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

ALIGN TECHNOLOGY, INC.,	Case No. IPR
Petitioner,	2023-01369
vs.	U.S. Patent No.
DENTAL MONITORING SAS,	10,755,409
Patent Owner.	

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REMOTE DEPOSITION OF
BUDI KUSNOTO, DDS, MS

August 9, 2024
9:59 a.m. Central

Stenographically Reported By:
Deanna Amore - CRR, RPR, CSR - 084-003999

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ALIGN - EXHIBIT 1038
Align Technology, Inc. v. Dental Monitoring SAS - IPR2024-00110
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(All Participants Appeared Remotely.)

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(Whereupon, the witness was duly sworn at 9:59 a.m.)

THE STENOGRAPHER: Thank you.

You may proceed.

BUDI KUSNOTO, DDS, MS

called as a witness herein, having been first duly sworn, was examined and testified as follows:

EXAMINATION

BY MR. ARGENTI:

Q. Good morning, Dr. Kusnoto. 09:59:22

A. Morning.

Q. My name is Matt Argenti, and I represent the petitioner, Align, in this proceeding. So I'll be asking you some questions today.

First, could you please state your name for the record?

A. My name is Budi Kusnoto.

Q. Where are you currently located, Dr. Kusnoto?

A. Located in Chicago, Illinois. 09:59:43

Q. Are you in your office or in your home?

A. No. I'm in an office.

Q. Is there anyone in the room with you today?

A. No. I'm by myself.

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Q. Do you have a printed copy of your declaration in this IPR available to you today?

A. Yes, I do.

Q. And do you also have printed copies of the exhibits that are cited in your declaration available?

A. Yes, I do.

Q. Great.

That being the case, I think if we refer to exhibits today that you have in your possession, 10:00:30 I think using those hard copies is fine instead of referring to the Exhibit Share. If you'd like to use the Exhibit Share system, just let me know, but I'm happy to rely on hard copies. Okay?

A. Okay. Thank you.

Q. Are those copies of the exhibits that you have clean copies?

A. Yes, they are all clean.

Q. Okay. No notes on them then?

A. No. 10:01:00

Q. Okay. Do you have any notes with you in the room today?

A. I do not have any notes.

Q. This is not your first deposition; correct?

A. This is not.
Q. How many times have you been deposed?
A. One other time.
Q. Was that in January of this year?
A. I believe so. I don't quite remember exactly, yeah, but few months ago.
Q. Was it in connection with the district court litigation between Dental Monitoring and Align?
A. Yes, it is. 10:01:45
Q. I'm going to quickly go through some of the ground rules just to refresh your recollection and make sure that we have the same understanding.
Do you understand that you are providing your testimony under oath and are expected to tell the truth?
A. Yes, I understand.
Q. Is there any reason that you cannot provide complete and accurate testimony today?
A. I don't believe I have any reason. 10:02:10
Q. Hopefully, my questions will be clear. If you do not understand any question, please let me know that it's unclear. Okay?
A. (No audible response.)
Q. Under the guidelines for this proceeding,

if you do not ask for clarification, I will assume that you understand the question. Okay?

A. Okay.

Q. Please provide verbal answers rather than nodding your head for the benefit of the transcript. Okay?

A. Yes.

Q. And we can take a break at any time that you would like one as long as there's not a question pending. If there is a question pending, 10:02:57 you have to answer it before we take a break. Do you understand?

A. Understood.

Q. And I will plan to take a break around every hour or so, but if you'd like to take one more frequently than that, let me know.

A. Okay.

Q. You are being compensated for your testimony in this proceeding; correct?

A. Yes. 10:03:21

Q. And your hourly rate is $100 an hour; is that right?

A. Yes. Correct.

Q. Payment for your work is being paid to the foundation for Modern Bioprogressive Orthodontics;

is that right?

A. Yes.

Q. Do you have a role with that foundation?

A. As a researcher.

Q. Are you also the president of that foundation?

A. No, I am not.

Q. Have you ever been the president of that foundation?

A. No. 10:04:00

Q. Can you identify the president of that foundation for me, please?

A. Currently, it's Dr. Flavio Sanchez.

Q. Who was the president for the foundation of Modern Bioprogressive Orthodontics in 2022?

A. It's still -- it is his, still his, yeah.

Q. What does the foundation for Modern Bioprogressive Orthodontics do?

A. It's a non-profit foundation that deals with research in -- specifically in orthodontics. 10:04:50

Q. What does the term "bioprogressive" mean in the foundation's name?

A. It's an orthodontics philosophy in which we incorporate a lot of biological aspects and biological principle while we try and establish the

treatment for a particular individualized case.

Q. Is it correct to say that the foundation is focused on doing research in the field of orthodontics to develop technology that's not yet well understood in that field?

MR. BLYTHE: Objection to form.

THE WITNESS: Not really. So I believe I don't quite understand your question. So if you can rephrase that.

BY MR. ARGENTI: 10:06:04

Q. What did you not understand about my question?

A. Can you rephrase the question?

Q. I can rephrase, but it would be helpful to understand what was unclear about my question.

MR. BLYTHE: Objection to form.

THE WITNESS: I believe you are asking whether a foundation is doing research in the area of orthodontics -- someone means?

BY MR. ARGENTI: 10:06:40

Q. My question was whether the foundation is focused on research in the field of orthodontics to develop technology that's not yet well understood in the field.

Do you agree?

MR. BLYTHE: Same objection.

THE WITNESS: No, not really.

BY MR. ARGENTI:

Q. Why not?

A. The research that we had been doing and currently doing, it's research that's already been done by some other predecessors, and, you know, some of them we just reexploring it and try to revisit the subject from a -- from a different angle. Yeah. Or collaborate with different 10:07:56 people. Yeah.

Q. So is the purpose then to refine the technology?

MR. BLYTHE: Objection to form.

THE WITNESS: Yeah, you probably can say so. Not really to refine but to confirm, to validate, that's what the research that we have been doing is.

BY MR. ARGENTI:

Q. So you mentioned -- when I asked you what 10:08:42 the term "bioprogressive" meant, you said it's a orthodontics philosophy in which we incorporate a lot of biological aspects and biological principles while we try and establish the treatment for a particular individualized case.

Why is that of interest in the field of orthodontics?

MR. BLYTHE: Objection to form.

THE WITNESS: I guess, you know, some treatment has lack of individualization. So that's what -- you know, we try to cater to our patients' best oral care as individualized as possible because everyone is different.

BY MR. ARGENTI:

Q. Does the foundation research remote 10:09:50
technology for the field of orthodontics?

A. It is not part of the foundation research project. We haven't really utilized that technology in what the research that the foundation did or doing.

Q. Does your foundation research the use of deep learning in the field of orthodontics?

A. No.

Q. What year was the foundation established?

A. I am not quite sure, but it's probably in 10:10:47
the early 2000s.

Q. Did the foundation develop a system called DR. ANNIE?

I'm sorry. Dr. Kusnoto, if you gave an answer I, at least, didn't catch it on the audio.

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A. No.

Q. Have you heard of a system called DR. ANNIE?

A. I heard of that.

Q. What's your understanding of what DR. ANNIE is?

A. It's a diagnostic system.

Q. Who developed it?

A. I'm not sure actually.

Q. Are you aware that the foundation's website says that as of 2023, it has a patented licensed technology called DR. ANNIE? 10:12:11

A. I don't recall that foundation develop or -- app on DR. ANNIE. They might have used it, some of my other colleague, but not in the area that I'm involved with the foundation.

Q. And what area are you involved in the foundation?

A. Specifically the orthodontic biological app, the patient care. 10:13:02

Q. And is DR. ANNIE relevant to the orthodontic biological patient care?

MR. BLYTHE: Objection to form.

THE WITNESS: It could, but I have never been involved in that. So I'm not sure.

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BY MR. ARGENTI:

Q. So as far as you know, you are not an inventor or on the patent that covers the DR. ANNIE system?

MR. BLYTHE: Objection to form.

THE WITNESS: So the -- can you rephrase the question?

I'm not quite sure. Am I the -- you are saying that -- can I rephrase them? You are saying that my role as a researcher in the foundation 10:14:06 owned the patent of DR. ANNIE?

BY MR. ARGENTI:

Q. Do you know whether you are a named inventor on the DR. ANNIE patent that the foundation's website refers to?

MR. BLYTHE: Objection to form and to scope.

THE WITNESS: Since I'm not sure, I would not answer the questions.

BY MR. ARGENTI:

Q. Are you a named inventor on any patents? 10:14:48

A. -- be.

Q. I'm sorry. Was that you could be?

A. Yes.

Q. What patents would you be a named inventor on?

A. It's been a while. I don't quite recall. It's part of the work at University of Illinois.

Q. So if you are a named inventor on a patent, it has no relation to the foundation?

MR. BLYTHE: Objection --

THE WITNESS: It has no relation to foundation. My role in the foundation, as I explained, is a researcher.

BY MR. ARGENTI:

Q. What work at the University of Illinois would be related to the patent you're referring to? 10:16:10

MR. BLYTHE: Objection to form.

THE WITNESS: I don't think, without the permission from the university, I can disclose that.

BY MR. ARGENTI:

Q. Who were the other named inventors on the patent?

A. The university intellectual property handles the situation. So, you know, I cannot really disclose that. 10:16:53

Q. Do you know when work on the DR. ANNIE system first started?

A. I'm not aware.

Q. Does the DR. ANNIE system involve neural

networks?

MR. BLYTHE: Objection to form and to scope.

THE WITNESS: I'm not aware. It could, but I'm not aware.

BY MR. ARGENTI:

Q. Are you aware that DR. ANNIE is an acronym?

MR. BLYTHE: Objection to form.

