52
9 (The requested portion of the record was 11:52
10 read by the reporter at 11:52 a.m.) 11:52
11 BY MR. ARGENTI: 11:53
12 Q. So Dr. Kusnoto, is it right that you formed your 11:53
13 opinion as to the relevant field of the '248 Patent 11:53
14 based on an assessment of what an orthodontist would 11:53
15 understand was the clinical application of the '248 11:53
16 claims? 11:53
17 MS. PARKS: Objection to form. 11:53
18 A. I will say yeah, yes. 11:54
19 BY MR. ARGENTI: 11:54
20 Q. Looking back at that sentence under the heading 11:54
21 technical field in the '248 Patent, the one that 11:54
22 reads, The present invention relates to the field of 11:54
23 dental arch image analysis? 11:54
24 A. The present invention relates to the field of dental 11:54
25 arch image analysis, yeah. 11:54

1	Q.	You disagree with that sentence in the '248 Patent?	11:54
2		MS. PARKS: Objection to form.	11:54
3	A.	No.	11:54
4		BY MR. ARGENTI:	11:54
5	Q.	So when looking, again, at the first sentence of	11:54
6		paragraph 57 of your declaration where you say the	11:55
7		relevant field of the '248 Patent is aligner	11:55
8		treatment, is aligner treatment typically carried out	11:55
9		by a dental professional?	11:55
10	A.	Yes.	11:55
11	Q.	Turn back to paragraph 54 of your declaration on the	11:55
12		'248 Patent. Here you discuss Dental Monitoring's	11:55
13		proposed definition of a person of ordinary skill in	11:55
14		the art, correct?	11:55
15		Was your answer yes, Dr. Kusnoto?	11:56
16	A.	The definition of POSA?	11:56
17	Q.	That's the paragraph 54. I think the audio just	11:56
18		didn't pick up your answer.	11:56
19	A.	Yeah, definition of POSA on paragraph 54 of my	11:56
20		declaration.	11:56
21	Q.	Okay. And then in paragraph 55, you say you agree	11:56
22		with that definition, right?	11:56
23	A.	Yes.	11:56
24	Q.	That person, the POSA, has an education in computer	11:56
25		science, bioinformatics, or a related engineering	11:56

1 discipline, right? 11:56

2 MS. PARKS: Objection to form. 11:56

3 A. Yes, that's what's written. 11:56

4 BY MR. ARGENTI: 11:56

5 Q. And that POSA has work experience in machine learning 11:56

6 or artificial intelligence, correct? 11:57

7 MS. PARKS: Objection to form. 11:57

8 A. Yes. 11:57

9 BY MR. ARGENTI: 11:57

10 Q. And the POSA is not a dental professional, correct? 11:57

11 MS. PARKS: Objection to form. 11:57

12 A. If you continue, a POSA would also work at 11:57

13 multidisciplinary team, which include familiarity with 11:57

14 medical imaging, dental imaging, dentistry, and or 11:57

15 orthodontists; so that's how I think I fit in this. 11:57

16 BY MR. ARGENTI: 11:57

17 Q. Right, but the POSA themselves, based on the 11:57

18 definition of the POSA, would not be someone who 11:57

19 provides aligner treatment to patients, right? 11:57

20 MS. PARKS: Objection to form. 11:57

21 A. It -- he or she could. 11:58

22 BY MR. ARGENTI: 11:58

23 Q. In your view, someone with a computer science, 11:58

24 bioinformatics or related engineering education and 11:58

25 experience with machine learning and artificial 11:58

1	intelligence would be qualified to provide aligner	11:58
2	treatment to a patient?	11:58
3	MS. PARKS: Objection to form.	11:58
4	A. No, but in my statement here, they also work as part	11:58
5	of multidisciplinary team which include, you know,	11:58
6	dentist, that's why, you know, in this case, you know,	11:59
7	I am the relevant one for this particular POSA.	11:59
8	BY MR. ARGENTI:	11:59
9	Q. Right, but the POSA themselves, they wouldn't be	11:59
10	qualified to provide aligner treatment?	11:59
11	MS. PARKS: Objection to form.	11:59
12	A. I guess, I mean, he or she, if it meets the criteria	11:59
13	like me, they could.	11:59
14	BY MR. ARGENTI:	11:59
15	Q. But that would be dental education and experience and	11:59
16	qualifications above and beyond the POSA definition,	11:59
17	right?	11:59
18	MS. PARKS: Objection to form.	11:59
19	A. I'm not sure if I can answer that questions.	11:59
20	BY MR. ARGENTI:	12:00
21	Q. Why?	12:00
22	A. I mean, because, you know, as a -- I am as a POSA that	12:00
23	has a dental, an orthodontics background, so I can	12:00
24	certainly do the aligner treatment also.	12:00
25	Q. Right, but the POSA definition itself does not qualify	12:00

1	someone to provide aligner treatment, right?	12:00
2	MS. PARKS: Objection to form.	12:00
3	A. I'm not sure how to answer that.	12:00
4	BY MR. ARGENTI:	12:01
5	Q. Why?	12:01
6	A. Because, you know, me as a POSA, again, as, you know,	12:01
7	given the training and multidisciplinary and dental	12:01
8	and orthodontics background, I can certainly provide	12:01
9	the aligners treatment. It may not be, you know, to	12:01
10	assess from the orthodontics point of view, so I'm not	12:01
11	quite sure if -- so you are saying I'm not a POSA?	12:01
12	Q. No, I'm saying someone with a bare minimum of the POSA	12:02
13	qualifications and no additional education and	12:02
14	experience would not be suitable to provide aligner	12:02
15	treatment, correct?	12:02
16	A. I suppose so.	12:02
17	Q. So in your view, the POSA, as defined in paragraph 54,	12:02
18	would be unqualified for what you go on to say is the	12:02
19	relevant field of the '248 Patent, right?	12:02
20	MS. PARKS: Objection to form.	12:02
21	A. The people that has an imaging or work already with	12:02
22	imaging in the field of, let's say, the technician of	12:02
23	the aligner's company, they are not dentists, they	12:02
24	have work a lot with this. They've been trained a	12:03
25	lot. I am sure they know what this aligner treatment	12:03

1 is. 12:03

2 They are not providing the treatment, but 12:03

3 they are very aware of how the treatment progress, how 12:03

4 the staging was made, how the tracks was evaluated. I 12:03

5 work with many of those people who's excellent. 12:03

6 BY MR. ARGENTI: 12:03

7 Q. And so those people who have experience in imaging 12:03

8 that's relevant to aligner treatment don't need to be 12:03

9 dental professionals to understand the relevant field 12:03

10 of the '248 Patent -- 12:03

11 A. Yes. 12:03

12 Q. -- right? 12:03

13 A. They don't need to be dentists. That's what I'm 12:03

14 saying. You know, they could be dental technicians, 12:03

15 they could be a hygienist, you know, that -- but the 12:03

16 one that's already -- or even a researcher, imaging 12:04

17 scientist, who has work a lot in this field, they -- 12:04

18 they can certainly know the relevant of the aligner's 12:04

19 treatment. 12:04

20 Q. They could be a computer science scientist with 12:04

21 experience with machine learning software, right? 12:04

22 MS. PARKS: Objection to form. 12:04

23 A. I'm -- I am not quite sure where the machine learning 12:04

24 software falls for this particular assumption that you 12:04

25 just say it but, you know, as I mentioned, a person 12:04

1 who has been trained to know they -- they wouldn't be 12:04
2 able to deliver or prescribe the treatment inside the 12:04
3 patient's mouth, because that will require a dentist 12:05
4 or a orthodontist to do so, but they will be able to 12:05
5 assess or know how this technology work when applied 12:05
6 to aligner treatment. 12:05
7 BY MR. ARGENTI: 12:05
8 Q. And when you say a person who has been trained would 12:05
9 know, what training is that? 12:05
10 A. Imaging, you know, people that's been doing research, 12:05
11 imaging, dental technicians, lab technicians 12:05
12 specifically for 3D imaging or more specifically on 12:05
13 dental, they are not dentists. 12:05
14 Q. Let's turn to paragraph 41 of your '248 declaration, 12:05
15 please. 12:06
16 A. Page 41. 12:06
17 Q. Paragraph 41 -- 12:06
18 A. Oh. 12:06
19 Q. -- on page 29. 12:06
20 A. Paragraph 41, yes. 12:06
21 Q. In this paragraph you identify three general 12:06
22 categories of steps for typical aligner treatment as 12:06
23 of 2017, right? 12:06
24 A. Yes. 12:06
25 Q. And when you say this is typical, can you think of 12:06

1 exceptions where one of these steps didn't happen over 12:06
2 the course of an aligner treatment? 12:06
3 A. Yeah, this is the -- I cannot think of anything but 12:07
4 this is the most common steps that we as a dentist or 12:07
5 orthodontist do when we evaluate for aligners 12:07
6 treatment. 12:08
7 Q. So, for example, did step one occur in every aligner 12:08
8 treatment? 12:08
9 A. Yes. 12:08
10 Q. Was it a routine part of every aligner treatment for 12:08
11 an orthodontist to assess aligner fit at regular 12:08
12 intervals? 12:08
13 A. Assessing the progress of treatment, which include 12:08
14 aligner fit, at regular interval, yes. 12:08
15 Q. Why was assessing an aligner fit important for aligner 12:08
16 treatment? 12:08
17 A. If the aligner doesn't fit well at the given states, 12:08
18 then the prescribed treatment may not track as it's 12:09
19 prescribed at the given state; so the treatment might 12:09
20 ended up either get delayed or unsuccessful or even 12:09
21 move to the wrong place. 12:09
22 Q. The tooth could move to the wrong place? 12:09
23 A. I mean, the tooth, yeah, the tooth, yeah, if it's not 12:09
24 checked. 12:09
25 Q. Look down to paragraph 46 of your '248 declaration on 12:09

1	page 31.	12:09
2	A. What paragraph again? Sorry.	12:09
3	Q. 46.	12:09
4	A. 46, yeah. Yes.	12:09
5	Q. Here you refer to two primary assessments at a	12:10
6	patient's examination, right?	12:10
7	A. Mm-hmm.	12:10
8	Q. And those are assessment of alignment of teeth and	12:10
9	assessment of aligner fit, right?	12:10
10	A. Alignment of teeth and aligner fit.	12:10
11	Q. Are those two assessments related to each other?	12:10
12	A. Not necessarily.	12:10
13	Q. But they can be, right?	12:10
14	A. They can, but also they -- they are not necessarily	12:10
15	coincide.	12:10
16	Q. Right. But for example, I think in your answer that	12:10
17	you just gave about the previous paragraph, you said	12:10
18	it's important to check aligner fit, because if you	12:10
19	don't, then you could get the teeth moving in an	12:11
20	undesirable direction, right?	12:11
21	A. Yeah.	12:11
22	Q. If we look in the next paragraph, paragraph 47, in	12:11
23	that paragraph you discuss an example examination	12:11
24	during the tenth week of treatment, right?	12:11
25	A. Yes.	12:11

1 Q. And you say that an orthodontist would make a visual 12:11
2 comparison between the patient's dentition and a 12:11
3 rendering of expected dentition at that point in time, 12:11
4 right? 12:11

5 A. Yes. 12:11

6 Q. If the patient's teeth don't match, what's expected at 12:11
7 that point in treatment, it could indicate a treatment 12:11
8 issue, correct? 12:11

9 A. Yes. 12:11

10 Q. What are some of the potential treatment issues that 12:12
11 this comparison might detect? 12:12

12 A. Well, the teeth is not moving to the location where 12:12
13 they supposed to be. They could either move too far 12:12
14 or move too less to the designated destination at the 12:12
15 given states of treatment. 12:12