THE WITNESS: I am not aware.

BY MR. ARGENTI: 10:17:45

Q. Does it sound correct to you that DR. ANNIE stands for Digital Research Artificial Neural Network Intelligence Expert?

MR. BLYTHE: Objection to form.

THE WITNESS: I'm not aware.

BY MR. ARGENTI:

Q. Have you ever heard the term Digital Research Artificial Neural Network Intelligence Expert before?

A. Before the time you mentioned it just now? 10:18:16

Q. Correct.

A. No, I'm not aware.

Q. Is your answer, no, you have not heard that term before today or you are not aware of whether you have?

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MR. BLYTHE: Objection to form.

THE WITNESS: I am not aware of the -- what you mentioned, Digital Research -- those acronym that you just mention.

BY MR. ARGENTI:

Q. That's a term you haven't heard before today?

A. No.

Q. You understand that you're here today with regard to one particular IPR proceeding; correct? 10:19:19

A. Yes.

Q. That IPR is IPR 2023-01369; correct?

A. 01369, yes, correct.

Q. And that IPR related to U.S. Patent No. 10,755,409; is that right?

A. 10,755,409. Yes. I'm just reading my cover sheet here.

Q. If I refer to that as the '409 patent today, will you understand what I'm referring to?

A. Yes, I am. 10:20:08

Q. Can you please take that declaration out again that you just had in your hand?

That's Exhibit 2030 in this IPR; correct?

A. This?

Q. Yes.

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And can you turn to the last page, please, page 72?

A. Page -- this?

Q. Correct.

So it looks like this declaration is signed twice by you; is that right?

A. Yes. I -- it's one I used a digital signature. So it always come like that.

Q. Okay. That explains. My next question was, you know, why does it have two signatures? 10:21:12
Did you add one or both of them?

(Simultaneous speaking.)

THE WITNESS: It's a single click, but they come up with both.

BY MR. ARGENTI:

Q. Understood.

And that was you that clicked and added that digital signature; is that right?

A. Yes.

Q. Prior to adding that digital signature, 10:21:32
did you carefully review this declaration to ensure its accuracy?

A. Yes.

Q. And sitting here today, do you believe the declaration is accurate?

A. The one with my digital signature here, yeah, what I reviewed and I believe it's accurate.

Q. Is there anything about your declaration that you would like to modify or correct?

A. No.

Q. About how many hours did you spend preparing your declaration on the '409 patent?

A. I don't really recall the exact hours. Maybe if I have to take a wild guess, 35 to 40 hours. 10:23:06

Q. Let's turn to page 8 of your declaration, please.

In paragraph 13 and 14, you identify materials considered in forming your opinions; correct?

A. Yes.

Q. And in the second sentence of paragraph 13, you say you considered the materials you've identified in your declaration.

Do you see that? 10:24:00

A. Yes.

Q. And then you go on to say "In particular, in forming my opinions, I have considered the declaration of Dr. Foroosh (Exhibit 1002), as well as the Carrier Provisional (Exhibit 1006), Carrier,

(Exhibit 1005), and Salah (Exhibit 1008)."

Do you see that?

A. Yes.

Q. Did you consider other materials beyond those four exhibits in forming your opinions?

MR. BLYTHE: Objection to form.

THE WITNESS: Let me try to rephrase your questions. Did I consider other than the four documents that you just mentioned in forming my declaration here? 10:25:13

BY MR. ARGENTI:

Q. Right.

A. The answer is yes.

Q. What other documents did you consider when forming your opinions?

A. This one.

Q. For the record, was that the exhibit list on page 3 of your declaration that you just referred to?

A. Yes. 10:25:36

Q. So if we look at that exhibit list, is it your testimony that you considered the exhibits identified in this exhibit list when forming your opinions in this IPR?

A. Can you clarify the question?

Q. Looking at the exhibit list on page 3, did you consider these exhibits when forming your opinions in this IPR?

A. Yes.

Q. Looking at the first entry on the exhibit list, Exhibit No. 2031, that's your CV; correct?

A. Yes.

Q. In what way did you consider your own CV when forming your opinions in this IPR?

A. Expertise as previously noted on this. 10:26:35

Q. If we look at paragraph 1 of your declaration on page 4, in the second sentence, you say "I've been asked to provide my opinions relating to aspects of the state of the art described in U.S. Patent No. 10,755,409 ('the '409 patent') (Exhibit 1001), as well as certain references relied upon by petitioner Align Technology, Inc., and its expert witness, Dr. Hassan Foroosh."

Do you see that? 10:27:34

A. Yes.

Q. Did you review the '409 patent when forming your opinions in this IPR?

A. Yes, I do.

Q. When forming your opinions in this case,

did you review any other documents beside the exhibits specifically identified in your declaration?

A. Do you mean besides -- besides this list? The exhibit in page 3?

Q. And the other exhibits that are cited throughout your declaration, yes.

A. Yeah. Which is this list on page 3; right?

Q. Right. I'm including that, and I'm asking did you consider any other documents in forming your opinions beyond the exhibits that are specifically cited in your declaration either in the exhibit list or in the paragraphs of your declaration? 10:28:24

A. No.

Q. Did you review Align's petition when forming your opinions?

A. If it's not in the list on page 3 here, then it wasn't included. 10:29:06

Q. Have you ever reviewed Align's petition in this IPR?

A. Maybe I do, but I don't remember clearly. Maybe it's passing -- maybe it's passing through -- through -- before we -- before I sought this out,

this list, it might, but I'm not sure.

Q. So it's possible that you reviewed Align's petition in this IPR before completing this declaration, but you didn't -- but it didn't inform your opinions in this declaration? Do I have that right?

MR. BLYTHE: Objection to form.

THE WITNESS: Yeah, as I mentioned, I might, but I'm not sure.

BY MR. ARGENTI: 10:30:27

Q. Did you review the Board's institution decision in this IPR when forming your opinions?

A. Which board are you --

Q. The Patent Trial and Appeal Board.

A. I believe I don't quite understand which board are you referring to.

Q. And that's fine. It could be that the lawyers know about the Board, and it's not something I would expect you to know.

But are you aware that this IPR proceeding 10:31:18 is in front of the Patent Trial and Appeal Board at the U.S. Patent Office?

A. Yes, I am aware.

Q. And so sometimes we, in the practice, refer to that as "the Board." So my question is

about the Patent Trial and Appeal Board.

Are you aware that the Patent Trial and Appeal Board has issued an institution decision in this IPR?

A. That is not to my knowledge. I'm not aware.

Q. So as far as you are aware, you have not reviewed the Patent Trial and Appeal Board's institution decision in this IPR?

A. I only focus on the exhibit list that's listed on my page 3. 10:32:18

Q. Did you do anything to prepare for this deposition?

MR. BLYTHE: Dr. Kusnoto, just caution that as you answer that question, please don't go into the substance of any communications with counsel.

THE WITNESS: Can you rephrase again the question, Mr. Argenti?

BY MR. ARGENTI:

Q. In preparing for this deposition -- strike that. 10:32:57

Did you prepare for this deposition?

A. Yes.

Q. In preparing for this deposition, did you review your declaration?

A. Yes.

Q. Did you review any other documents in preparing for this deposition?

A. Yes.

Q. What other documents did you review?

A. The one listed on page 3 of my declaration.

Q. Did you review every one of those documents on page 3 when preparing for this deposition? 10:33:48

A. Yes.

Q. Did you review any other documents in preparing for this deposition?

A. No, if it's not on page 3 and on my declaration.

Q. Did you review the documents cited in paragraph 13 of your declaration in preparing for this deposition?

A. Give me a minute. Let me check paragraph 13. 10:34:29

Just to rephrase, the paragraph 13 that you mention is Exhibit 1002, 1006, 1005, and 1008; is that correct?

Q. That's what's listed there, yes.

A. Yes, that is the one I reviewed.

Q. You reviewed those four documents in preparing for this deposition?

A. Yes.

Q. Did you review the '409 patent in preparing for this deposition?

A. Yes.

Q. You mentioned earlier that you had been deposed in the district court case between Dental Monitoring and Align. Did you review the transcript of that deposition in preparing for this one? 10:35:44

A. Took a glance but not in detail because it's not what -- pertain to my reference that I selected.

Q. So other than taking a glance at that deposition transcript, did you review any other documents that aren't specifically identified in your declaration when preparing for this deposition?

A. No. 10:36:33

Q. Did you meet with anyone to prepare for your deposition?

A. We have draft back and forth multiple times.

Q. Sorry. What draft?

A. When I made this, this one? The declaration? Are you talking about the declaration?

Q. No. I'm asking about your deposition, this deposition today.

A. Oh, okay. Yes.

Q. But I think your answer means we maybe need to clarify some of my earlier questions, if there's any confusion about the declaration versus the deposition. 10:37:29

A. No, I understand. The declaration is this. The deposition is what we are doing now.

Q. So, for instance, I asked you about the deposition transcript from the district court case between Dental Monitoring and Align, and you said that you took a glance at it.

Was -- when did you take a glance at it?

A. More than a month or two ago. So I couldn't quite recall, remember, exactly.

Q. Was it before or after you signed your declaration? 10:38:11

A. I'm not quite sure.

Q. And then again let's look at paragraph 13 of your declaration.

A. Yes.

Q. I was just gonna ask again so that we're clear and there's no confusion between the time period when you prepared your declaration and then the time period more recently when you prepared for this deposition.

So my question is did you review the four documents cited in paragraph 13 in preparing for this deposition today?

A. Yes.

Q. When did you review them? 10:39:11

A. Several times. I don't quite remember but in the past month.

Q. So I'll ask again. I think we got sidetracked. But let me ask you again, did you meet with anyone to prepare for this deposition today?

A. I met with legal counsel.

Q. Who was that specifically?

A. Mr. Andrew Blythe.

Q. Was that an in-person meeting? 10:40:12

A. It's both, in person and virtual.

Q. Where did the meeting take place?

A. In Zoom.

Q. Where did the in-person meeting take place?

A. Oh, in Chicago.
Q. When was that?
A. It was yesterday.
Q. How long was the in-person meeting?
A. Couple hours.
Q. Do you know where Mr. Blythe is located today?
A. In Chicago.
Q. Do you know where in Chicago?
A. In an office. 10:41:21
Q. Do you know if he's in the same building that you're in today?
A. I'm not aware.
Q. Let's turn back to paragraph 1 of your declaration, please.
A. Yes.
Q. I want to look again at that second sentence where you say you've been asked to provide your opinions regarding aspects of the state of the art described in the '409 patent. 10:42:09
Do you see that?
A. Yes.
Q. What state of the art described in the '409 patent are you referring to there?
A. It's -- to my understanding, it's the way

that this patent being utilized from the orthodontics or dental technician point of view.

Q. Can you identify where in your declaration you discuss the state of the art described in the '409 patent?

A. Can you give me a moment to look?

Q. Uh-huh.

A. The question was where is the state of the art mentioned in this declaration? Am I correct?

Q. Right. 10:43:53

My question was can you identify where in your declaration you discuss the state of the art described in the '409 patent.

A. I'm not sure if I'm answering your question, but I'm looking at paragraph 24 in page 12, but method for monitoring the positioning, shape, appearance of teeth using digital -- 3D digital reference model. That is the -- one of the state of the art that pertain to my clinical use.

Q. So I think you were just reading from the last sentence of paragraph 24; is that right? 10:45:12

A. Yes.

Q. And that sentence begins "Salah is directed to a method for monitoring"; right?

A. Yes.

Q. So in that sentence you are addressing what Salah describes; right?

A. Yes.

Q. That sentence doesn't say that that's the state of the art described in the '409 patent, does it?

A. Oh, I thought you were asking my opinion as a clinician, orthodontist, what my thinking -- of which of this I think is the state of the art.

Am I not understanding your questions? 10:46:05

Q. Not quite.

If we look back at paragraph 1, there you say, in the second sentence, that you are providing your opinions relating to aspects of the state of the art described in the '409 patent; right?

A. Uh-huh.

Q. And my question is can you identify where in your declaration you discuss the state of the art described in the '409 patent?

A. Oh. Oh. Totally mistaken. I'm sorry. 10:46:34

It's on the page 15, paragraph 31 and 32.

Q. Those are paragraphs where you are discussing the state of the art with respect to standard orthodontic photographs; is that right?

A. Yes.

Q. Is it your understanding that the '409 patent describes using a standard set of dental photographs?

A. It's utilizing and establishing methods to construct or create the standard to acquire and obtain the standard orthodontic photographs.

Q. The '409 patent is? That's your understanding?

MR. BLYTHE: Objection to form.

THE WITNESS: From my clinical use as an orthodontist, there is many other aspect of '409 patent, but what I'm more focused on as what I was, you know, clinical orthodontist is to -- in respect to standard orthodontic photographs and then the paragraph 32 basically what I think as the state of the art. 10:48:04

BY MR. ARGENTI:

Q. So it's your understanding that the '409 patent describes using a standard set of dental photographs; is that right? 10:49:03

MR. BLYTHE: Objection to form.

THE WITNESS: It's not using standard photographs, but it's constructing or helping to acquire a standard photographs, to produce a standard photographs.

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BY MR. ARGENTI:

Q. So it's your understanding that the '409 patent describes producing a standard set of dental photographs; is that right?

A. And how to use it.

Q. How to use what?

A. How to utilize, create it, or acquire photographs, to analyze it, you know, so, yeah.

Q. Is it your understanding that the claims of the '409 patent require producing a standard set 10:50:06 of dental photographs?

MR. BLYTHE: Objection to form and to scope.

THE WITNESS: It will be helpful if I can have a look at the exhibit.

BY MR. ARGENTI:

Q. Sure. Why don't we take the '409 patent out. Exhibit 1001.

A. I got it here.

Q. And my question is is it your understanding that the claims of the '409 patent 10:51:23 require producing a standard set of dental photographs?

MR. BLYTHE: Objection to form and to scope.

THE WITNESS: You say "producing." I'm -- it is not producing. So that's -- that's where I'm --

get a little confused by your questions. If -- it's acquiring dental photographs by certain methods. It's not producing. Being produced is an analysis of those acquired images.

BY MR. ARGENTI:

Q. Is it your understanding that the claims of the '409 patent require acquiring a standard set of dental photographs?

MR. BLYTHE: Objection to form and to scope.

THE WITNESS: I think the question goes beyond my scope as a clinician utilizing the technology. Yeah. 10:52:37

BY MR. ARGENTI:

Q. Okay. Let's go back then to paragraph 1 of your declaration where you say that you've been asked to provide opinions relating to aspects of the state of the art described in the '409 patent, and earlier you testified that it's your understanding that the '409 patent does describe acquiring a standard set of dental photographs; right? 10:53:23

MR. BLYTHE: Objection to form.

THE WITNESS: Acquiring dental photographs, yes, that's -- it's acquiring a photographs of teeth.

BY MR. ARGENTI:

Q. Does it describe acquiring a standard set of dental photographs?

MR. BLYTHE: Objection to form and to scope.

THE WITNESS: You mean in my declaration?

BY MR. ARGENTI:

Q. In the '409 patent.

A. I don't think I ever mention it's acquire a standard photographs.

Q. I don't think you do either, Dr. Kusnoto. 10:54:12

A. Yeah. No. That's what I'm -- it's acquiring a dental photographs. It doesn't have to be standard, you know. It acquire dental photographs.

Q. Okay. So let's go back to that sentence again in paragraph 1 of your declaration where you say you have been asked to provide opinions relating to aspects of the state of the art described in the '409 patent.

And I will go back to my earlier question 10:54:44 of where in your declaration do you address the state of the art described in the '409 patent?

A. In answer to your question, and, then, I must go back to my page 15, which is the beginning of my explanation of the -- what I think is the

standard of art, 15 to 25, basically explaining different knowledge.

Q. And that's the section where you are addressing standard orthodontic photographs; correct?

A. That's the section, yeah.

MR. ARGENTI: It's been about an hour, Dr. Kusnoto. Why don't we take a break.

THE WITNESS: Sure.

(A short break was taken from 10:58 a.m. to 11:12 a.m.)

MR. ARGENTI: Back on the record.

BY MR. ARGENTI:

Q. Dr. Kusnoto, you have a bachelor's degree in computer science; right?

A. Yes, I do.

Q. You got that bachelor's degree in 1993; is that right?

A. Yes.

Q. Look at paragraph 6 of your declaration on page 5. Let me know when you're there. 11:13:01

A. Yes.

Q. In the first sentence of that paragraph, you say that you've been deeply involved in the implementation of digital technology for dental

treatment purposes.

Do you see that?

A. Yes.

Q. Further down in that paragraph, you identified some examples of a digital technology for dental --

A. Uh-huh.

Q. -- right?

And some of those examples include 3D imaging technology, teledentistry, artificial intelligence, and machine learning; correct? 11:13:52

A. Yes.

Q. About how many years of experience would you say you have working with 3D imaging technology in the dental field?

A. 15 years.

Q. How about artificial intelligence? How many years of experience do you have working with artificial intelligence?

A. Around five, six years maybe. 11:14:26

Q. And how much experience do you have with machine learning?

A. Aside from conducting research and validations on it and being exposed on the basic principle, machine learning, that's not much

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exposure on machine learning. I work with groups of engineers and -- yeah.

Q. And that experience you described, how many years of that type of experience do you have?

A. It's about five years.

Q. Return to paragraph 27 of your declaration, please on page 13.

A. Paragraph?

Q. Paragraph 27.

A. Yes. 11:15:50

Q. This is where you discuss your understanding of a person of ordinary skill in the art; right?

A. Uh-huh, yes.

Q. Based on the definition in paragraph 27, it sounds like your education and experience qualifies you as a person of ordinary skill in the art; right?

A. Yeah, I believe so.

Q. Did you qualify as a person of ordinary 11:16:14 skill in the art as of June 2017 under that paragraph 27 definition?

A. I would say so.

Q. Let's look at paragraph 29 on the next page. This is where you discuss Dr. Foroosh's

definition of the POSA; correct?

A. Yes.

Q. Do you qualify as a POSA under Dr. Foroosh's definition?

A. Could be for the most part but maybe not all. So I'm not sure how to answer that here.

Q. You don't have a master's degree or Ph.D. in computer science or related field. You only have a bachelor's; right?

A. Yes. 11:18:15

Q. But then he goes on to say "with at least two years of work in computer vision, image analysis, medical imaging, or related areas," and it sounds like you have 15 years of experience or so in that field?

A. Yes.

MR. BLYTHE: Objection to form.

BY MR. ARGENTI:

Q. The next sentence says "A POSA could have less education but significant professional 11:18:38 experience in one or more of these fields"; right?

A. That's what's written there, here.

Q. So if the 15 years of experience in imaging that you have is enough to qualify someone with a bachelor's instead of a master's degree in

computer science, then you'd be a POSA; right?

MR. BLYTHE: Objection to form.

THE WITNESS: I don't think I can answer that because it's relative.

BY MR. ARGENTI:

Q. How long have you been the coordinator of the Digital Imaging Laboratory in the department of orthodontics at the University of Illinois Chicago?