16 Q. Poor aligner fit could be one thing preventing the 12:12
17 treatment from progressing as expected, right? 12:12

18 A. They are somewhat independent because the -- the way 12:12
19 that we evaluate them first is we need to make sure 12:12
20 that the patient's teeth look similar to what the 12:13
21 simulation at the given stage is. Okay? You don't 12:13
22 see any growths completely totally out. Okay? 12:13

23 So if that already pass, then we assess the 12:13
24 aligner fit secondarily to that, but if that already 12:13
25 completely failed then, you know, we don't even bother 12:13

1 to assess aligner fit because we just have to perform 12:13
2 rescan and do rebuild refinement at that point of 12:13
3 time. 12:13

4 If that's passed, then we check aligner 12:13
5 fit, and then if the aligner fit it well, then it's 12:14
6 good to go. If at that time the aligner did not fit, 12:14
7 then we might have to prescribe other treatment 12:14
8 regime. 12:14

9 Q. But even if you don't get to checking aligner fit, if 12:14
10 the teeth haven't moved as expected at that point in 12:14
11 treatment, that could be caused by poor aligner fit, 12:14
12 right? 12:14

13 A. Well, it could be as one of the reason, yeah, because 12:14
14 of poor oral hygiene it could be other reason, but 12:14
15 yeah, I mean, it could be because aligner is not 12:14
16 fitting there. 12:14

17 Q. In the next paragraph, No. 48, you go on to say that 12:14
18 orthodontists also assessed aligner treatment, 12:15
19 correct? 12:15

20 A. Assessed the aligner -- yes, aligner treatment. 12:15

21 Q. Some aligner treatment problems that might be detected 12:15
22 include problems with aligner fit, tooth attachments, 12:15
23 or detention complications, correct? 12:15

24 A. Dentition. Dentition complications, yeah. 12:15

25 Q. What are tooth attachments? 12:15

1 A. Tooth attachment is -- it's almost, like, a composite 12:15
2 filling materials that was placed on the tooth, glued 12:15
3 to the tooth, or teeth, most of the time is several 12:15
4 teeth, to aid in aligners moving the teeth or tooth. 12:15
5 Q. And what do you mean there when you refer to dentition 12:16
6 complications? 12:16
7 A. That, you know, the teeth or tooth that's not moved to 12:16
8 where we want it to move or, you know, it -- it has 12:16
9 other complications such as developing gum problem or 12:16
10 become mobile or sensitive, so those are the few other 12:16
11 things. 12:16
12 Q. So what's the distinction then between the assessment 12:16
13 that you talk about in paragraph 47 where you're 12:16
14 looking at whether the teeth have moved as expected 12:16
15 and the assessment in paragraph 48 where you're saying 12:16
16 you could be looking at dentition complications? 12:16
17 A. Well, even if the tooth move to where it should be, we 12:17
18 still have to check each tooth in term of vitality, 12:17
19 sensitivity, gum problem, oral hygiene, because in 12:17
20 some cases during the movement, even if the tooth move 12:17
21 to where it should be, the patient develop 12:17
22 hypersensitivity on that region, so then we have to 12:17
23 act upon it and we have to make sure the patients are 12:17
24 not in pain. 12:17
25 Q. In your previous answer, though, you said that a 12:17

1 dentition complication would be or could be that 12:17

2 you're looking has the tooth not moved to where we 12:17

3 expected it to move, right? 12:18

4 A. Yeah, it could be one of them is not moving to where 12:18

5 it should be or moving in the wrong direction. 12:18

6 Q. So is that a different assessment in paragraph 48 than 12:18

7 the assessment that you're talking about in paragraph 12:18

8 47? 12:18

9 A. It's dentition complication is much broader than just 12:18

10 the location. Part of it is assessing location, of 12:18

11 course, the way, because we are moving teeth, the 12:18

12 movement has to be correct, but then part of it is 12:18

13 addressing a tooth health itself, whether the tooth is 12:18

14 still good at that particular -- not only the tooth 12:18

15 but also the surrounding tissue of the tooth or teeth. 12:18

16 Q. I want to set aside the health issue and focus just on 12:18

17 the movement issue. 12:18

18 In paragraph 48, a little further down, you 12:18

19 say that the -- the an aligners might move the tooth 12:19

20 in an unintended direction, i.e., non-tracking, such 12:19

21 that the movement would be detrimental to the patient. 12:19

22 Do you see that? 12:19

23 A. Yes. 12:19

24 Q. And if we focus on this unintended movement that 12:19

25 you're talking about in paragraph 48, is that a 12:19

1 different assessment than the previous assessment you 12:19
2 talk about in paragraph 47? 12:19
3 A. It's -- it's -- the one in paragraph 48 has broader -- 12:19
4 for the movement, it is the same, but for the 12:19
5 assessing the dentition complication, movement is part 12:19
6 of it. 12:19
7 Q. So then do I have it right that you're going to check 12:19
8 the tooth movement as part of each of these two main 12:20
9 assessments that are performed that you're talking 12:20
10 about in paragraph 47 and 48? 12:20
11 A. Can you rephrase that again? 12:20
12 Q. Both of the assessments that you talk about, one in 12:20
13 paragraph 47 and the one in paragraph 48, both involve 12:20
14 assessing the movement of teeth and whether it's 12:20
15 moving as desired, correct? 12:20
16 A. The movement of the teeth or tooth is part of the 12:20
17 assessment in both paragraph. If I may add, in 12:20
18 paragraph 47, the first sentence you also inspect the 12:20
19 current states of the dentition that will include if 12:20
20 there is any dental complications. 12:21
21 Q. Right, and then that would also be an aspect of the 12:21
22 assessment described in paragraph 48 regarding 12:21
23 assessing the aligner treatment, right? 12:21
24 A. Yes. 12:21
25 MS. PARKS: Objection to form. 12:21

1 MR. ARGENTI: We've been going a little 12:21
2 over an hour, Dr. Kusnoto, why don't we take a break. 12:21
3 THE WITNESS: Okay. What time we come 12:21
4 back? 10 minutes? 12:21
5 MR. ARGENTI: Can we come back I guess 12:21
6 11:30 your time? That would be nine minutes. 12:21
7 THE WITNESS: Okay. Thank you. 12:21
8 MR. ARGENTI: Okay. 12:21
9 (Recess taken at 12:21 p.m.) 12:21
10 (On the record at 12:30 p.m.) 12:30
11 BY MR. ARGENTI: 12:30
12 Q. Dr. Kusnoto, let's turn back to paragraph 57 of your 12:30
13 '248 declaration on page 36, please. This is the one 12:30
14 we looked at earlier where you had that opinion about 12:30
15 the relevant field. 12:30
16 If we keep looking at the rest of that 12:30
17 paragraph, you mentioned the Kim, Invisalign, Salah, 12:30
18 and Frey references, correct? 12:31
19 A. Yes. 12:31
20 Q. And at the end of that paragraph, you say that those 12:31
21 references use terms that would have had a specific 12:31
22 meaning to dental professionals; do you see that? 12:31
23 MS. PARKS: Objection to form. 12:31
24 A. The last sentence you mean? 12:31
25 BY MR. ARGENTI: 12:31

1 Q. Right. 12:31

2 A. Yeah. Yeah. Yeah. Yeah, I see. 12:31

3 Q. What terms are you referring to there? 12:31

4 A. It's dental photography, I think, the standardized 12:31

5 photography, and then, like, in -- in how -- how the 12:31

6 dental records, dental standardized photography should 12:32

7 be, that's what I mean with the specific meaning. 12:32

8 Q. Let's take them one at a time and focus first on the 12:32

9 Kim reference. 12:32

10 In this sentence at the end of paragraph 57 12:32

11 when you say that the -- it uses terms that would have 12:32

12 had a specific meaning to dental professionals. 12:32

13 Are there any terms in Kim that you would 12:32

14 point me to that you're referring to there? 12:32

15 A. May I have a look at the reference here? 12:32

16 Q. Of course. Do you have a copy of the Kim reference 12:32

17 available to you there? 12:32

18 A. Yes, I just need to know the numbers. Let me see. 12:32

19 Trying to find it. Just one second. 12:32

20 Q. Right. I believe that's Exhibit 1005. 12:32

21 A. Give me a minute to look. 12:33

22 Yeah, in paragraph, couple of these in Kim, 12:34

23 one is, like, left-side angle, right-side angle, 12:34

24 photos, a collection of top, bottom, left, right 12:34

25 photos surrounding central front photo; so I think 12:34

1 this terminology is meaningful to dental and 12:34
2 orthodontist but not really, I mean, for general 12:34
3 public. 12:34
4 Q. Was that a -- can you point me to a particular page? 12:34
5 A. Oh, I'm sorry, it's in page 9 of Kim, down below, 12:35
6 point No. 3, there's a method wherein that the teeth 12:35
7 alignment, front view, bottom view, front view, you 12:35
8 know, those thing, left-side angle, right-side angle, 12:35
9 yeah. 12:35
10 Q. So there was claim 3 of Kim that you were referring 12:35
11 to, right? 12:35
12 A. Yes. Yes. 12:35
13 Q. Anything else that you would point me to as a term in 12:35
14 Kim that has a specific meaning to dental 12:35
15 professionals? 12:35
16 A. It's a teeth alignment. 12:35
17 Q. And can you give me the paragraph where that appears? 12:35
18 A. I think they come in several -- several paragraph, 12:35
19 including the first in the abstract, providing remote 12:36
20 teeth alignment surface. That's one. And then all 12:36
21 throughout the claim there is a lot of teeth alignment 12:36
22 mentioned, point No. 4 wherein the teeth alignment 12:36
23 report and so on. 12:36
24 Q. And what's the specific meaning that that term "teeth 12:36
25 alignment" would have to dental professionals? 12:36

1 A. That means they have to be not only aligned in an 12:36
2 ideal dentition dental arch, we call it dental arch. 12:36
3 It's a curve of human dentition, but they have to be 12:36
4 at a particular location and a particular bite, with 12:37
5 ideal overbite and, you know, certain relationship 12:37
6 between tooth to the neighboring teeth. 12:37
7 Q. Anything else in Kim that you would point me to? 12:37
8 A. Those are the two big things and then maybe, you know, 12:37
9 they mention about clear aligner, so that's -- it's a 12:37
10 dental term there. 12:37
11 Q. Are there any terms from the Kim reference that you 12:37
12 believe Dr. Foroosh interpreted differently than a 12:38
13 dental professional would have? 12:38
14 A. I am not sure how to answer that, because Dr. Foroosh 12:38
15 I think is more to the technical aspect. I'm not sure 12:38
16 how to answer that. 12:39
17 Q. Can you point me to any of Dr. Foroosh's testimony 12:39
18 that you think is based on an inaccurate understanding 12:39
19 of a term in Kim that would have a special meaning to 12:39
20 a dental professional? 12:39
21 A. I might have to go back, please, give a moment. 12:39
22 Q. Sure. 12:39
23 A. I'm trying to look now at Exhibit 2054, which it's not 12:39
24 the declaration but -- or you know, the report, but -- 12:40
25 so your question is, again, if Dr. Foroosh 12:40

1 misunderstood some of the thing that I just mentioned 12:40
2 about? Is that right? 12:40
3 Q. Right. Are there any terms from the Kim reference 12:40
4 that you believe Dr. Foroosh interpreted differently 12:40
5 than a dental professional would have? 12:40
6 A. Because Dr. Foroosh's transcript here is mainly on, 12:41
7 you know, I'm just glancing through it, you know, it's 12:41
8 mainly on technical aspect to this. I'm not quite 12:41
9 familiar actually if there is any specific -- can you 12:41
10 give me an example of specific paragraph that 12:41
11 Dr. Foroosh says that -- that I -- so I can take a 12:41
12 look at it? 12:41
13 Q. No. I'm asking if you can give me an example. I'm 12:41
14 asking if you're aware of any of Dr. Foroosh's 12:41
15 testimony where he applies a different understanding 12:41
16 of any terminology in Kim than what a dental 12:41
17 professional would have. 12:41
18 A. Is there any particular -- because I didn't have -- I 12:42
19 don't think I have Dr. Foroosh's testimony here except 12:42
20 for the -- this long transcript in 2054. Is there 12:42
21 any -- if it's not in here, then I might not be able 12:42
22 to give you -- I'd have to go back to you on that 12:42
23 because I don't quite remember. 12:42
24 Q. So sitting -- 12:42
25 A. I only have 2054 that pertain to Foroosh, yeah. 12:42