A. It's been a while. Let me see. It's probably -- I would, safely, say it's around 11:19:49 15 years.

Q. Are you familiar with Dr. John Mongan, M-o-n-g-a-n?

A. Yes.

Q. Are you aware that Dr. Mongan has submitted two declarations in this IPR on behalf of Dental Monitoring?

A. Yes.

Q. Have you reviewed either of Dr. Mongan's declarations submitted in this IPR? 11:20:22

A. Maybe. Not too extensively because we had discussed, but I don't review the detail.

Q. Do you recall whether you reviewed one of the declarations or both of them?

A. Briefly I don't remember.

Q. When did you review one or both of those declarations?

A. Maybe two months ago.

Q. Did you consider any of Dr. Mongan's declaration testimony in this IPR when forming your own opinions in this case?

A. No.

My opinion is what -- that's my own opinion here. Only based on the references that I think is pertaining to this particular one. 11:22:18

Q. Have you reviewed the transcript of Dr. Mongan's deposition in this IPR?

A. No.

Q. Do you know whether Dr. Mongan has reviewed your declaration in this IPR?

MR. BLYTHE: Objection to form.

THE WITNESS: I don't have that knowledge.

BY MR. ARGENTI:

Q. Do you know whether Dr. Mongan ever reviewed a draft of your declaration in this IPR? 11:22:56

MR. BLYTHE: Objection to form.

THE WITNESS: An answer is I don't know.

BY MR. ARGENTI:

Q. Have you ever spoken to Dr. Mongan?

A. Yes, several times.

Q. How many times would you say you've spoken to him?

A. Four or five. I don't quite exactly -- I don't remember. Yeah.

Q. Have you ever spoken to Dr. Mongan about this IPR specifically?

A. In the declaration here? The one I made or about the whole process or just on this particular -- on this particular topic?

Q. Have you ever spoken to Dr. Mongan about your declaration in this IPR? 11:24:02

A. It might come across in our conversation, but I don't recall exactly what.

Q. Have you ever spoken to Dr. Mongan about Dr. Foroosh's testimony in this IPR?

A. Maybe indirectly when we discuss some aspect that pertain to this, my declaration here, but I don't remember exactly what was being discussed.

Q. But you did discuss with Dr. Mongan aspects that relate to your declaration in this case; is that right? 11:25:03

A. Yes.

Q. Have you discussed the Carrier Provisional, Exhibit 1006, with Dr. Mongan?

A. As I recall, briefly, yes.

Q. Have you discussed the Salah prior art reference, Exhibit 1008, with Dr. Mongan?

A. Okay. You are not talking about the '409; right? You're talking about --

Q. Good point.

Before -- the named inventor on the '409 patent is Salah as well. My question was about the Salah prior art reference --

(Simultaneous speaking.) 11:26:17

THE WITNESS: Oh.

BY MR. ARGENTI:

Q. -- which is Exhibit 1008.

A. Briefly.

Q. When did those discussions or that discussion or multiple discussions take place regarding the prior art at issue in this IPR?

MR. BLYTHE: Objection to form.

THE WITNESS: I don't quite remember. It's probably in two, maybe even three -- two, three 11:26:52 months, yeah, maybe.

BY MR. ARGENTI:

Q. So did you speak to Dr. Mongan about this IPR before finalizing your declaration?

A. I'm trying to recall when it is. Yeah.

Unfortunately, I cannot check my agenda.
I can't -- I cannot pinpoint exactly when, but it's within two months, but I don't know exactly whether it's before or after the declaration, but, yeah, that's as far as I can recall. Yeah.

Q. How many times did you speak to Dr. Mongan about this IPR?

A. I mean, recently, the one within, let's say, two, three months, it's -- the most recent one is this one that I remember. It's probably within 11:28:27 two months, but then this year has been, like, several. I don't know exactly -- maybe two or -- three more other times, but, you know...

Q. That most recent one, did that discussion involve this IPR on the '409 patent or other IPRs on other Dental Monitoring patents?

A. Mainly probably revolve around this, around Carrier and Salah.

Q. Did your most recent discussion with Dr. Mongan involve other prior art that's at issue 11:29:23 in other IPRs and not at issue in this one?

A. Not that I can recall.

Q. Has anyone else been present during your discussions with Dr. Mongan?

A. Yeah, the counsel, Mr. Blythe.

Q. Anyone else?

A. It might be, but I don't remember the name actually. So...

Q. All right. Let's take a look at paragraph 25 of your declaration, please. That's on page 12.

A. Yes.

Q. And in this paragraph you mentioned --

(Simultaneous speaking.)

THE WITNESS: Paragraph -- oh, I'm turning to page 25. 11:30:51

BY MR. ARGENTI:

Q. No, paragraph 25 on page 12.

A. Yes.

Q. In this paragraph you mentioned the Carrier Provisional and the Salah references; right?

A. Yes.

Q. And in the last line of that paragraph, you say that "Both the Carrier Provisional and Salah use terms that would have had a specific meaning to dental professionals"; right? 11:31:27

A. Yes.

Q. What terms in Salah are you referring to there?

A. In Salah? Give me a second. Let me get it out.

Clearance access models, gingival margin. I think those are dental term.

MR. BLYTHE: And just one moment. For the record, can you please clarify which document you were just referring to?

THE WITNESS: Oh, I'm referring to Exhibit 1008.

MR. BLYTHE: Okay. Thank you. 11:33:23

THE WITNESS: Yeah.

BY MR. ARGENTI:

Q. What's the specific meaning that the term "model" would have had to the dental professional?

A. When you -- particularly to an orthodontist, like mine, when -- or any dentist, when you describe models, their mind kind of fixate towards a study model. Study model is this replicate of teeth produced by either impressions or scanning technology. That's models. Yeah. 11:34:23

Q. If we look back at that last sentence on paragraph 25 of your declaration, what terms from the Carrier Provisional are you referring to when you say it "uses terms that would have had a specific meaning to dental professionals"?

A. Give me a second.

I am referring to Exhibit 1006, Provisional Carrier, the terminology like frontal view, anterior view, those are like dental-related terminology.

Q. Anything else you would point out to my attention as a term that has a specific meaning in the Carrier Provisional?

A. There might be a few others here.

(Stenographer clarification.) 11:36:33

THE WITNESS: Yeah, like, 2D facial, then there's another one here, anterior, buccal left -- those are some terminology that I can find -- and then underbite, overbite, those are dental terminology.

BY MR. ARGENTI:

Q. I'm sorry. Did you say left in that list, l-e-f-t?

A. Yeah. Buccal left, buccal right, over jet, overbite. 11:39:10

Q. Okay. So it's "left" in combination with "buccal"?

A. Yeah. Yeah. Left and a right.

Q. You're not saying that left, the word on its own, has a specific meaning to it?

A. No. No. No. Buccal left, buccal right. Yeah. So, yeah. Yeah.

Q. Got it.

Let's take a look at paragraph 64 on page 46, please, of your declaration.

A. 64?

Q. Yep.

A. Yes.

Q. In this paragraph you address the term "required teeth" from the Carrier Provisional; 11:40:01 right?

A. Yeah.

Q. And in the second sentence of this paragraph, you say, "With the guidance of a dentist or orthodontist, a POSA would have understood that 'required' teeth in this context means the teeth that are intended to be the subject of the specific predetermined view in the photograph."

Do you see that?

A. Yes. 11:40:36

Q. Is the term "required teeth" one of the terms that you referred to in that earlier paragraph that would have had a specific meaning to dental professionals?

A. Could be part of it.

Q. How so?

A. It's probably a little bit too clinical, but if it's okay, I can try to elaborate.

Q. Please.

A. Yeah. So certain conditions that's, say, like a -- like a functional shape or an overbite or -- I'm sorry -- an underbite or certain overbite, the required teeth might not be -- let's -- I'm trying to put it in a way that it's more understandable here. 11:42:11

Let's say the required teeth may not be visible, but this -- this required to be -- yeah, again, in certain condition, the required teeth may not be visible, but you have to have an understanding of is needed as -- to be acceptable as a standard orthodontics record. I don't know if that makes sense.

Q. Let me ask you this, Dr. Kusnoto: In that sentence in paragraph 64 where you referred to "in this context," the context you're referring to 11:43:39 there is the Carrier Provisional reference; correct?

A. I kind of lost you in the 64 here. Which --

Q. In the second sentence --

(Simultaneous speaking.)

BY MR. ARGENTI:

Q. When you say "A POSA would have understood the required" --

A. Okay.

Q. -- "in this context means," and then you go on --

A. Yeah.

Q. In this context means in the context of the Carrier Provisional. Do I have that right? 11:44:19

MR. BLYTHE: Objection to form.

THE WITNESS: One second.

Yes.

BY MR. ARGENTI:

Q. So "required teeth" is not a term of art in the dentistry field that always means the teeth intended to be the subject of a predetermined view in a photograph; right?

A. Can you rephrase that question?

Is "is it" or "is it not"? So I'm -- 11:45:39

Q. Sure. We can look at that sentence again in paragraph 64.

A. Yes. Uh-huh.

Q. Where you say "'Required' teeth in this context means that the teeth means" -- sorry.

Start that over.

In that second sentence of paragraph 64, where you say "'Required' teeth in this context means the teeth that are intended to be the subject of the specific predetermined view in the photograph," you're not saying that is a term of art in the dentistry field with the definition; correct?

MR. BLYTHE: Objection to form.

THE WITNESS: Sorry. I'm not quite clear. 11:46:17
It's not the term of art? Are you saying that?

BY MR. ARGENTI:

Q. Right.

Would a dentist understand that required teeth always means the teeth that are intended to be the subject of the specific predetermined view in the photograph?

MR. BLYTHE: Objection to form.

THE WITNESS: I think it has to be in the
context too. It depends. Okay? So it depends on 11:46:51
-- under what purpose is the -- the specific predetermined view is for. As I mentioned, certain clinical condition, the required teeth, then different condition. So, yeah...

BY MR. ARGENTI:

Q. Right.

So, as one example, if a reference in the dentistry field was talking about treating tooth decay, and it mentioned required teeth, that could be referring to the teeth that need treatment for tooth decay; right?

MR. BLYTHE: Objection to form.

THE WITNESS: It could, but in the same time, they could also want to know the area around the 11:47:49 tooth that's decayed, you know, because it might -- the opposing teeth might have, you know, certain influence to the one that's decayed. It's not necessarily one tooth. Yes. So it's -- it's hard to really define.

BY MR. ARGENTI:

Q. It's a term that could mean different things in different contexts; correct?

MR. BLYTHE: Objection to form.

THE WITNESS: Yeah, but it's a -- standardized 11:48:21 in a way. So, for instance, like, if I want -- if in the context of orthodontic standard in diagnostic records for buccal right shot, then the required teeth kind of have to have molar, canine, incisors aligned in a certain way. That's in that

context.

In the context of prosthodontics having an onlay on one tooth that's cracked, then the required field might be that tooth along with the neighbor and opposing arch.

In periodontics, those are different things again, you know, so it's -- but in each requirement, the required teeth kind of standard.

BY MR. ARGENTI:

Q. Let's look back at that paragraph 64. 11:49:42

And do you see the sentence further down that starts with the word "Rather"?

A. Yes. Yes.

Q. And that sentence says "The 'required teeth' for such an image for those that are visible when a photograph of the patient's dental arch is captured from the appropriate viewpoint as determined by an 'approximate' match with those teeth shown in the overlay for that predetermined view." 11:50:15

Did I read that correctly?

A. Yes.

Q. So do I understand it right that, in your view, when Carrier refers to "required teeth," it means whatever teeth are visible in a photograph so

long as the photograph is taken from the correct angle?

MR. BLYTHE: Objection to form.

THE WITNESS: If the keyword here is the "predetermined view," I mean, yes, that's correct, but it have to fulfill kind of the predetermined view.

Again, as I said, if this is orthodontic standard initial diagnostic records, the buccal right side view should have this predetermined, 11:51:24 like -- like a standard. Okay? It should look like this. It doesn't have to be precise, of course, because everyone is different, but it should look like the example here.

BY MR. ARGENTI:

Q. So it should look like an example. So it's not enough that it's simply whatever teeth are captured in a particular image from the correct angle; right?

MR. BLYTHE: Objection to form. 11:52:05

THE WITNESS: That should have influence.

BY MR. ARGENTI:

Q. But is it enough --

A. You cannot -- for instance, if we want to capture buccal shot right view, you cannot read

from the left side. It doesn't make sense. You can't do it from the top. The angle has to be somewhat correct.

Q. Right.

Are you saying -- in that sentence in paragraph 64 that that begins with "rather," are you saying that if the image is properly aligned with a predetermined view, that whatever teeth are in the image defines the set of required teeth?

MR. BLYTHE: Objection to form. 11:53:03

THE WITNESS: For different pre -- for a different scenario, for a different use, yes. As I mentioned, if this is a standard orthodontic buccal right shot, yeah.

BY MR. ARGENTI:

Q. In that sentence higher up in paragraph 64 that we looked at earlier, you say that the required teeth are those that are intended to be in a specific predetermined view"; right?

A. The one above that? 11:53:48

I'm trying to -- okay. Yes.

Q. But then two sentences down, you say that the required teeth are those that are visible when a photograph is captured in the appropriate viewpoint; right?

A. You're talking about that is visible?

Q. Yes. I am reading that from your declaration.

A. Yeah, in the teeth, it must be visible. Otherwise, we cannot capture -- I am not quite sure. Which part do you want me to clarify here?

So we do have an idea required for certain type of care, standardized image where we do have certain -- okay. We have -- it has to encompass this -- it's like a checklist. It's like a 11:55:46 suggestion. So this is -- in order to mimic -- in order to comply as much as possible with the standard of certain view that we require, we require certain things, but, of course, if it's not visible, then we may not achieve what's required, but we try to -- always try to maximize to be able to capture as much as we can the basic requirement.

Q. Okay. I think -- I think we are getting there. I think you just mentioned that you could have required teeth that aren't visible in the 11:56:36 image; right? And then that's not in the image; right?

MR. BLYTHE: Objection to form.

THE WITNESS: Can you say that again? That is not a good image?

BY MR. ARGENTI:

Q. Well, it would fail to capture all the required teeth; correct?

MR. BLYTHE: Objection to form.

THE WITNESS: What I'm trying to say is it's not fail. So the required teeth is what the Board or whatever suggested, okay, to have, but if the teeth is not there, it's not visible. Sometimes they are ectopic, inside the bone, or sometimes they are missing, already being pulled, then we 11:57:36 have to still take it to the -- with the given angle and given proportion to the best of as if all the required teeth is there.

BY MR. ARGENTI:

Q. And under those circumstances, when you take the image, does that image include all of the required teeth?

MR. BLYTHE: Objection to form.

THE WITNESS: The image will include all the required teeth visible, visible and exist. 11:58:22

BY MR. ARGENTI:

Q. So does that image include all the required teeth?

MR. BLYTHE: Objection to form.

THE WITNESS: You mean if the patient has, for

instance, missing premolars, okay, and then the Board does require the full set. Okay? It's a template. Okay? It's a suggested required teeth. Okay? So if the teeth is missing, will that -- and then we still take the pictures, will that pictures fulfill the characteristic of required teeth? Is that kind of how I understand them? Your question?

BY MR. ARGENTI:

Q. Does it capture the full set of teeth that's required? 11:59:40

MR. BLYTHE: Objection to form.

THE WITNESS: If it's missing, the answer is, yes, it fulfill the requirement. It doesn't mean all the required teeth has to be there because the teeth are or tooth isn't there.

BY MR. ARGENTI:

Q. So it's your understanding that even if an image doesn't capture all -- the full set of required teeth, it can still be seen as having all the required teeth? 12:00:21

MR. BLYTHE: Objection to form.

THE WITNESS: If the tooth is not there, of course, they didn't have the required teeth there because the tooth is simply just not there. Okay? But the way it's being captured, the way it's being

captured, it will still fulfill what's being required, for instance, by the American Board of Orthodontics. Okay? Again, if the tooth is not there, then it's not there. We cannot say that, oh, yeah, the patient has a premolar. I mean, the premolar has been extracted. It's not there.

BY MR. ARGENTI:

Q. Let me ask you this: This term "required teeth" in Carrier -- I'm focused on that word, that combination of words "as used in the Carrier" -- 12:01:42

A. Uh-huh. Uh-huh. Uh-huh.

Q. -- that refers to a set of particular teeth; right?

MR. BLYTHE: Objection to form.

THE WITNESS: I'm really not sure what Carrier meant by I mean by "required teeth." I think what they is the standard could have been optimally required or suggested required, but if it means that all teeth must be present, accounted for, there are -- from this side you'd be able to see -- 12:02:22 what? -- like, six or seven on the top, six, seven on the lower, like 14 of them, and then you count them. I'm not sure -- I don't think that's what Carrier meant.

BY MR. ARGENTI:

Q. So is it your testimony now that you are unsure what the Carrier Provisional means when it uses the term "required teeth"?

MR. BLYTHE: Objection to form.

THE WITNESS: No. The "required teeth" in my understanding, okay, in my understanding, is what is being required as maximum as possible in the certain shot that is per requirement of the Board or per requirement of the ADA, but I'm not sure if 12:03:22 Carrier understand them that way.

BY MR. ARGENTI:

Q. Are you saying that you're applying your own understanding of the term "required teeth," but you're not sure if that's consistent with how Carrier is using the term?

A. Oh, no.

MR. BLYTHE: Objection to form.

THE WITNESS: No. I mean, in Carrier, okay, so the required teeth is clearly six of them or seven 12:03:49 of them means certain shot. Okay? So that's what -- clearly, that's what Carrier produced. Okay? So he -- or yeah, the required certain number of teeth being there. So that doesn't mean that all teeth must be present in the view. That's my

understanding of Carrier.

BY MR. ARGENTI:

Q. I'm gonna pick one of those numbers that you just said. I'm gonna pick six teeth. Okay? So you just said that in Carrier, the required teeth could be six teeth. There are six teeth that are the required teeth; right?

A. That's to my understanding because it's -- the template shows one, two, three, four, five, six, seven, that's -- yeah. 12:04:54

Q. So in that example where the -- where there are six required teeth, is that determined before the image is taken or after the image is taken in terms of determining what the required teeth are?

MR. BLYTHE: Objection to form.

THE WITNESS: I'm trying to formulate what's the different before or after the image was taken. The template is the same. So that's why -- I'm a little confused. 12:05:45

BY MR. ARGENTI:

Q. Let's stay with that example where there are -- the image is intended to capture six teeth. Those six teeth are the required teeth; correct?

MR. BLYTHE: Objection to form.

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THE WITNESS: If the template has six, then, yes, that's the six required teeth.

BY MR. ARGENTI:

Q. And then an image is taken, and for whatever reason, the image only has five teeth. Maybe there's a missing tooth. Maybe one of the teeth is obscured in the image. Are those five teeth the required teeth?

MR. BLYTHE: Objection to form.

THE WITNESS: It is. 12:06:42

BY MR. ARGENTI:

Q. So that image has ensured that all required teeth are visible even though the set of required teeth is six teeth and the image only captures five teeth? That's your testimony?