1 Q. Dr. Kusnoto, I'd be happy to provide you with a copy 12:42
2 of Dr. Foroosh's declaration if that would help you 12:42
3 answer my question, but it sounds like it's not 12:42
4 something that you considered and you haven't reached 12:42
5 an opinion on this as far as whether Dr. Foroosh has 12:42
6 applied a different understanding of any terminology 12:42
7 in Kim than what a dental professional would have? 12:43

8 MS. PARKS: Objection to form. 12:43

9 A. I'm not sure but I don't think, you know, 12:43
10 Dr. Foroosh -- so you are asking me if Dr. Foroosh 12:43
11 completely misunderstood the terminology as what I 12:43
12 mentioned just now, like standard orthodontic 12:43
13 photographs, clear aligners, and teeth alignment, is 12:43
14 that what you are -- you are mentioning? I mean, 12:43
15 that's your question, right? 12:43

16 So I, you know, in my opinion, again, I 12:43
17 don't have it in front of me here, don't quite 12:43
18 remember, but in my opinion, Dr. Foroosh is not 12:43
19 misunderstanding any of those. He understand what 12:44
20 clear aligners mean and what the standardized 12:44
21 orthodontic photographs means. 12:44

22 BY MR. ARGENTI: 12:44

23 Q. So there's no terminology in Kim that you would point 12:44
24 me to that you think Dr. Foroosh misunderstood or 12:44
25 applied a different understanding than a dental 12:44

1 professional would, right? 12:44

2 MS. PARKS: Objection to form. 12:44

3 A. Not that I'm aware of, having no document here in 12:44

4 front of me, just based on my recollection, yeah. 12:44

5 BY MR. ARGENTI: 12:44

6 Q. Again, Dr. Kusnoto, I would be happy to provide a copy 12:44

7 of Dr. Foroosh's declaration if it would help you 12:44

8 answer this question. Would you like a copy? 12:44

9 A. I, you know, I'm not sure if it's needed but I'm -- 12:44

10 when I'm preparing this, I did take a look at Foroosh 12:45

11 but not -- it's been a while, okay? So when -- when I 12:45

12 am glancing through it, I -- I do think Dr. Foroosh is 12:45

13 not misunderstanding any of this. 12:45

14 Q. Why don't we, just to avoid any concern about this 12:45

15 issue, I'm going to upload a copy of Dr. Foroosh's 12:45

16 declaration. 12:45

17 Do you have a copy of Dr. Foroosh's 12:45

18 declaration there with you today, Dr. Kusnoto? 12:45

19 A. No. 12:45

20 MS. PARKS: Are you referring to Exhibit 12:45

21 1002? 12:46

22 MR. ARGENTI: That's correct. 12:46

23 THE WITNESS: Okay. Just want to make sure 12:46

24 I have it here. I don't see it. Oh, I'm looking at 12:46

25 the wrong file. Sorry. This is 2000. That's why. 12:46

1 Yeah. Yeah, this is what I'm looking for. Yeah, I 12:46
2 found it. 12:46
3 BY MR. ARGENTI: 12:46
4 Q. You do have a copy of that -- 12:46
5 A. No, no, no, I was looking at the wrong pile; so yeah, 12:46
6 okay. 12:46
7 Q. And is that -- is that Exhibit 1002 in the '248 IPR? 12:46
8 A. Yes, it is 1002. 12:46
9 Q. Do you also have a copy of Exhibit 1002 in the '945 12:46
10 IPR? 12:46
11 A. Yes, I'm looking at '248, 1002, '248. Yeah, because 12:46
12 they're both the same number. 12:47
13 Q. They're both 1002, but I just want to make sure you 12:47
14 have the 1002 from the '248 IPR. 12:47
15 A. Yes. 12:47
16 Q. And the -- 12:47
17 A. Yes. 12:47
18 Q. From the '945 -- 12:47
19 A. Yes, yes, I have both. 12:47
20 Q. -- IPR. Okay. 12:47
21 So now that you have both exhibits 12:47
22 available to you, I'll ask the question again. 12:47
23 Are there any terms from the Kim reference 12:47
24 that you believe Dr. Foroosh interpreted differently 12:47
25 than a dental professional would have? 12:47

1 A. Give me a moment to look at the paragraph. Trying to 12:47
2 find my, oh, there you are, my Kim reference. It get 12:52
3 buried under the files. 12:52
4 In terms of those three things that I had 12:52
5 mentioned pertaining to Kim, you know, I think for the 12:52
6 most part Dr. Foroosh is grasping the terminology 12:52
7 correctly. 12:52
8 Q. And are there any other terms in Kim that you would 12:52
9 point me to as something that Dr. Foroosh 12:52
10 misinterpreted compared to how a dental professional 12:52
11 would understand it? 12:52
12 A. As terminology, not that I'm aware of. 12:53
13 Q. Now I'll ask about the Invisalign reference which is 12:53
14 Exhibit 1006. Do you have a copy of that there? 12:53
15 A. Yeah. Yes, I have 1006 here. 12:53
16 Q. Okay. Are there any terms from the Invisalign 12:54
17 reference, Exhibit 1006, that you believe Dr. Foroosh 12:54
18 interpreted differently than a dental professional 12:54
19 would have? 12:54
20 A. One second. I think I hear somebody knocking on the 12:54
21 door, I should ignore it or -- 12:55
22 Q. Do we need to go off the record for a second? 12:55
23 MS. PARKS: Yeah. 12:55
24 A. I'm not sure who that is actually. 12:55
25 BY MR. ARGENTI: 12:55

1 Q. Well, I can tell it's not Ms. Parks, so go ahead if 12:55
2 you need to answer, then go ahead and go answer it. 12:55
3 A. Yeah. It's the guy bringing lunch. Sorry about that. 12:55
4 Yeah, let me just give me a minute try to organize 12:55
5 here... 12:55
6 (Off the record at 12:55 p.m.) 12:55
7 (On the record at 12:58 p.m.) 12:55
8 A. I think for a -- yeah, so I have rearranged this a 12:58
9 little bit, so -- I think with the exception of the 12:58
10 illustration of poor fit, okay, for the most part, 12:58
11 he's getting the terminology correct. 12:58
12 BY MR. ARGENTI: 12:58
13 Q. Okay. Now I'll ask about the Salah reference. 12:58
14 A. Mm-hmm. 12:58
15 Q. Which is Exhibit 1008. Do you have a copy of that 12:58
16 too? 12:59
17 A. Yeah, I have it here, 1008. 12:59
18 Q. Are there any terms from the Salah reference Exhibit 12:59
19 1008 that you believe Dr. Foroosh interpreted 12:59
20 differently than a dental professional would have? 12:59
21 A. Here, but that's the -- I'm sorry, that's the guy 12:59
22 again. 13:00
23 Yeah, I think for the most part he also get 13:00
24 it correct, I mean, in term of the terminology. 13:03
25 Q. Last I'll ask you about the Frey blog exhibit, Exhibit 13:03

1 1009. Do you have a copy of that available? 13:03

2 A. Yeah, I have 1009. 13:04

3 Q. Are there any terms or phrase in Exhibit 1009 that you 13:04

4 believe that Dr. Foroosh interpreted differently than 13:04

5 a dental professional would have? 13:04

6 A. I don't think -- I don't think Dr. Foroosh use any 13:04

7 phrase reference. I don't think he refer to phrase at 13:05

8 all. 13:05

9 Q. So I would agree that it's not a reference in the 13:05

10 obviousness combinations at issue here. 13:05

11 A. Yeah. 13:05

12 Q. But since you mentioned Frey in your paragraph 57 of 13:05

13 your declaration. 13:05

14 A. Mm-hmm. 13:05

15 Q. You go on to say that that's one of the exhibits that 13:05

16 uses special terminology. I just want to ask you, 13:05

17 again, are there any terms in Frey Exhibit 1009 that 13:05

18 you believe Dr. Foroosh interpreted differently than a 13:05

19 dental professional would have? 13:06

20 A. Yeah, I'm not sure how to answer this because there is 13:06

21 none in Foroosh that refer to -- even the similarity 13:06

22 to -- to this, with -- I mean, let me -- let me see. 13:06

23 Q. Dr. Kusnoto, Dr. Foroosh in his declaration on the 13:07

24 '248 Patent, Exhibit 1002, mentions Exhibit 1009 in 13:07

25 paragraphs 73 and 90, if that helps your review. 13:07

1 A. Paragraph 73? 13:07

2 Q. 73 and 90. 13:07

3 A. In paragraph 73, I think Dr. Foroosh is -- he got it 13:11

4 all good. I mean, all the terminology there is good. 13:11

5 Still not quite sure about the paragraph 90. 13:11

6 The first sentence of paragraph 90 in 13:12

7 Dr. Foroosh is the one that I'm a little bit unsure, 13:12

8 because to me, it reads like it's a -- it's a methods 13:12

9 for orthodontics practice, which is, if we go back to 13:12

10 2017, this method was kind of a one off, you know, 13:13

11 it's not really proposed or reinforced by the board or 13:13

12 the -- the education to ask the patient to use their 13:13

13 own phone to acquire image because that -- the first 13:13

14 sentence kind of suggests that it's -- it's a 13:13

15 consistent with methods for orthodontic practice. 13:13

16 It's almost like generalization but, you 13:13

17 know, if it's refer only for Frey, there's one -- one 13:13

18 instance here then, I mean, this depiction is good. 13:14

19 Q. Okay. So aside from your disagreement with the first 13:14

20 sentence of paragraph 90, to the extent that it's 13:14

21 purporting to refer to a generalized approach to 13:14

22 practice, you do not take issue with Dr. Foroosh's 13:14

23 understanding of any terminology in Exhibit 1009, 13:14

24 correct? 13:14

25 A. Yeah, no disagreement in term of terminology. 13:14

1 Q. Let's turn now to paragraph 48 of your '248 13:14
2 declaration on page 32. Sorry, I misspoke. Let's 13:14
3 turn to paragraph 58 of your '248 declaration on page 13:15
4 37. 13:15
5 A. 58, yeah. 13:15
6 Q. And this is where you begin your discussion of the 13:15
7 Invisalign prior art reference, right? 13:15
8 A. Mm-hmm. 13:15
9 Q. A little bit more than halfway down the paragraph 58 13:15
10 your declaration says, Invisalign also instructs 13:15
11 orthodontists to perform steps in office that could 13:15
12 not be performed remotely or virtually, such as 13:15
13 assessing tight contacts with floss and testing 13:15
14 aligner retention with a dental scaler. 13:15
15 Do you see that? 13:15
16 A. Yes. 13:15
17 Q. What are the tight contacts that that sentence refers 13:15
18 to? 13:16
19 A. Oh, it's the contacts between two teeth. Yeah, 13:16
20 sometimes as teeth be moved, they become either too 13:16
21 tight or too loose or it doesn't contact to where it's 13:16
22 supposed to be. 13:16
23 Q. Would assessing tight contacts with floss be done with 13:16
24 the aligner worn on the teeth? 13:16
25 A. No. 13:16

1 Q. When the Invisalign guide refers to assessing tight 13:16
2 contacts with unwaxed floss, that's not something that 13:16
3 evaluates aligner fit, right? 13:16
4 A. No, it's not for aligner fit. 13:16
5 Q. Now let's turn to paragraph 64 of your '248 13:16
6 declaration, please. 13:17
7 A. 64? Yes. 13:17
8 Q. In the first sentence of paragraph 64, do you see 13:17
9 where you say, In reality, there was no way to make 13:17
10 quantitative evaluations of aligner fit from a visual 13:17
11 inspection of a digital image in 2017? 13:17
12 A. Mm-hmm. 13:17
13 Q. When you say there was no way to make quantitative 13:17
14 evaluations of aligner fit from visual inspection of a 13:17
15 digital image in 2017, do you mean it was impossible? 13:17
16 A. Yeah, it is quantitative -- okay? -- measurement. 13:17
17 Yeah, it is impossible. If you, you know, what -- if 13:18
18 it's a precise measurement, yeah, it is -- it's not 13:18
19 there in 2017. 13:18
20 Q. And by visual inspections, you mean by a dentist's or 13:18
21 orthodontist's eyes making a visual inspection, right? 13:18
22 A. From a digital image, and this is pertaining to 13:18
23 looking at the pictures, yeah. 13:18
24 Q. Do you have an opinion whether using computer image 13:18
25 analysis would have allowed for quantitative 13:18

1 evaluations of aligner fit of a digital image in 2017? 13:18

2 A. I think depends on the techniques used, but I was 13:18

3 unaware of any digital technology that is able to 13:19

4 quantify aligner fitness in term of millimetrics or 13:19

5 some units of measurements at that time. 13:19

6 Q. So when you say there was no way to do it in 2017, are 13:19

7 you saying you are not aware of a known way to do it 13:19

8 or that it would have been impossible? 13:19

9 MS. PARKS: Objection to form. 13:19

10 A. Could probably mean both, you know, from my point of 13:20

11 view as an orthodontist, clinicians looking at 13:20

12 two-dimensional image being project to me, then I 13:20

13 would say there is no way to -- for me as an 13:20

14 orthodontist to measure it without, you know, at -- 13:20

15 with the technology that happened there in 2017. 13:20

16 But, you know, I don't know if there is any 13:20

17 other methods that they can, you know, use at that 13:20

18 time to measure such thing. 13:20

19 BY MR. ARGENTI: 13:20

20 Q. Are you saying you aren't sure whether it was possible 13:20

21 to make quantitative evaluations of aligner fit from 13:20

22 visual inspection of a digital image in 2017? 13:21

23 MS. PARKS: Objection to form. 13:21

24 A. I think with the technology in 2017 from the 13:21

25 orthodontist point of view, and using the digital 13:21

1 technology at that time, this quantitative evaluation 13:21
2 of aligner fit, it's -- it's not possible at that 13:21
3 2017. 13:21
4 BY MR. ARGENTI: 13:21
5 Q. It would not have been possible to make quantitative 13:21
6 evaluations of aligner fit using computer image 13:21
7 analysis analyzing a digital image in 2017, that's 13:21
8 your testimony? 13:22
9 MS. PARKS: Objection to form. 13:22
10 A. Yeah, with a digital image provided to us, as an 13:22
11 orthodontist at -- using the technology at that time, 13:22
12 I would say it is not possible. 13:22
13 BY MR. ARGENTI: 13:22
14 Q. Using what technology at that time? 13:22
15 A. We don't yet have solid, deep learning, for instance, 13:22
16 we don't have yet solid AI technology that's able to 13:23
17 identify the region of tooth -- tooth for tooth and 13:23
18 how far it is from the actual alignment, for instance. 13:23
19 Okay? And then just by looking at the digital image 13:23
20 and at that time. 13:23
21 So I mean, in the lab, probably, but I'm 13:24
22 not aware of anything on the hand of an orthodontist 13:24
23 that we can use this. 13:24
24 Q. Oh, so when you're saying it would not have been 13:24
25 possible, you are saying it was not in widespread use 13:24

1	among orthodontists?	13:24
2	A. I'm not aware --	13:24
3	MS. PARKS: Objection to form.	13:24
4	A. Yeah.	13:24
5	BY MR. ARGENTI:	13:24
6	Q. When you're saying it would not have been possible to	13:24
7	make quantitative evaluations of an aligner fit using	13:24
8	computer image analysis of a digital image in 2017,	13:24
9	what you mean is that it was not part of the	13:24
10	widespread standard of care for orthodontists at that	13:24
11	time; is that right?	13:24
12	MS. PARKS: Objection to form.	13:24
13	A. Then yes, because we were just -- didn't have any	13:24
14	tooth that we can use readily and publicly available	13:25
15	or can even as our diagnostic tools to perform so in	13:25
16	2017.	13:25
17	BY MR. ARGENTI:	13:25
18	Q. Let's look now at the previous page of your	13:25
19	declaration, page 42 and paragraph 63.	13:25
20	In this paragraph, you have a photograph	13:25
21	from Exhibit 2063, correct?	13:25
22	A. Yes.	13:25
23	Q. And in the sentence above that photograph you say,	13:25
24	Importantly, the separation cannot be asserted with	13:25
25	precision even -- sorry. Let me start that over.	13:25

1 A. Okay. 13:26

2 Q. In the sentence above that photograph, you say, 13:26

3 Importantly, the separation cannot be assessed with 13:26

4 precision even though this appears to be a 13:26

5 high-quality photograph taken with controlled lighting 13:26

6 in acquisition conditions, not a patient-created 13:26

7 cellphone image. 13:26

8 Do you see that? 13:26

9 A. Yes. 13:26

10 Q. Why do you say the separation can't be assessed with 13:26

11 precision in this picture? 13:26

12 A. Because we just simply didn't have tool available or 13:26

13 to assess the situation in metrics, millimetrics. We 13:26

14 know there is a separation but how far and how much we 13:26

15 don't know. 13:26

16 Q. And you don't know because there was no widespread -- 13:27

17 A. Tools. 13:27

18 Q. -- available tool that was part of the standard of 13:27

19 care at that time? 13:27

20 A. Yes. 13:27

21 MS. PARKS: Objection to form. 13:27

22 BY MR. ARGENTI: 13:27

23 Q. Let's turn to paragraph 74 now on page 49 of your '248 13:27

24 declaration. 13:27

25 A. Page 49? 13:27

1 Q. Right, paragraph 74. 13:27

2 A. Yes. 13:27

3 Q. In this paragraph, you discuss Kim's disclosure 13:27

4 regarding checking a photo or video of an aligner 13:27

5 currently worn by the orthodontic patient to determine 13:27

6 if the aligner is normal and corresponds to an 13:27

7 appropriate step, correct? 13:27

8 A. Yes. 13:28

9 Q. At the end of paragraph 74, you say that the 13:28

10 assessment of the aligner is normal, means assessing 13:28

11 whether it has abnormalities such as damage, right? 13:28

12 A. Yes. 13:28

13 Q. If an aligner is damaged, could that prevent it from 13:28

14 fitting on the teeth properly? 13:28

15 A. Sometimes yes, sometimes no, depends on how extensive 13:28

16 is the damage and where the damage is. 13:28

17 Q. Aligner damage could cause an aligner fit issue, 13:28

18 correct? 13:28

19 A. Again, depending on where the damage is. Sometimes it 13:28

20 fits well, sometimes it does not. 13:29

21 Q. Are you familiar with the term bonded expander in the 13:29

22 context of orthodontic treatment? 13:29

23 A. Yes. 13:29

24 Q. What is a bonded expander? 13:29

25 A. It's a type of orthodontics device which is bonded or 13:29

1 glued to the tooth, teeth, and it's being used to 13:29
2 widen the jaw. 13:29
3 Q. So a bonded expander is an orthodontics appliance, 13:30
4 right? 13:30
5 A. It's an orthodontics appliance. 13:30
6 Q. Let's turn to paragraph 83 of your '248 declaration 13:30
7 please, where you discuss Salah. Let me know when 13:30
8 you're there. 13:30
9 A. Yes, I'm here. 13:30
10 Q. Looking at figure 11 of Salah that you have included 13:30
11 on this page, would you agree that this is an image of 13:30
12 teeth fitted with an orthodontic appliance? 13:30
13 A. Yeah, this is teeth with orthodontic appliance. 13:31
14 Q. And would you also agree that Salah teaches taking 13:31
15 such dental images with a cellphone? 13:31
16 A. Salah has the ability to take the image with a 13:31
17 cellphone. 13:31
18 Q. Under that image, figure 11, three lines down, do you 13:32
19 see where it has parentheses and it starts a quote, 13:32
20 "Salah similarly teaches." 13:32
21 Do you see that sentence? 13:32
22 A. Yes. 13:32
23 Q. And the sentence reads, Salah similarly teaches 13:32
24 acquiring dental images with a cellphone, including of 13:32
25 teeth fitted with orthodontic appliances. 13:32

1	That sentence is accurate, correct?	13:32
2	A. Yes.	13:32
3	MR. ARGENTI: Why don't we take a break and	13:32
4	I think I'm about done here but we'll take a short	13:32
5	break and then we can come back and see if we have any	13:32
6	additional questions.	13:32
7	THE WITNESS: Okay. Like 10 minutes?	13:32
8	MR. ARGENTI: Yeah, let's do -- why don't	13:32
9	we do till a quarter to the hour. How about that?	13:32
10	10:45. 12:45 your time.	13:33
11	THE WITNESS: Okay.	13:33
12	MR. ARGENTI: All right. Thank you.	13:33
13	(Recess taken at 1:33 p.m.)	13:45
14	(On the record at 1:45 p.m.)	13:45
15	BY MR. ARGENTI:	13:45
16	Q. Dr. Kusnoto, during any of the breaks today, did you	13:45
17	discuss your testimony with counsel for Dental	13:45
18	Monitoring?	13:45
19	A. No.	13:45
20	MR. ARGENTI: Thank you. That's all the	13:45
21	questions I have unless I have any follow-up after	13:45
22	redirect.	13:45
23	MS. PARKS: Okay. I just have a couple of	13:45
24	questions for you Dr. Kusnoto.	13:45
25	EXAMINATION	13:45

1	BY MS. PARKS:	13:45
2	Q. So first can you please pull up your '248 Patent	13:45
3	declaration.	13:46
4	A. Yes.	13:46
5	Q. Can you turn to paragraph 87.	13:46
6	A. Yes.	13:46
7	Q. About halfway down that paragraph do you see the	13:46
8	citation to Exhibit 2054 where it says Foroosh	13:46
9	transcript or Foroosh TR, period?	13:46
10	A. Mm-hmm.	13:46
11	Q. When you prepared the opinions set forth in this	13:46
12	declaration in paragraph 87, did you review	13:46
13	Dr. Foroosh's transcript?	13:46
14	A. I did.	13:46
15	Q. Okay. And then earlier today, do you recall	13:46
16	Mr. Argenti asking you questions about what terms and	13:47
17	the various references have specific meaning for	13:47
18	dental professionals?	13:47
19	A. Yes.	13:47
20	Q. And do you also recall telling Mr. Argenti that you	13:47
21	had conversations with Dr. Mongan about the substance	13:47
22	of these IPRs?	13:47
23	A. Yes.	13:47
24	Q. In the course of those discussions with Dr. Mongan,	13:47
25	did he ask you for clarification about any terms used	13:47