MR. BLYTHE: Objection to form.

THE WITNESS: If I may read this: "The 'required teeth' for such an image are those that are visible when a photographs of patient's dental arch is captured from the appropriate viewpoint as 12:08:01 determined by an 'approximate' match with those teeth shown in the overlay for that predetermined view."

So, again, this is illustrated in Figure 2C, Carrier Provisional, which shows an

example of an overlay on the screen which shows that the teeth should be visible in the view.

BY MR. ARGENTI:

Q. Right. I agree that you read that correctly.

So in that sentence you are saying it is -- that the required teeth are those that are visible in the image, and yet two sentences above, you say that the required teeth are those that are intended to be in the predetermined view? 12:08:49

Those, to me, sound like two different things.

Which is it? Are the required teeth the ones that are intended to be in the view, or are the required teeth the ones that are actually captured in the view?

MR. BLYTHE: Objection to form.

THE WITNESS: Of course, if there is -- if we can have all the teeth present being captured visibly, that's what we try to require ourself to 12:09:19 have. Okay? But whether the teeth is visible or not, even present or not, that's beyond our control. So then at that time then, yes, the required teeth is whatever visible.

BY MR. ARGENTI:

Q. So the required teeth, in your view, are whatever teeth are visible when an image is captured from the appropriate angle; is that correct?

A. From the appropriate angle, given the appropriate -- following the template as much as possible.

Q. What do you mean by "following the template as much as possible"? 12:10:17

A. The template that Carrier would have produced. There is a template there; right? So when we capture an image, there is a template. We have to try to follow, you know, as much as possible, meaning -- I mean, if the patient is here, I cannot be standing ten feet away with my little camera on my little unit trying to capture the tooth of a patient because the teeth of the patient will be way smaller than the template itself. So within the framework of the template 12:10:55 that's at the area required to have.

Q. And how would software, an image-processing algorithm, make that determination as to whether the image appropriately followed the template?

MR. BLYTHE: Objection to form.

THE WITNESS: I don't know. I'm not a computer programmer that programs area. So I really don't know how. I mean, just from my understanding reading, it's not enough for me to formulate that opinion.

MR. BLYTHE: We have been going about another hour, Matt. Do you want to take another break here?

MR. ARGENTI: Yeah. We can do that. That's fine. 12:12:08

(A short break was taken from 12:12 p.m. to 12:22 p.m.)

BY MR. ARGENTI:

Q. Okay. Dr. Kusnoto, can we turn to page 22 of your declaration, please?

This is paragraph 37. Let me know when you're there.

A. Yes.

Q. Here, on this page, you have included a photograph of a tooth retractor; correct? 12:22:52

A. Yes.

Q. Actually, I might have misspoken there.

Would you refer to that as a cheek retractor or a tooth retractor or just a retractor?

A. Usually, the name is tooth retractor. Yeah.

Q. Where did this particular retractor come from?

A. This come from our clinic at the university.

Q. Was it originally provided by Dental Monitoring?

A. Many years ago.

Q. When was that about? 12:23:43

A. It's around 2000 maybe 20.

Q. And what were the circumstances of the clinic receiving the retractor from Dental Monitoring?

A. Oh, to perform initially for brief research that we did, and then later on, in 2021, happened to be when COVID hit, so we used this actually to continue some of our patient care.

Q. When you received the retractor, did it come with any other equipment? 12:24:41

A. No.

Q. Just the retractor?

A. Uh-huh.

Q. Did it come with any software?

A. We download the software to the phone.

Q. And did the clinic pay for the retractor and the software?

A. Yes.

Q. Who took this photo on page 22 of your declaration?

A. This is me, yeah. I took the photo.

Q. What's the purpose of this retractor?

A. The retractor that we have here, the purpose is to aid when patient is taking the mouth -- the dental pictures. 12:25:35

Q. And how does it aid in that?

A. First, it helps in retracting the mouth so that we have clear visibility to the area that we want to take the pictures with.

Q. If we look at this photograph, do you see the u-shaped part at the bottom of the retractor?

A. Yes.

Q. And just to be clear, if we look, there are four green dots on the retractor; right?

A. Yes. 12:26:17

Q. And the u-shaped part I'm referring to is the part that it looks like it connects the bottom two dots. Are we on the same page?

A. Yeah.

Q. It looks like it's even stamped or molded

with the words "Dental Monitoring" right at the bottom of that piece. Do you see that?

A. Let me get my glasses here.

Q. It's actually easier to see on my electronic copy. It is rather hard to see on this -- on the hard copy printout that I have.

A. Yes, I'm here. I saw it now.

Q. What is the purpose of that part of the retractor, the u-shaped piece?

A. Besides connecting the left and right to 12:27:03 provide tension as this is being opened, the lips being shaped and lips being retracted, it's also for the ability for patients to hold onto it as the picture is being captured.

Q. So that u-shaped part of the retractor provides tension that helps pull the cheeks away from the teeth?

A. Yes.

Q. And the patient can hold that bottom u-shaped part of the retractor with one hand while 12:27:45 taking a photo with the other hand or doing something else with the other hand?

A. Yes.

MR. BLYTHE: Objection. Form.

BY MR. ARGENTI:

Q. So that retractor does not require someone to pull on the -- on both the left and right sides of it when taking a photo; right?

A. Not to the best of my knowledge on the patients that I saw.

Q. Let's turn now to paragraph 75 of your declaration, please.

Let me know when you're there.

A. Yes, I'm here. I'm there. 12:29:01

Q. In paragraph 75 you address the issue of whether the Carrier Provisional discloses a patient taking a photo of their own teeth; right?

A. Yeah, as part of this paragraph.

Q. In forming your opinions, did you have an understanding of what Carrier means when it refers to a "user"?

MR. BLYTHE: Objection to form.

THE WITNESS: Let me get Carrier here, just to be sure. It's going to be referring to 12:29:49 Exhibit 1006.

I'm also looking at the Exhibit 0005 now.

Going back to Exhibit 0006, so using the Exhibit 0006, my understanding of here, it's either a doctors or a practitioner.

BY MR. ARGENTI:

Q. So I understand the parties have a dispute about who can be the user in the Carrier Provisional and whether the user is a dentist or can be a patient, but that's not quite what I'm asking.

My question is do you have an understanding of what Carrier means -- the Carrier Provisional means when it refers to a "user"?

MR. BLYTHE: Objection to form. 12:33:43

THE WITNESS: Can you help me point out exactly where in the provisional here that the -- I'm looking at paragraph 63, 62, of this, but the user is some of -- a doctor taking a picture. Is that what you're asking? My understanding of the users; right?

BY MR. ARGENTI:

Q. My question was just did you have an understanding?

A. Yeah, that my understanding is the doctor is taking a picture of a patient. 12:35:58

Q. Okay. So --

A. Yeah.

Q. -- with that understanding, why don't we turn to paragraph 53 of the Carrier Provisional.

Could you read the sentence in that paragraph to me, please?

A. "In general, this method" -- is at the -- is "In general, this method and apparatus may improve on existing technology by guiding a user through the process of collecting relevant patient images predetermined" -- "e.g., a predetermined set of images enhancing and/or confirming the image quality, associating patient information, and transmitting the set of images so that they may be 12:37:06 used in a dental or orthodontic procedure."

Q. Thank you.

Could you also read the first sentence of the next paragraph, please, paragraph 54?

A. "For example, the methods and apparatus described herein may use a user own handheld electronic apparatus having a camera (smartphone) and adapted so that the user's device guides the user in taking high-quality images (at the correct aspect ratio, magnification, lighting, focus, 12:37:51 et cetera) of a predetermined sequence and orientation. In particular, these apparatuses and methods may include the use of an 'overlay' on the real-time image of the screen providing immediate feedback on each of the desired orientations."

Q. The Carrier Provisional says that it guides the user through the process of taking images; correct?

A. Yes.

Q. So in the Carrier Provisional, the term "user" refers to the one that is taking photos of the patient; correct?

MR. BLYTHE: Objection to form.

THE WITNESS: Somebody taking the pictures for the patients. 12:39:02

BY MR. ARGENTI:

Q. And that's the user; right?

MR. BLYTHE: Objection to form.

THE WITNESS: Yeah. The doctors; right? Either doctors, healthcare provider, dental assistant in an orthodontic records setting because this is for maybe used in dental and orthodontic procedure.

BY MR. ARGENTI:

Q. Right. 12:39:32

So the user -- the thing that the user is using is the camera to take the picture; correct?

MR. BLYTHE: Objection to form.

THE WITNESS: Is the camera to take the pictures. The camera that has the Carrier

technology and to take the pictures.

BY MR. ARGENTI:

Q. So in the Carrier Provisional, the term "user" refers to the one that is using the camera with the Carrier technology to take the pictures; right?

MR. BLYTHE: Objection to form.

THE WITNESS: Which is the healthcare provider and the doctors offer seeing the patients.

BY MR. ARGENTI: 12:40:22

Q. But it doesn't say that in those paragraphs. I'm not asking -- I'm trying to set aside the issue of who that user is, and I'm focused on what the user does.

A. The user takes the pictures.

Q. Thank you.

Why don't we take out the Salah exhibit, please. That's the translated version that's marked as Exhibit 1008.

A. Yeah, this one. 12:41:43

Q. Have you reviewed this document?

A. Yes.

Q. Did you review it in its entirety when forming your opinions in this IPR?

A. Yes, in the area that pertains to this

IPR.

Q. Are there portions of this document, Exhibit 1008, that you have not reviewed?

A. I reviewed the 00 all. I may not completely understand when it comes to the detail of the high technology that they mentioned here, like some of the algorithm or those, but I review.