1 in the references? 13:47

2 A. Excuse me, any term of what? 13:47

3 Q. In your discussions with Dr. Mongan, did he ask you 13:47

4 for clarification about the meaning of the terms used 13:47

5 in various references? 13:47

6 MR. ARGENTI: Objection, scope. 13:47

7 A. I'm having a little bit problem hearing. Term in 13:47

8 various references? 13:48

9 BY MS. PARKS: 13:48

10 Q. Yes. Yes. In your discussions with Dr. Mongan, did 13:48

11 you discuss with him the meaning of terms used in the 13:48

12 references? 13:48

13 MR. ARGENTI: Objection, scope. 13:48

14 A. If you are -- again, I don't quite get the last 13:48

15 sentence. I'm so sorry. Term of similar references? 13:48

16 Is that -- 13:48

17 BY MS. PARKS: 13:48

18 Q. Yes, I can try it a different way. 13:48

19 Did you discuss with Dr. Mongan the meaning 13:48

20 of the Kim reference, the Invisalign reference, the 13:48

21 Salah reference, and the Frey reference? 13:48

22 MR. ARGENTI: Objection, scope, form. 13:48

23 A. Oh, the meaning of -- of that, yes. 13:48

24 BY MS. PARKS: 13:49

25 Q. And in each case in your discussions with Dr. Mongan, 13:49

1 did you give him your view of the meaning of those 13:49
2 references from the perspective of a dental 13:49
3 professional? 13:49
4 MR. ARGENTI: Objection, scope, form. 13:49
5 A. Yeah, I clarified the meaning. 13:49
6 BY MS. PARKS: 13:49
7 Q. Okay. And turning back to your '248 Patent 13:49
8 declaration, can you please look at paragraph 64. 13:49
9 A. Yes. 13:49
10 Q. And do you recall discussing the first sentence of 13:49
11 paragraph 64 with Mr. Argenti earlier? And this is 13:49
12 the sentence that states, "In reality, there is no way 13:49
13 to make quantitative evaluations of aligner fit from a 13:49
14 visual inspection of a digital image in 2017"? 13:50
15 A. Yes. 13:50
16 Q. And do you recall telling Mr. Argenti that there was 13:50
17 no widespread tool for doing this quantitative 13:50
18 evaluation as of 2017? 13:50
19 A. Yes. 13:50
20 Q. Putting aside whether a tool was widespread, are you 13:50
21 aware of any tools for doing this quantitative 13:50
22 evaluation in 2017? 13:50
23 A. No. 13:50
24 MS. PARKS: Okay. No further questions for 13:51
25 me. Thank you, Dr. Kusnoto. 13:51

1 MR. ARGENTI: Nothing from me. Thank you, 13:51

2 Dr. Kusnoto. 13:51

3 THE WITNESS: Thank you very much. 13:51

4 (The deposition was concluded at 1:51 p.m.

5 Signature of the witness was not requested

6 by counsel for the respective parties

7 hereto.)

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CERTIFICATE OF NOTARY

STATE OF MICHIGAN)

) SS

COUNTY OF MONROE)

I, LEISA PASTOR, certify that this deposition was taken before me on the date hereinbefore set forth; that the foregoing questions and answers were recorded by me stenographically and reduced to computer transcription; that this is a true, full and correct transcript of my stenographic notes so taken; and that I am not related to, nor of counsel to, either party nor interested in the event of this cause.



LEISA PASTOR, CSR-3500, CRR,
Notary Public,
Monroe County, Michigan
My Commission expires: 9/7/27

[& - 90]

&	2000 42:25	26:19 27:10	49 53:23,25
& 2:4	2007 9:20	28:14 29:25	5
1	2010 9:20	36:13 43:7,11	54 23:11,17,19
1 20:5,7,13,20	2017 28:23	43:11,14 46:24	26:17
10 36:4 56:7	47:10 49:11,15	48:1,3 49:5	55 23:21
10,755,409 6:2	49:19 50:1,6	53:23 55:6	56 3:7
1001 19:20,21	50:15,22,24	57:2 59:7	57 17:1,6 19:1
20:11,12	51:3,7 52:8,16	29 28:19	19:14 23:6
1002 42:21	59:14,18,22	3	36:12 37:10
43:7,8,9,11,13	2024 1:17 4:2	3 38:6,10	46:12
43:14 46:24	2024-00052 5:5	31 30:1	58 8:14 48:3,5
1005 37:20	7:20,21	32 48:2	48:9
1006 44:14,15	2024-00110	3500 1:18	6
44:17	5:12 8:11	61:22	6 1:17 4:2
1008 45:15,17	2030 7:19,22,24	351-2308 2:7	61 8:1
45:19	8:11 11:9,12	354-4154 2:15	63 52:19
1009 46:1,2,3	11:19 12:16	36 17:2,6 36:13	64 49:5,7,8
46:17,24 47:23	15:1,7,11,17	37 48:4	59:8,11
101 19:21	2054 39:23	3d 28:12	650 2:13,15
10166 2:6	40:20,25 57:8	4	6876129 1:19
10:45 56:10	2063 52:21	4 3:6 38:22	7
11 55:10,18	212 2:7	409 6:3,4,8,13	73 46:25 47:1,2
11,049,248 1:7	248 5:8 6:22	41 28:14,16,17	47:3
5:6	7:17 10:21	28:20	74 53:23 54:1,9
11,109,945 5:12	11:9 12:5,20	42 52:19	8
12th 13:1	12:24 13:14	444 1:14	83 55:6
14711 61:21	14:17,19,20,24	46 29:25 30:3,4	87 57:5,12
1:33 56:13	15:10,21,24	47 30:22 33:13	9
1:45 56:14	16:22 17:1,10	34:8 35:2,10	9 38:5
1:51 60:4	17:23,24 18:9	35:13,18	9/7/27 61:25
2	18:12 19:3,14	48 32:17 33:15	90 46:25 47:2,5
2-4 19:21	19:19,20 20:9	34:6,18,25	47:6,20
200 2:5	21:4,20,21	35:3,10,13,22	
	22:13,15,21	48:1	
	23:1,7,12		

[94304 - argenti]

94304 2:14 945 5:15 6:22 8:11,19 10:24 11:12 12:8,20 12:24 13:18 15:13,14,16,19 15:24 16:22 43:9,18	additional 26:13 56:6 addressing 17:24 34:13 ago 5:19 6:1,8 15:12,22 agree 14:9,10 23:21 46:9 55:11,14 ahead 9:4 45:1 45:2 ai 51:16 aid 33:4 align 1:4 11:2 aligned 39:1 aligner 15:24 16:1,2,3,9,13 16:19,19 17:10 18:10,11,14,15 18:17,18,19,21 18:23,24 19:4 19:7 21:5 23:7 23:8 24:19 25:1,10,24 26:1,14,25 27:8 28:6,22 29:2,7,10,11,14 29:15,15,17 30:9,10,18 31:16,24 32:1 32:4,5,6,9,11 32:15,18,20,20 32:21,22 35:23 39:9 48:14,24 49:3,4,10,14	50:1,4,21 51:2 51:6 52:7 54:4 54:6,10,13,17 54:17 59:13 aligner's 26:23 27:18 aligners 16:9 16:12 17:17,18 19:8,18 21:10 21:12,13,15 26:9 29:5 33:4 34:19 41:13,20 alignment 16:17 30:8,10 38:7,16,20,21 38:22,25 41:13 51:18 allowed 49:25 allyson 2:3 alto 2:14 analysis 21:3 22:23,25 49:25 51:7 52:8 analyzing 20:21 51:7 angle 37:23,23 38:8,8 answer 7:9 9:4 23:15,18 25:19 26:3 30:16 33:25 39:14,16 41:3 42:8 45:2 45:2 46:20 answers 7:4 61:9	aparks 2:8 appeal 1:2 appearances 2:1 appearing 2:9 2:17 appears 38:17 53:4 appliance 55:3 55:5,12,13 appliances 55:25 application 22:2,15 applied 28:5 41:6,25 applies 40:15 apply 6:12 19:10 approach 47:21 appropriate 54:7 approximately 7:13 arch 20:21 21:3 22:23,25 39:2 39:2 argenti 2:11 3:6 4:11 5:24 9:7 11:22 14:16 16:25 18:2,8 21:18 22:3,6,11,19 23:4 24:4,9,16
a			
a.m. 1:16 4:3 5:23 22:10 ability 55:16 able 28:2,4 40:21 50:3 51:16 abnormalities 54:11 above 25:16 52:23 53:2 abstract 20:12 38:19 accurate 6:21 17:13,14 56:1 acquire 47:13 acquiring 55:24 acquisition 53:6 act 33:23 actual 51:18 actually 13:10 40:9 44:24 add 35:17 addition 11:18			

[argenti - characterize]

24:22 25:8,14 25:20 26:4 27:6 28:7 36:1 36:5,8,11,25 41:22 42:5,22 43:3 44:25 45:12 50:19 51:4,13 52:5 52:17 53:22 56:3,8,12,15,20 57:16,20 58:6 58:13,22 59:4 59:11,16 60:1 art 23:14 48:7 artificial 24:6 24:25 aside 34:16 47:19 59:20 asked 21:25 asking 13:15,20 13:21,23 17:15 17:22 40:13,14 41:10 57:16 aspect 35:21 39:15 40:8 asserted 52:24 assess 26:10 28:5 29:11 31:23 32:1 53:13 assessed 32:18 32:20 53:3,10 assessing 16:13 29:13,15 34:10 35:5,14,23	48:13,23 49:1 54:10 assessment 22:14 30:8,9 33:12,15 34:6 34:7 35:1,1,17 35:22 54:10 assessments 30:5,11 35:9 35:12 assume 7:1 assumption 27:24 attachment 33:1 attachments 32:22,25 attention 14:7 audio 11:20 22:5 23:17 available 37:17 43:22 46:1 52:14 53:12,18 avenue 2:5 avoid 42:14 aware 6:22 14:18 27:3 40:14 42:3 44:12 50:7 51:22 52:2 59:21	39:21 40:22 47:9 56:5 59:7 background 25:23 26:8 bare 26:12 based 19:16,23 22:14 24:17 39:18 42:4 basis 19:4,6 21:19 beginning 21:7 behalf 2:9,17 believe 10:22 12:17 37:20 39:12 40:4 43:24 44:17 45:19 46:4,18 beyond 25:16 big 39:8 bioinformatics 23:25 24:24 bit 20:4 45:9 47:7 48:9 58:7 bite 39:4 blog 9:15 45:25 board 1:2 47:11 bonded 54:21 54:24,25 55:3 bother 31:25 bottom 7:23 37:24 38:7 break 7:7,10,12 36:2 56:3,5	breaks 56:16 bringing 45:3 broader 18:23 34:9 35:3 budi 1:13 3:4 4:5,14 buried 44:3
			c
			california 2:14 call 39:2 called 4:6 care 52:10 53:19 carried 23:8 case 1:6 25:6 58:25 cases 33:20 categories 28:22 cause 54:17 61:14 caused 32:11 caution 9:2 cellphone 53:7 55:15,17,24 central 37:25 certain 39:5 certainly 25:24 26:8 27:18 certificate 61:1 certify 61:6 change 8:20 characterize 16:21

[check - dds]

check 19:21 30:18 32:4 33:18 35:7 checked 29:24 checking 32:9 54:4 chicago 1:15 4:1,16 citation 57:8 cited 10:15,17 claim 19:6,16 19:17 21:13 38:10,21 claims 19:23 22:16 clarification 5:23 6:25 57:25 58:4 clarified 59:5 clarity 7:19 clean 4:25 5:1 clear 6:14,23 14:23 16:24 39:9 41:13,20 clinical 22:2,2 22:15 clinician 22:1 clinicians 50:11 clyde 13:12 coincide 30:15 collection 37:24 column 20:5,7 20:20	columns 20:16 20:18 combinations 46:10 come 36:3,5 38:18 56:5 commencing 1:16 commission 61:25 common 29:4 company 26:23 compared 44:10 comparison 31:2,11 complete 6:20 completely 31:22,25 41:11 complication 34:1,9 35:5 complications 32:23,24 33:6 33:9,16 35:20 composite 33:1 computer 23:24 24:23 27:20 49:24 51:6 52:8 61:10 concern 42:14 concluded 60:4 concluding 21:19	conclusion 19:13 conditions 53:6 consider 20:1 considered 41:4 consistent 47:15 construct 16:17 contact 48:21 contacts 48:13 48:17,19,23 49:2 contents 3:1 context 54:22 continue 24:12 controlled 53:5 conversations 57:21 copies 4:25 5:1 copy 7:17 14:25 37:16 41:1 42:6,8,15 42:17 43:4,9 44:14 45:15 46:1 corner 7:23 correct 5:13 8:8 11:16,24 13:2 15:25 23:14 24:6,10 26:15 31:8 32:19,23 34:12 35:15 36:18 42:22 45:11,24	47:24 52:21 54:7,18 56:1 61:11 correctly 44:7 corresponds 54:6 counsel 9:3 13:7,9 19:9 56:17 60:6 61:13 county 61:4,24 couple 15:12,22 37:22 56:23 course 29:2 34:11 37:16 57:24 court 5:22 created 53:6 criteria 25:12 cross 11:20 crr 1:18 61:22 crutcher 2:4 csr 1:18 61:22 current 35:19 currently 4:15 54:5 curve 39:3
			d
			damage 54:11 54:16,16,17,19 damaged 54:13 date 61:7 days 15:12,22 dds 1:13 3:4 4:5

[decisions - documents]

decisions 10:4 10:7 declaration 4:20 7:16 8:8 8:10,19 9:21 10:16,18,19,23 11:1,5,9,12,17 13:1,13,17,22 14:2,9,21,24,25 15:11,17,20 17:2,13,16,23 17:24 18:4,11 19:1,15 21:11 23:6,11,20 28:14 29:25 36:13 39:24 41:2 42:7,16 42:18 46:13,23 48:2,3,10 49:6 52:19 53:24 55:6 57:3,12 59:8 declarations 9:5 10:8 11:14 11:18,23 12:2 12:15,25 15:6 deep 51:15 defined 26:17 definition 23:13,16,19,22 24:18 25:16,25 delayed 29:20 deliver 28:2 dental 1:8 9:16 10:20 11:2,15	19:9 20:21 21:2 22:23,24 23:9,12 24:10 24:14 25:15,23 26:7 27:9,14 28:11,13 35:20 36:22 37:4,6,6 37:12 38:1,14 38:25 39:2,2 39:10,13,20 40:5,16 41:7 41:25 43:25 44:10,18 45:20 46:5,19 48:14 55:15,24 56:17 57:18 59:2 dentist 25:6 28:3 29:4 dentist's 49:20 dentistry 24:14 dentists 26:23 27:13 28:13 dentition 31:2 31:3 32:24,24 33:5,16 34:1,9 35:5,19 39:2,3 depending 54:19 depends 50:2 54:15 depiction 47:18 deposition 1:13 5:18,25 6:7,9 6:13 8:22 9:3 9:11,18,22,25	10:1,5,11,14 60:4 61:7 described 35:22 description 20:1 designated 31:14 desired 35:15 destination 31:14 detail 9:24 14:18 detect 31:11 detected 32:21 detention 32:23 determine 54:5 determining 19:11 detrimental 34:21 develop 33:21 developing 33:9 device 54:25 diagnostic 52:15 different 16:17 18:4,20 21:20 34:6 35:1 40:15 41:6,25 58:18 differently 39:12 40:4 43:24 44:18	45:20 46:4,18 digital 49:11,15 49:22 50:1,3 50:22,25 51:7 51:10,19 52:8 59:14 digits 6:3 dimensional 50:12 direction 30:20 34:5,20 directly 21:15 disagree 23:1 disagreement 47:19,25 discipline 24:1 disclosure 54:3 discuss 23:12 30:23 54:3 55:7 56:17 58:11,19 discussed 13:13 13:17 17:19 discussing 14:14 59:10 discussion 48:6 discussions 9:2 57:24 58:3,10 58:25 distinction 33:12 document 10:17 42:3 documents 10:15
--	--	--	--

[doing - files]

doing 28:10 59:17,21 door 44:21 dr 4:12 5:25 9:1,21 10:1,11 10:19,23 11:1 11:8,11 12:1,5 12:8,11,14,18 12:23 13:5,13 13:14,15,17,18 13:20,22 14:2 14:6,8 15:5 22:12 23:15 36:2,12 39:12 39:14,17,25 40:4,6,11,14,19 41:1,2,5,10,10 41:18,24 42:6 42:7,12,15,17 42:18 43:24 44:6,9,17 45:19 46:4,6 46:18,23,23 47:3,7,22 56:16,24 57:13 57:21,24 58:3 58:10,19,25 59:25 60:2 drop 11:20 due 11:20 duly 4:7 dunn 2:4	e earlier 11:23 12:2 15:3,6 36:14 57:15 59:11 education 23:24 24:24 25:15 26:13 47:12 either 29:20 31:13 48:20 61:13 electronic 8:3 8:14 ended 29:20 engineering 23:25 24:24 entirely 16:1,3 etcetera 17:11 evaluate 29:5 31:19 evaluated 27:4 evaluates 49:3 evaluation 51:1 59:18,22 evaluations 49:10,14 50:1 50:21 51:6 52:7 59:13 event 61:13 exact 12:12 exactly 14:12 19:12 examination 3:6,7 4:10 30:6	30:23 56:25 examined 4:9 example 29:7 30:16,23 40:10 40:13 excellent 27:5 except 4:20 40:19 exception 45:9 exceptions 29:1 excuse 58:2 exhibit 3:11 7:19,22,24,25 8:11 9:15,20 11:9,12,19 12:16 14:25 15:11,17 19:20 20:11 37:20 39:23 42:20 43:7,9 44:14 44:17 45:15,18 45:25,25 46:3 46:17,24,24 47:23 52:21 57:8 exhibits 3:9,12 4:22 9:6,17 15:7 43:21 46:15 expander 54:21 54:24 55:3 expected 6:18 31:3,6,17 32:10 33:14 34:3	experience 24:5 24:25 25:15 26:14 27:7,21 expires 61:25 explained 14:10 explaining 21:17 extensive 54:15 extent 47:20 eyes 49:21 f failed 31:25 falls 27:24 familiar 40:9 54:21 familiarity 24:13 far 31:13 41:5 51:18 53:14 field 15:23 16:21 17:9,10 18:4,5,9,13 19:3,11,14,23 20:3,23,25 21:2,4,20 22:13,21,22,24 23:7 26:19,22 27:9,17 36:15 figure 55:10,18 figures 20:15 file 20:14 42:25 filed 14:21 files 44:3
--	--	--	--

[filling - happy]

filling 33:2 find 37:19 44:2 first 4:7 6:3 7:23 15:3 17:4 18:25 23:5 31:19 35:18 37:8 38:19 47:6,13,19 49:8 57:2 59:10 fit 24:15 29:11 29:14,15,17 30:9,10,18 31:16,24 32:1 32:5,5,6,9,11 32:22 45:10 49:3,4,10,14 50:1,21 51:2,6 52:7 54:17 59:13 fitness 50:4 fits 54:20 fitted 55:12,25 fitting 32:16 54:14 floss 48:13,23 49:2 focus 34:16,24 37:8 follow 20:6 56:21 follows 4:9 foregoing 61:8 form 11:4 14:11 16:23	18:1,7 21:6,23 21:25 22:17 23:2 24:2,7,11 24:20 25:3,11 25:18 26:2,20 27:22 35:25 36:23 41:8 42:2 50:9,23 51:9 52:3,12 53:21 58:22 59:4 formed 22:12 forming 20:2 22:4 foroosh 39:12 39:14,25 40:4 40:11,25 41:5 41:10,10,18,24 42:10,12 43:24 44:6,9,17 45:19 46:4,6 46:18,21,23 47:3,7 57:8,9 foroosh's 9:21 10:1,11 13:13 13:17,22 14:2 14:8 39:17 40:6,14,19 41:2 42:7,15 42:17 47:22 57:13 forth 57:11 61:8 found 20:19 43:2	frame 12:12 frequently 7:14 frey 9:15 36:18 45:25 46:12,17 47:17 58:21 friday 1:17 4:2 front 37:25 38:7,7 41:17 42:4 full 4:13 61:11 further 34:18 59:24	glued 33:2 55:1 go 9:4 18:20 20:14 26:18 32:6,17 39:21 40:22 44:22 45:1,2,2 46:15 47:9 goal 18:18,24 going 6:13 35:7 36:1 42:15 good 4:12 32:6 34:14 47:4,4 47:18 goodrich 2:12 grabbed 9:19 grasping 44:6 great 9:24 14:18 ground 6:12 growths 31:22 guess 17:20 25:12 36:5 guide 49:1 gum 33:9,19 guy 45:3,21
		g	
		general 28:21 38:2 generalization 47:16 generalized 47:21 getting 45:11 gibson 2:4 gibsondunn.c... 2:8 give 37:21 38:17 39:21 40:10,13,22 44:1 45:4 59:1 given 26:7 29:17,19 31:15 31:21 glance 15:12,21 16:6 glanced 9:23 glancing 40:7 42:12	
			h
			halfway 48:9 57:7 hand 51:22 hands 19:19 happen 29:1 happened 50:15 happy 41:1 42:6

[hard - issues]

hard 22:7 head 7:5 heading 20:22 21:1 22:20 health 34:13,16 hear 22:7 44:20 hearing 58:7 help 41:2 42:7 helps 46:25 hereinbefore 61:8 hereto 60:7 high 53:5 hmm 11:21 17:3 19:2 20:24 30:7 45:14 46:14 48:8 49:12 57:10 holder 2:17 hopefully 6:23 hour 7:13 36:2 56:9 human 39:3 hygiene 32:14 33:19 hygienist 27:15 hypersensitiv... 33:22	identified 5:11 identify 28:21 51:17 ignore 44:21 illinois 1:15 4:1 illustration 45:10 image 20:21 21:3 22:23,25 47:13 49:11,15 49:22,24 50:1 50:12,22 51:6 51:7,10,19 52:8,8 53:7 55:11,16,18 59:14 images 55:15 55:24 imaging 24:14 24:14 26:21,22 27:7,16 28:10 28:11,12 important 29:15 30:18 importantly 52:24 53:3 impossible 49:15,17 50:8 inaccurate 39:18 include 24:13 25:5 29:13 32:22 35:19 included 55:10	including 38:19 55:24 independent 31:18 indicate 31:7 information 12:4 informations 16:15,16 inside 28:2 inspect 35:18 inspection 49:11,14,21 50:22 59:14 inspections 49:20 instance 14:4 47:18 51:15,18 institution 10:4 10:7 instructs 48:10 intelligence 24:6 25:1 interaction 13:7 interested 61:13 interfacing 11:13 interference 22:5 interpreted 39:12 40:4 43:24 44:18 45:19 46:4,18	interrupts 5:22 interval 29:14 intervals 29:12 invention 21:2 21:15 22:22,24 invisalign 9:10 36:17 44:13,16 48:7,10 49:1 58:20 involve 35:13 involved 6:1 involving 6:8 ipr 5:3,5,11,11 7:19,21 8:11 10:21,24 11:9 11:12 12:6,9 14:20 15:16,17 43:7,10,14,20 ipr2024-00052 1:6 iprs 4:23 5:5 9:22,25 10:5 10:12 11:2,14 11:23 12:3,11 12:14,19,23 13:5 15:6 57:22 issue 31:8 34:16,17 42:15 46:10 47:22 54:17 issues 31:10
i			
i.e. 34:20 idea 18:15,24 ideal 39:2,5 identification 16:18			