Q. Sure.

Let's take a look at page 8, please.

A. Page what? 12:42:51

Q. 8.

A. Yes.

Q. Take a look at the paragraph that starts at line 19 and let me know when you've read it to yourself.

A. Paragraph in -- which one? The one that says "In particular"?

Q. Right.

A. Okay. So "In particular the method can be used during orthodontic treatment, especially to 12:43:28 monitor progress with step a) being carried out less than three months, less than two months, less than one month, less than one week, less than two days after the start of the treatment, i.e., after being fitted with a device intended to

correct the positioning of the patient's teeth, so-called 'active retainer.'"

Is that the paragraph?

Q. Yes.

So this paragraph here, Salah says that its method can be used to monitor progress during orthodontic treatment; right?

A. Yes.

Q. And one example that it gives of orthodontic treatment is with an active retainer; 12:44:23 correct?

A. Yes. Yes.

Q. What is an active retainer?

A. It's a retainer that we sometimes use to either actively control the habit of the patient so that the treatment that we have delivered did not relapse.

Q. How is that different from a passive retainer?

A. Passive retainer is -- it doesn't have the 12:45:22 component of -- it's basically passive. It doesn't move anything. It's just retaining -- retaining the current position of the finished treatment.

Q. So when you say that an active retainer is trying to "prevent relapse," does an active

retainer move the teeth?

A. For the most part, some do, but for the most part, they keep the teeth where they are while actively guarding, let's say, the lips or the tongue, most often, which some people have habits that needs to be broken before it creates the relapse.

Q. So in the specific treatment example that's provided in this paragraph of Salah, the teeth typically would not move. Do I have that 12:46:59 right?

A. If it doesn't have the active component, it will move.

Q. "If it doesn't have the active component, it will move."

But we're talking about the active retainer example there.

MR. BLYTHE: Objection to form.

THE WITNESS: Yeah, I don't know if this is -- let me try to think about it. Okay? So trying to 12:47:39 find a way to explain it better.

So some treatment is prone to relapse even though that they already fit nicely. Any treatment without retainer, whether it's active or passive, will be very prone to relapse if it's not given an

appropriate retainer for a given time.

Now, some case has even more prone to relapse if the case has habits, like, either tongue thrusts or, you know, tendency towards certain muscles.

So in this case there is a active component in the retainer that helps prevent -- either preventing relapse, preventing movement, or sometimes, in a growing individual, it promotes the growth to a better way. 12:49:18

So those active component had to be monitored regularly. So most patient think when the braces is off or the liner is off, they are off treatment. They don't care about the retainer, but in this particular instance, we need to really care about them because the retainer is part of the treatment.

BY MR. ARGENTI:

Q. So do I have it right that the purpose of an active retainer is generally to prevent movement 12:49:56 of the teeth?

A. Not necessarily. Sometimes we actually want certain teeth to adapt to the new growth, to the new muscle as the patient develop, as the patient grow. Yeah.

Q. This paragraph, starting at line 19 of page 8 refers to "step a)."

Do you see that?

A. Oh, yeah, "step a)." Yeah.

Q. What is "step a)"?

A. This is the step prior we described in -- let me see -- to my understanding, is the one that's described in -- I don't know how to say this -- this is 30 on there, second page here, page 1 -- 12:52:15

Q. Page 1, the number 1 at the top of the page?

A. Yeah, and then there is an a, b, c, d, e, f.

Q. So we are looking at (a)?

A. (a) is "creation of three-dimensional digital reference model part of an arch, preferably one" -- "at least one of the patient's arches or an 'initial reference model,' preferably, for each tooth, defining use of initial reference model, of 12:53:00 a three-dimensional digital reference model of said tooth, 'tooth model.'"

Q. And then what is step b?

A. Step b is "acquisition of at least one two-dimensional image of the patient's arches, the

so-called 'updated image,' under actual acquisition conditions."

Q. Turn to page 6, please.

And you see, starting at line 15 of page 6, where it says "The time interval between steps a) and b) or between Steps A and B may be greater than 1 week, 2 weeks, 1 month, 2 months, or 6 months"?

A. Yes, that's what it said.

Q. How much would a patient's teeth be 12:54:28 expected to move over a period of one week when monitoring progress during orthodontic treatment?

MR. BLYTHE: Objection to form.

THE WITNESS: It depends from case to case. Some move fast; some move slower. Depends on the age of the patient. Depends if the patient has habits or growth -- we call it growth modification. So it's a certain thing, underbite, overbite, those kind of things, it depends, but generally the tooth movement is within half to a millimeter a month. 12:55:20 Yeah.

BY MR. ARGENTI:

Q. Why don't we turn to paragraph 48 of your declaration, please. That's on page 36.

A. Yes. Uh-huh.

Q. In this paragraph you discuss the time and expense of anonymizing dental patient images; right?

A. Yes.

Q. And in the third sentence, you say, "Anonymizing an image involves redacting identifiable features of a patient's face, removing patient identifying information and metadata, and assigning unique and random identifiers to the image." 12:56:55

Do you see that?

Can I get a verbal answer for the transcript?

A. Yes. I'm sorry. Yes.

Q. Which of those three anonymization tasks is the most time consuming?

MR. BLYTHE: Objection to form.

THE WITNESS: The first and the last, which is redacting identifiable features and, well, removing patient identification information. Yeah. 12:57:48 That's -- that's the most time consuming of the identification process.

BY MR. ARGENTI:

Q. What are you referring to there when you say "patient identifying information"?

A. It's -- we need to abide by HIPAA regulation. So any PHI, personal health information, has to be scraped out, any link that can be linked to the patients, like, of course, names, date of birth, Social Security, or insurance information or part of the facial face in the dental field at least that's what we have to be careful and eliminate.

Q. So the last one you mentioned, part of the features of the patient's face, that's the first 12:59:07 category of the three -- right? -- redacting identifiable features of the patient's face; correct?

MR. BLYTHE: Objection to form.

BY MR. ARGENTI:

Q. And then you go on to say, "removing identifiable patient information." So I think there are you referring to stuff other than identifiable features of a patient's face?

A. Well, they are all time-consuming 12:59:34 problems. We usually do it at -- in one passing, you know. So for a patient we do this, this, this, this, and then we clean them up. Yeah.

Q. So the other stuff, aside from the facial features of the patient's face, how are those other

pieces of information that you mentioned, such as name, birthdate, Social Security number, how are those included in a photographic dental image?

MR. BLYTHE: Objection to form.

THE WITNESS: I -- I'm talking about the identification of medical dental records in general. I mean, this is -- it also pertains -- if there is only dental photographs that we do have to de-identify the face. There is no face included in that. 13:00:43

BY MR. ARGENTI:

Q. Okay. So at the beginning of this paragraph talks about the need to anonymize dental images; right?

A. Yeah, if we want to use this to develop some kind of a research project, we do have to abide by an IRB. We cannot show patient's identifier.

Q. Right.

And if it's an image of just of the teeth, 13:01:19 not the patient's face, then you don't need to redact the image; right?

MR. BLYTHE: Objection to form.

THE WITNESS: The image itself, no, but the identifier that goes with the image, yes.

BY MR. ARGENTI:

Q. And what identifier are you referring to there?

A. The patient's name, for instance, any age or anything that goes with that it has to be de-identified.

Q. And is that -- how is that included with the image file?

MR. BLYTHE: Objection to form.

THE WITNESS: Sometimes it goes to the 13:01:56 metadata. So we have to be careful it's not there. Yeah. And if in a medical dental setting, all of these image go to the secure server and their management system before we can use it, it always link to a patient in apps. In the application it always link patient, create patient, patient's name, and all that stuff. So we have to be careful that the metadata did not get embedded into the image being exported.

If it's a DICOM file, for instance, we 13:02:51 always -- the metadata goes with it. So then when -- anyone that has the ability to open the DICOM file has the access to the patient's personal health information.

BY MR. ARGENTI:

Q. And then you go on to say that you would "need to assign unique and random identifiers to the image." Is that a file name?

A. No.

Then we generate the -- it depends on the research, for instance. If we gonna do research in certain condition of the teeth, okay, so then we generate a random number, and that random number being assigned to a particular file which has no 13:03:43 name, no associated names with any patients, so that instead of Budi, the patient becomes OO8, something like that.

Q. So to anonymize a dental image that doesn't include the patient's face, you would need to strip out any identifying metadata and replace it with a unique random number; correct?

A. Yes.

MR. BLYTHE: Form. Objection to form.

BY MR. ARGENTI: 13:04:27

Q. In this paragraph, a little further down in paragraph 48, you go on to say that you have personal experience anonymizing a dataset that was smaller than the 10,000 images at issue here.

Do you see that?

A. Yes.

Q. Did that dataset that you referred to there require all three types of anonymization that you discuss in this paragraph, including redacting portions of the image?

A. It does, yeah.

Q. In the next paragraph, you discuss the time and expense of labeling dental images; right?

A. Yes.

Q. And about halfway down on page 37, you refer to your own experience adding pixel-wise contours of teeth and annotations of tooth numbers to dental images. 13:05:36

Do you see that?

A. At page 37; correct?

Q. Right.

MR. BLYTHE: What was the last answer? I couldn't hear that.

THE WITNESS: Page 37?

MR. ARGENTI: Verification for page 37. 13:06:16

BY MR. ARGENTI:

Q. Do you see the sentence --

A. Yeah. Yeah. Yeah.

Q. -- from my personal experience?

A. Yes.

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Q. What experience are you referring to there?