[jaw - medical]

j	known 50:7	30:22 31:20	margenti 2:16
jaw 55:2	kusnoto 1:13	37:15,21 39:23	marked 7:22
job 1:19	3:4 4:5,12,14	40:12 42:10	11:18 12:15
john 10:19	5:25 9:1 15:5	44:1 52:18	match 31:6
july 13:1,1	22:12 23:15	59:8	materials 33:2
k	36:2,12 41:1	looked 11:19	matter 17:22
keep 36:16	42:6,18 46:23	36:14	matthew 2:11
kim 9:8,9 36:17	56:16,24 59:25	looking 22:20	mean 6:9 13:2
37:9,13,16,22	60:2	23:5 33:14,16	16:4,12 25:12
38:5,10,14	l	34:2 36:16	25:22 29:23
39:7,11,19	lab 28:11 51:21	42:24 43:1,5	32:15 33:5
40:3,16 41:7	lake 1:14	43:11 49:23	36:24 37:7
41:23 43:23	leads 21:12,13	50:11 51:19	38:2 41:14,20
44:2,5,8 58:20	learning 24:5	55:10	45:24 46:22
kim's 54:3	24:25 27:21,23	looks 19:19	47:4,18 49:15
kind 47:10,14	51:15	loose 48:21	49:20 50:10
knocking 44:20	left 37:23,24	lot 26:24,25	51:21 52:9
know 7:14 11:8	38:8	27:17 38:21	meaning 36:22
11:10,11 12:1	legal 13:7,9	loud 21:1	37:7,12 38:14
14:13 16:13,14	19:10	lunch 45:3	38:24 39:19
17:17 18:18	leisa 1:18 61:6	m	57:17 58:4,11
20:13 21:9	61:22	m 1:18	58:19,23 59:1
25:5,6,6,22	lighting 53:5	machine 24:5	59:5
26:6,6,9,25	lines 55:18	24:25 27:21,23	meaningful
27:14,15,18,25	little 20:4 22:7	made 27:4	38:1
28:1,5,9,10	22:8 34:18	main 18:15,23	means 39:1
31:25 33:7,8	36:1 45:9 47:7	18:24 35:8	41:21 54:10
37:18 38:8	48:9 58:7	make 14:3	measure 50:14
39:5,8,24 40:7	llp 2:4	21:24 31:1,19	50:18
40:7 41:9,16	located 4:15	33:23 42:23	measurement
42:9 44:5	location 31:12	43:13 49:9,13	49:16,18
47:10,17 49:17	34:10,10 39:4	50:21 51:5	measurements
50:10,14,16,16	long 7:8 40:20	52:7 59:13	50:5
50:17 53:14,15	look 8:10 18:12	making 14:1	medical 24:14
53:16 55:7	18:25 29:25	49:21	

[meets - oh]

meets 25:12 memory 16:7 mention 39:9 mentioned 14:13 19:22 21:10 27:25 36:17 38:22 40:1 41:12 44:5 46:12 mentioning 41:14 mentions 46:24 method 38:6 47:10 methods 20:21 47:8,15 50:17 metrics 53:13 michigan 61:2 61:24 mill 2:13 millimetrics 50:4 53:13 minimum 26:12 minute 37:21 45:4 minutes 36:4,6 56:7 misinterpreted 44:10 misspoke 48:2 mistaken 13:12 misunderstan... 41:19 42:13	misunderstood 17:20 21:8 40:1 41:11,24 mm 11:21 17:3 19:2 20:24 30:7 45:14 46:14 48:8 49:12 57:10 mobile 33:10 modify 8:8 moment 8:9,21 39:21 44:1 mongan 10:19 11:1,8,11 12:1 12:5,8,11,14,18 12:23 13:5,14 13:15,18,20 14:6 57:21,24 58:3,10,19,25 mongan's 10:23 monitoring 1:8 9:16 11:3 56:18 monitoring's 10:20 11:15 19:9 23:12 monroe 61:4,24 month 5:19 6:1 6:8 months 12:12 14:12 morning 4:12 mouth 28:3	move 22:7 29:21,22 31:13 31:14 33:8,17 33:20 34:3,19 moved 32:10 33:7,14 34:2 48:20 movement 33:20 34:12,17 34:21,24 35:4 35:5,8,14,16 moving 30:19 31:12 33:4 34:4,5,11 35:15 multidiscipli... 24:13 25:5 26:7 n name 4:13 necessarily 16:18 18:21 30:12,14 need 7:9 27:8 27:13 31:19 37:18 44:22 45:2 needed 42:9 neighboring 39:6 never 14:6 new 2:6,6 nine 36:6 nodding 7:4	non 34:20 normal 54:6,10 notary 61:1,23 notes 4:19,20 61:12 nuance 21:11 21:14 number 43:12 numbered 20:16 numbering 20:17 numbers 37:18 o oath 6:18 objection 11:4 14:11 16:23 18:1,7 21:6,23 22:17 23:2 24:2,7,11,20 25:3,11,18 26:2,20 27:22 35:25 36:23 41:8 42:2 50:9 50:23 51:9 52:3,12 53:21 58:6,13,22 59:4 obviousness 46:10 occur 29:7 offered 3:12 office 1:1 48:11 oh 20:8,10 28:18 38:5
--	--	---	---

[oh - patent]

42:24 44:2 48:19 51:24 58:23 okay 4:25 5:5 6:4,7,15,16 7:2 7:3,5,6,10,11 7:15,25 15:8,9 16:5,5 20:12 20:20,20 23:21 31:21,22 36:3 36:7,8 42:11 42:23 43:6,20 44:16 45:10,13 47:19 49:16 51:19 53:1 56:7,11,23 57:15 59:7,24 opinion 15:23 17:11 18:3,9 21:24 22:1,13 36:14 41:5,16 41:18 49:24 opinions 20:2 22:4 57:11 oral 32:14 33:19 ordinary 23:13 organize 45:4 orthodontic 14:14 41:12,21 47:15 54:5,22 55:12,13,25 orthodontics 14:5 25:23 26:8,10 47:9	54:25 55:3,5 orthodontist 13:24 21:24 22:1,14 28:4 29:5,11 31:1 38:2 50:11,14 50:25 51:11,22 orthodontist's 49:21 orthodontists 24:15 32:18 48:11 52:1,10 overbite 39:5 own 14:4 47:13 owner 1:9 10:21,24 p p.m. 36:9,10 45:6,7 56:13 56:14 60:4 page 2:13 3:3 3:11 7:23,23 7:25,25 8:14 17:2,6 20:13 20:13,17,18 28:16,19 30:1 36:13 38:4,5 48:2,3 52:18 52:19 53:23,25 55:11 pain 33:24 palo 2:14 paragraph 14:8 17:1,5,6 19:1,14 23:6	23:11,17,19,21 26:17 28:14,17 28:20,21 29:25 30:2,17,22,22 30:23 32:17 33:13,15 34:6 34:7,18,25 35:2,3,10,13,13 35:17,18,22 36:12,17,20 37:10,22 38:17 38:18 40:10 44:1 46:12 47:1,3,5,6,20 48:1,3,9 49:5,8 52:19,20 53:23 54:1,3,9 55:6 57:5,7,12 59:8 59:11 paragraphs 46:25 parentheses 55:19 park 2:5 parks 2:3 3:7 9:1 11:4,7 13:9 14:11 16:23 18:1,7 21:6,23 22:17 23:2 24:2,7,11,20 25:3,11,18 26:2,20 27:22 35:25 36:23 41:8 42:2,20 44:23 45:1	50:9,23 51:9 52:3,12 53:21 56:23 57:1 58:9,17,24 59:6,24 part 16:2,9,19 20:15 25:4 29:10 34:10,12 35:5,8,16 44:6 45:10,23 52:9 53:18 particular 25:7 27:24 34:14 38:4 39:4,4 40:18 parties 60:6 party 61:13 pass 31:23 passed 32:4 past 20:14 pastor 1:18 61:6,22 patent 1:1,2,7,9 2:17 5:6,8,12 5:15 6:1,4,8,13 7:17 8:11,20 10:20,21,24,24 12:5,8,24 13:14,18 14:17 14:20,21,24 15:10,13,14,16 15:19,22,24,24 16:6,7,20 17:10,15,17,23 17:24 18:5,10
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[patent - professional]

18:12,13 19:3 19:6,11,14,17 19:19,23 20:2 20:9,16 21:4,9 21:20,21 22:13 22:21 23:1,7 23:12 26:19 27:10 46:24 57:2 59:7 patents 14:19 16:22 19:17 patient 25:2 33:21 34:21 47:12 53:6 54:5 patient's 28:3 30:6 31:2,6,20 patients 24:19 33:23 pending 7:8,9 people 26:21 27:5,7 28:10 perform 32:1 48:11 52:15 performed 35:9 48:12 period 57:9 person 23:13 23:24 27:25 28:8 perspective 59:2 pertain 40:25 pertaining 9:16 12:20 13:23	44:5 49:22 petitioner 1:5 phone 47:13 photo 37:25 54:4 photograph 52:20,23 53:2 53:5 photographs 41:13,21 photography 14:5,15 37:4,5 37:6 photos 37:24 37:25 phrase 46:3,7,7 pick 23:18 picture 53:11 pictures 49:23 pile 43:5 place 29:21,22 placed 33:2 plaintiff 2:9 please 4:12 7:4 7:16 8:1 17:2 20:5 28:15 36:13 39:21 49:6 55:7 57:2 59:8 point 13:23,24 13:25 14:7 26:10 31:3,7 32:2,10 37:14 38:4,6,13,22 39:7,17 41:23	44:9 50:10,25 pointed 14:7 poor 31:16 32:11,14 45:10 portion 14:2 22:9 portions 13:22 posa 23:16,19 23:24 24:5,10 24:12,17,18 25:7,9,16,22,25 26:6,11,12,17 positioning 17:20 possible 50:20 51:2,5,12,25 52:6 potential 31:10 practice 47:9 47:15,22 preceding 18:16 precise 49:18 precision 52:25 53:4,11 preliminary 11:15 preparation 9:11,17,22 prepare 8:22 prepared 57:11 preparing 10:5 10:8,14 14:20 15:16 42:10	prescribe 28:2 32:7 prescribed 29:18,19 present 13:6 21:2 22:22,24 pretty 22:6 prevent 54:13 preventing 31:16 previous 5:21 5:25 6:13 30:17 33:25 35:1 52:18 primary 30:5 principle 19:10 prior 4:23 48:7 probably 50:10 51:21 problem 33:9 33:19 58:7 problems 32:21 32:22 proceeding 6:25 proceedings 5:3 professional 23:9 24:10 39:13,20 40:5 40:17 41:7 42:1 43:25 44:10,18 45:20 46:5,19 59:3
--	---	---	--

[professionals - regime]

professionals 27:9 36:22 37:12 38:15,25 57:18 progress 27:3 29:13 progressing 31:17 project 50:12 properly 54:14 proposed 23:13 47:11 provide 6:20 7:4 19:9 21:25 25:1,10 26:1,8 26:14 41:1 42:6 provided 11:2 51:10 provides 24:19 providing 6:17 16:14 27:2 38:19 ptab's 10:4,7 public 38:3 61:23 publicly 52:14 pull 7:16 57:2 purporting 47:21 put 15:6 putting 59:20	q	quote 55:19	redirect 56:22
		r	reduced 61:10
	qualifications 25:16 26:13 qualified 25:1 25:10 qualify 25:25 quality 53:5 quantify 50:4 quantitative 49:10,13,16,25 50:21 51:1,5 52:7 59:13,17 59:21 quarter 56:9 question 6:24 7:2,8,9,9 11:17 15:13 39:25 41:3,15 42:8 43:22 questions 6:23 13:16,21,21,23 14:1 15:7 16:24 17:21 21:8 25:19 56:6,21,24 57:16 59:24 61:8 quick 15:12,21 16:6 quiet 22:6 quite 10:9 13:10 16:24 26:11 27:23 40:8,23 41:17 47:5 58:14	rather 7:4 reach 19:13 reached 41:4 read 17:4 19:8 20:25 22:10 readily 52:14 reads 22:22 47:8 55:23 reality 49:9 59:12 really 38:2 47:11 rearranged 45:8 reason 6:20 32:13,14 rebuild 32:2 recall 5:18 10:25 12:12 13:11 16:7 19:12 57:15,20 59:10,16 recess 36:9 56:13 recollection 42:4 record 4:13 6:15 22:9 36:10 44:22 45:6,7 56:14 recorded 61:9 records 37:6	refer 5:8,15 6:4 13:9 14:23 15:5 30:5 33:5 46:7,21 47:17 47:21 reference 9:8,9 9:10,13 14:1 37:9,15,16 39:11 40:3 43:23 44:2,13 44:17 45:13,18 46:7,9 48:7 58:20,20,21,21 references 4:21 4:22 9:6,8,19 14:3,4 36:18 36:21 57:17 58:1,5,8,12,15 59:2 referring 14:24 21:8 37:3,14 38:10 42:20 refers 48:17 49:1 refinement 32:2 regard 5:3 regarding 13:13,17 35:22 54:4 regards 6:22 regime 32:8