A. No, this is to anonymize -- first, to anonymize the steps of dental records. Okay? So when we say dental records, it might also include X-rays, radiographs. Okay? So other than just teeth. That's the dental records, X-rays, teeth also can be included there. Okay? So -- and including the study models, the scans. Those are all dental records. 13:07:07

So anonymizing the dental records for a proposed -- and, then, first, to eliminate any personal health information, anything that can link this to a patient and then assign an identifier, and then we have to also -- depending on the research project, sometimes we also have to digitize certain structures.

So if we want to study a shape of lower molar, for instance, then we have to do carveout, to point the lower molar. If we want to study the 13:07:52 shape of a head X-rays, then we have to manually identify the area of interest that we want to study and label them: this is -- this is nose, this is eyes, this is mouth, something like that. So -- and then we run studies out of that.

Q. I was asking specifically about the personal experience adding pixel-wise contours of teeth and annotations of tooth numbers to dental images that you referred to there on page 37, Dr. Kusnoto.

A. Yes.

Q. What's included in that--

A. Oh, that would include -- you know, you start by de-identifying and all that stuff, and then you isolate in the -- in this particular one, 13:08:54 we isolate the upper and lower scan, which is -- we call it the occlusogram upper arch and lower arch separately, and then you identify the border of each tooth for a propose measuring the width of each tooth so that we boundary and then segment it to teeth and label it -- this is first molar, upper left second molar, or lower right second bicuspid tooth -- and then we put labels on it.

Q. When was that project?

A. Several times. In 2016 there is one. 13:09:40 In '20 there is another one. In 2022 -- you know, several instances that leads to a different -- different projects.

Q. So the project in 2016, what was the purpose -- was it a research project?

A. It's a research project.

Q. And was that affiliated with the foundation that we talked about earlier today?

A. No.

Q. What was the purpose of the research project?

A. It's to evaluate the accuracy of -- we call it American Board Orthodontics Index, degree of difficulty of a face, and then we evaluate whether if you are doing it in computers or you are 13:10:53 doing it manually by measuring which one is more -- it's more accurate.

Q. What was the source of funds for the research project?

A. Usually, it's from UIC. Occasionally, it's from, you know, other agency like American Association of Orthodontic Foundation, those.

Q. Where do the images come from that you used for that project?

A. It's a -- it's a -- our clinic, our 13:11:34 university clinic.

Q. So it was a collection of pre-existing images?

A. Yes.

Q. You didn't need to take new images

specifically for the project?

A. No.

Q. How many images did that project involve?

A. Oh, it's been many years. I really cannot recall exactly, but it's hundreds.

Q. And were you labeling just the edges of the teeth and the tooth numbers or was there additional labeling?

A. There are some additional parameters like inter-molar width, inter-canine width, the depth of 13:12:32 the arch, the contour of the tongue, a few other parameters.

Q. Did that project involve labeling any issue with the teeth, like malocclusion?

A. Could be, yeah. Could be. The one with the American Board of Orthodontics, I think it is, yeah.

Q. And I think you say in your declaration here that that labeling took about 20 minutes per image; is that right? 13:13:19

A. Yeah, roughly, yeah.

Q. And then at the end of the paragraph, you estimate that it would take more than two years for unlicensed dental students to create a learning base of 10,000 cell phone images of dental arches;

right?

A. That's reasonable.

Q. How many students did you base that estimate on?

A. What?

Q. How many students did you base that estimate on?

A. Five.

Q. So if it was ten students, it would take one year? 13:14:10

A. Yeah, it would depend. Some students are faster than the other. Some takes time. Some full-time some -- actually, rarely full-time. Most of them part-time, but they do pool their hours. So, again, it's hard to say.

Q. Can you walk me through the math of how you calculated a cost of upwards of $1.5 million to create that learning base?

A. I have -- I don't have it with me here, but it's just a -- it's kind of hard now to 13:15:03 explain, but, you know, it's -- let's say we have a thousand patients. That thousand patients needs to be all de-identified. Each patient might have more than a time point. Okay? So each patient have, let's say, eight images -- ten, make it ten images.

So that's like 10,000 images. Right? 10,000 images, that means if we have ten people doing the labeling, then it's one person have, like -- what? -- a thousand images to work with. It takes 20 minutes an image.

So I don't have a calculator with me here but an hour is, like, three images. We have a thousand. So 300 hours, 350 hours' worth of labor. Okay. So then you have -- like, if this is a dentist, my dental students are all residents. 13:17:13 Okay? So they are all dentists already. So they would not take less than let's say -- I don't know -- 50, $60 an hour kind of thing.

So, no, I don't have a pen here. So I cannot write. So I'm assuming you take the notes. I don't know the math exactly where it is, but that's how I come up with this. Okay?

So, then, people don't work at 350, 400 hours straight. So they -- you take maybe five hours, ten hours a week kind of thing. You spread 13:18:03 them out. Then you have to go to quality check. So the supervisor have to check again, check again. The supervisor is a faculty, like, $200 an hour rate. So then it all compounded to about two years' project and the value of this value, the one

that I say here. So that's kind of how I...

Q. And when you refer to that estimate in the last sentence of paragraph 49 and you talk about the work to capture, compile, anonymize, and label, you're referring to the anonymization steps that you talk about in the preceding paragraph 48; right?

A. Yes.

Q. And when you talk about the time that it would take to label and your estimate of that and 13:19:18 the 20 minutes that you think it would take to label, that's based on your own experience that you just described earlier in that project from 2016; right?

A. Yeah, when the -- as I said, there are multiple times we are doing similar things. So the number always came up would be about the same per image.

Q. So in all those projects that you talked about in your personal experience, it was taking 13:19:47 you or your team about 20 minutes to label each image?

A. Uh-huh.

MR. ARGENTI: Okay. We've been going about an hour again. So I think this is probably a good

time for a short break. Should we come back -- I think it's, I guess, 1:30 your time?

MR. BLYTHE: Let's stop for lunch here.

(A short break was taken.)

MR. ARGENTI: Back on the record.

That's all the questions from me for now subject to any follow-up after redirect.

MR. BLYTHE: Okay. Let's take a five-minute break, and we'll come back, and I'll see if I have any follow-up for the witness. 13:31:31

MR. ARGENTI: Okay.

(A short break was taken.)

EXAMINATION

BY MR. BLYTHE:

Q. Dr. Kusnoto, do you recall earlier when counsel was asking you about paragraph 25 of your declaration? Could you please turn to that?

A. (Inaudible).

Q. Yes, on page 12.

A. Yes. 13:35:24

Q. Do you see, in the last sentence, your declaration refers to terms that would have had a specific meaning to dental professionals? Do you see that?

A. The paragraph that says "This is because,

as I discuss further below, both references concern dental imaging, they discuss technical concepts from the dental field, and they use terms that would have had a specific meanings to dental professionals."

Q. Do you recall earlier in your deposition when Mr. Argenti asked you what terms in the Carrier Provisional reference you were referring to? Do you recall that?

A. Yes, I recall that. 13:36:09

Q. Okay. Could you please turn to Exhibit 1006, the Carrier Provisional, and specifically on page 2.

A. Exhibit. Let's see.

Okay. Carrier Provisional at page 2?

Q. Yes. It will say 2 of 32 at the bottom and specifically paragraph 4. Just let me know when you're there.

A. Yes, paragraph 4.

Q. Do you see the second-to-last sentence in 13:37:07 paragraph 4 states that "If the camera of the mobile phone is too far to the teeth, dental photos cannot meet the orthodontic standards."

Do you see that?

A. Yes.

Q. Is "orthodontic standards" also a term that would have also had a specific meaning to dental professionals?

A. Yes.

MR. BLYTHE: No further questions.

MR. ARGENTI: Nothing from me.

(The proceedings concluded at 1:37 p.m.)

C E R T I F I C A T E

I, DEANNA AMORE, a Shorthand Reporter and notary public, within and for the State of Illinois, County of DuPage, do hereby certify:

That BUDI KUSNOTO, DDS, MS, the witness whose examination is hereinbefore set forth, was first duly sworn by me and that this transcript of said testimony is a true record of the testimony given by said witness.

I further certify that I am not related to any of the parties to this action by blood or marriage, and that I am in no way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand this 13th day of August 2024.

Deanna M. Amore, CRR, RPR, CSR

Andrew Blythe, Esq.
ablythe@gibsondunn.com

August 13, 2024

RE: Align Technology, Inc. v. Dental Monitoring SAS
8/9/2024, Budi Kusnoto , DDS, MS (#6839161)

The above-referenced transcript is available for review.

Within the applicable timeframe, the witness should read the testimony to verify its accuracy. If there are any changes, the witness should note those with the reason, on the attached Errata Sheet.

The witness should sign the Acknowledgment of Deponent and Errata and return to the deposing attorney. Copies should be sent to all counsel, and to Veritext at Calendar-PNW@Veritext.com.

Return completed errata within 30 days from receipt of testimony.

If the witness fails to do so within the time allotted, the transcript may be used as if signed.

Yours,
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Align Technology, Inc. v. Dental Monitoring SAS
Budi Kusnoto , DDS, MS (#6839161)

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Budi Kusnoto , DDS, MS Date

Align Technology, Inc. v. Dental Monitoring SAS
Budi Kusnoto , DDS, MS (#6839161)

ACKNOWLEDGEMENT OF DEPONENT

I, Budi Kusnoto , DDS, MS, do hereby declare that I have read the foregoing transcript, I have made any corrections, additions, or changes I deemed necessary as noted above to be appended hereto, and that the same is a true, correct and complete transcript of the testimony given by me.

_____ _____

Budi Kusnoto , DDS, MS Date

*If notary is required

SUBSCRIBED AND SWORN TO BEFORE ME THIS

_____ DAY OF _____, 20___.

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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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VERITEXT LEGAL SOLUTIONS

COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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