[region - sentence]

region 33:22 51:17	rephrase 11:17 35:11	14:10 15:2 17:12 19:24	says 17:9 19:7 19:17 20:21,23
regular 29:11 29:14	report 10:13 38:23 39:24	20:22 22:12 23:22 24:1,17	21:21 40:11 48:10 57:8
reinforced 47:11	reporter 5:22 22:10	24:19 25:9,17 25:25 26:1,19	scaler 48:14
related 5:6 21:15 23:25 24:24 30:11 61:12	requested 22:9 60:5	27:12,21 28:23 30:6,9,13,16,20	science 23:25 24:23 27:20
relates 5:12 21:2,16 22:22 22:24	require 28:3	30:24 31:4,17	scientist 27:17 27:20
relation 9:3	rescan 32:2	32:12 34:3	scope 58:6,13 58:22 59:4
relationship 39:5	research 28:10	35:7,21,23	second 37:19 44:20,22
relevant 15:23 16:21 17:9,10 18:4,5,9,13,15 19:3,11,13,23 20:3 21:4,10 21:19 22:13 23:7 25:7 26:19 27:8,9 27:18 36:15	researcher 27:16	37:1,20,23,24 38:8,11 40:2,3 41:15 42:1 48:7 49:3,21 52:11 54:1,11 55:4 56:12	secondarily 31:24
remainder 20:1	respective 60:6	road 2:13	section 9:16
remember 6:3 10:10 14:3,4 14:12,13 40:23 41:18	response 10:21 10:24 13:25	room 4:17	see 20:18,22 31:22 34:22 36:22 37:2,18 42:24 46:22 48:15 49:8 53:8 55:19,21 56:5 57:7
remote 1:12 38:19	responses 11:15	rosati 2:12	segmenting 17:19
remotely 48:12	rest 36:16	routine 29:10	sensitive 33:10
rendering 31:3	retention 48:14	rpr 1:18	sensitivity 33:19
	review 9:10,13 9:15,17,21,23 10:4,7,13,15,17 14:20 15:16 16:7 46:25 57:12	rules 6:12,24 run 6:14	sentence 14:8 17:4,23 19:1 20:25 22:20 23:1,5 35:18 36:24 37:10 47:6,14,20 48:17 49:8
	reviewed 8:25 9:5 10:11,19 10:23 11:1,6,8 11:11 12:1 14:17 15:10,14 15:19	salah 9:13 36:17 45:13,18 55:7,10,14,16 55:20,23 58:21	
	right 4:25 5:6 6:2 7:17,23	sas 1:8 saying 17:12,14 18:3,6 26:11 26:12 27:14 33:15 50:7,20 51:24,25 52:6	

[sentence - teaches]

52:23 53:2 55:21,23 56:1 58:15 59:10,12 separation 52:24 53:3,10 53:14 september 1:17 4:2 set 34:16 57:11 61:8 several 33:3 38:18,18 shape 19:7 short 56:4 side 37:23,23 38:8,8 signature 8:3 8:15,17 60:5 61:21 signed 12:15,24 13:1 signing 15:10 15:19 similar 13:19 15:13,21 31:20 58:15 similarity 46:21 similarly 55:20 55:23 simply 53:12 simulation 31:21 sitting 8:7 40:24	situation 53:13 skill 23:13 software 27:21 27:24 solid 51:15,16 somebody 44:20 somewhat 31:18 sonsini 2:12 sorry 9:1 17:5 30:2 38:5 42:25 45:3,21 48:2 52:25 58:15 sounds 41:3 speak 12:11,14 12:18 special 39:19 46:16 specific 13:21 14:1,8 21:12 36:21 37:7,12 38:14,24 40:9 40:10 57:17 specifically 15:5 28:12,12 spoke 13:5 14:6 spoken 12:5,8 12:23 ss 61:3 stage 31:21 staging 27:4 standard 41:12 52:10 53:18	standardized 14:5,14 37:4,6 41:20 start 52:25 starts 55:19 state 4:12 29:19 61:2 stated 21:13 statement 17:13 25:4 states 1:1 29:17 31:15 35:19 59:12 stenographic 61:11 stenographic... 61:9 step 29:7 54:7 steps 18:20 28:22 29:1,4 48:11 street 1:14 stuff 17:18 submitted 10:20 11:9,12 11:14,23 12:2 substance 57:21 suggests 47:14 suitable 26:14 support 11:15 supporting 10:23 suppose 26:16	supposed 31:13 48:22 sure 10:9 11:10 13:10 25:19 26:3,11,25 27:23 31:19 33:23 39:14,15 39:22 41:9 42:9,23 43:13 44:24 46:20 47:5 50:20 surface 38:20 surrounding 34:15 37:25 sworn 4:7
			t
			table 3:1 take 7:7,10,12 7:14 8:10 16:6 36:2 37:8 40:11 42:10 47:22 55:16 56:3,4 taken 1:14 6:7 36:9 53:5 56:13 61:7,12 talk 11:20 33:13 35:2,12 talking 5:9,16 6:5 14:14 20:12 34:7,25 35:9 teaches 55:14 55:20,23

[team - treatment]

team 24:13 25:5	54:21 58:2,7 58:15	18:22 21:7 23:17 24:15	tool 53:12,18 59:17,20
technical 20:23 20:25 22:21 39:15 40:8	terminology 38:1 40:16 41:6,11,23 44:6,12 45:11 45:24 46:16 47:4,23,25	28:25 29:3 30:16 37:4,25 38:18 39:15,18 40:19 41:9,24 42:12 44:5,20 45:8,9,23 46:6 46:6,7 47:3 50:2,24 56:4	tools 52:15 53:17 59:21
technician 26:22			tooth 16:17 17:19,20 29:22 29:23,23 32:22 32:25 33:1,2,3 33:4,7,17,18,20 34:2,13,13,14 34:15,19 35:8 35:16 39:6 51:17,17,17 52:14 55:1
technicians 27:14 28:11,11	terms 36:21 37:3,11,13 39:11 40:3 43:23 44:4,8 44:16 45:18 46:3,17 57:16 57:25 58:4,11	thought 17:15	
techniques 50:2		three 28:21 44:4 55:18	
technology 1:4 28:5 50:3,15 50:24 51:1,11 51:14,16		tight 48:13,17 48:21,23 49:1	
teeth 16:18 30:8,10,19 31:6,12,20 32:10 33:3,4,4 33:7,14 34:11 34:15 35:14,16 38:6,16,20,21 38:22,24 39:6 41:13 48:19,20 48:24 54:14 55:1,12,13,25	testified 4:9 testify 4:7 testimony 6:17 6:21 39:17 40:15,19 51:8 56:17 testing 48:13 text 20:15 thank 36:7 56:12,20 59:25 60:1,3	till 56:9 time 7:7,12 12:12,24 18:21 31:3 32:3,6 33:3 36:3,6 37:8 50:5,18 51:1,11,14,20 52:11 53:19 56:10	top 20:17 37:24 totally 31:22 tr 57:9 track 29:18 tracking 34:20 tracks 27:4 trademark 1:1 trained 26:24 28:1,8 training 26:7 28:9
tell 6:18 7:1 21:9 45:1	thing 31:16 38:8 40:1 50:18	times 12:18	transcript 9:25 10:12,13 40:6 40:20 57:9,13 61:11
telling 57:20 59:16	things 18:16 33:11 39:8 44:4	tissue 34:15 today 4:17,19 5:2,8,11 6:4,12 6:21,23 8:7,20 10:14 15:8 17:12 42:18 56:16 57:15	transcription 61:10
tenth 30:24		took 5:18,25 15:12,21	treatment 15:24 16:1,2,3 16:14,19,19 17:11 18:10,11
term 11:5 14:5 33:18 38:13,24 39:10,19 45:24 47:25 50:4	think 10:6,9 11:5 12:4 13:10 16:8		

[treatment - wsgr.com]

18:14,15,17,19 18:20,23,24 19:4 21:5 23:8 23:8 24:19 25:2,10,24 26:1,9,15,25 27:2,3,8,19 28:2,6,22 29:2 29:6,8,10,13,16 29:18,19 30:24 31:7,7,10,15,17 32:7,11,18,20 32:21 35:23 54:22 trial 1:2 true 61:11 truth 4:7,8,8 6:18 try 7:12 45:4 58:18 trying 18:17 37:19 39:23 44:1 turn 8:14 17:1 20:5 23:11 28:14 36:12 48:1,3 49:5 53:23 55:6 57:5 turning 7:25 59:7 twice 12:22 two 4:20 9:5 20:17 30:5,11 35:8 39:8	48:19 50:12 type 8:5,17 54:25 typed 8:6 typical 28:22 28:25 typically 23:8 u u.s. 1:7 unaware 50:3 under 6:18,24 20:23,25 22:20 44:3 55:18 understand 5:2 5:9,16 6:5,17 6:24 7:2 22:15 27:9 41:19 44:11 understanding 16:9 18:13 19:5,10,16,22 39:18 40:15 41:6,25 47:23 undesirable 30:20 unintended 34:20,24 united 1:1 units 50:5 unqualified 26:18 unsuccessful 29:20 unsure 47:7	unwaxed 49:2 upload 42:15 use 36:21 46:6 47:12 50:17 51:23,25 52:14 used 50:2 55:1 57:25 58:4,11 uses 37:11 46:16 using 18:21 49:24 50:25 51:6,11,14 52:7 v various 57:17 58:5,8 verbal 7:4 veritext 1:19 video 54:4 videoconfere... 1:12 view 13:24,24 13:25 24:23 26:10,17 38:7 38:7,7 50:11 50:25 59:1 virtually 48:12 visual 31:1 49:10,14,20,21 50:22 59:14 vitality 33:18 vs 1:6	w want 14:23 33:8 34:16 42:23 43:13 46:16 way 13:15 18:19 31:18 34:11 49:9,13 50:6,7,13 58:18 59:12 we've 36:1 week 30:24 west 1:14 widen 55:2 wider 16:8,11 widespread 51:25 52:10 53:16 59:17,20 wilson 2:12 witness 3:3 4:6 36:3,7 42:23 56:7,11 60:3,5 work 24:5,12 25:4 26:21,24 27:5,17 28:5 worn 48:24 54:5 written 11:5 24:3 wrong 29:21,22 34:5 42:25 43:5 wsgr.com 2:16
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[yeah - zoom]

y
yeah 6:6 13:12 15:3,3 20:19 20:22 22:18,25 23:19 29:3,23 29:23 30:4,21 32:13,15,24 34:4 37:2,2,2,2 37:22 38:9 40:25 42:4 43:1,1,1,5,11 44:15,23 45:3 45:4,8,17,23 46:2,11,20 47:25 48:5,19 49:16,17,18,23 51:10 52:4 55:13 56:8 59:5 york 2:6,6
z
zoom 11:20 22:5

Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

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