IN THE UNITED STATES DISTRICT COURT

IN AND FOR THE DISTRICT OF DELAWARE

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OSSEO IMAGING, LLC,		
Plaintiff,	**:**	**CIVIL ACTION**
v	**:**	
PLANMECA USA, INC.,	**:**	
	:	**NO. 17-1386-LPS**
Defendant.		

- - -

Wilmington, Delaware
Wednesday, January 8, 2020
Oral Argument Hearing

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BEFORE: HONORABLE LEONARD P. STARK, Chief Judge

APPEARANCES:

- - -

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and

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P R O C E E D I N G S

(REPORTER'S NOTE: The following oral hearing was held in open court, beginning at 10:37 a.m.)

THE COURT: Good morning.

(The attorneys respond, "Good morning, Your Honor.")

THE COURT: I'll have you put your appearances on the record for us, please.

MR. BRAUERMAN: Good morning, Your Honor. Steve Brauerman from Bayard on behalf of the plaintiff. I'm joined at counsel table by Seth Ostrow, Antonio Papageorgiou and Sarah Pfeiffer from Meister Seelig & Fein. All three have been pro hac'd in and will be addressing various motions with the Court today.

THE COURT: Okay. Thank you.

MR. BRAUERMAN: Thank you.

THE COURT: Good morning to all of you.

Good morning.

MR. FLYNN: Good morning, Your Honor. Michael Flynn from Morris Nichols on behalf of the defendant, Planmeca USA. With me at counsel table is Leisa Peschel and Wasif Qureshi from Jackson Walker.

THE COURT: Good morning to you as well.

So we're here for argument on the many motions that you all have filed. Did you talk about how you might like to proceed through those motions given my limited time? And if not, what do you propose?

MS. PESCHEL: We would propose to start with the

summary judgment motions, Your Honor.

THE COURT: Summary judgment motions?

MS. PESCHEL: (Nodding yes.)

THE COURT: Is there any objection to that?

MR. OSTROW: No, that makes sense to us.

THE COURT: We'll start with summary judgment and we'll see where we are once we get through that.

MS. PESCHEL: Thank you, Your Honor. Do you have a preference for which summary judgment motion you would like to start with?

THE COURT: I do not have a preference.

MS. PESCHEL: Okay. Then I believe we'll start with the summary judgment motion for invalidity due to lack of written description and enablement.

In particular, we have moved on four grounds:

That there is no written description enablement support for comparing the claimed models.

Single energy densitometry.

Use of an electron beam source, or

Generating 3D models.

So beginning with the "comparing" issue, the comparing claims are a subset of the accused claims. It's claim 6, 12 to 24 of the '374 patent and claims 1 through 4 and 6 of the '262 patent.

Each of these claims requires that the

controller or computer compare the claimed models.

In the claim construction hearing in this case, Osseo's counsel argued that comparing was one of the points of novelty of the invention to the able to make this comparison between these models.

Now, the problem is that there is no identification in the specification of how you describe -- where is the description for how to actually compare these models.

We know in the claim construction hearing, we have had an issue with respect to one of the means plus function claims that the Court ended up finding indefinite because there was no structure recited for how to perform that comparison.

When we took the deposition of the inventor in this case, Mr. Massie/Dr. Massie, we asked him, okay, well comparing is important to your invention. How does your invention describe looking for those changes? And he says he couldn't tell us.

Now, there are references in the specification that state the word "compare" but there is only one reference that mentions comparing models and all it says is the prior art could compare B and D models.

The other uses of the word "compare" in the specification have to do with comparing a model to

predetermined parameters or to a baseline, but none of it describes how to actually do the comparing.

So, of course, our expert in this case, Dr. Pelc issued an invalidity report that said there was lack of written description and enablement and described the reasons why for this comparing limitation. And in response, Osseo's expert, Dr. Kia cites three different portions of the specification. He cited the portion of the summary of the invention which merely says compare the model to predetermined parameters and then he cites two portions of the '262 patent specification.

Now, in this case, all the asserted claims are being claimed to have a priority back to the original specification. And so those two additional citations don't go back to the original specification here.

Even if you look at those citations, they don't describe how to actually use the invention in a way in which they're comparing these models.

Just for the Court's reference, on slide 10 we have Figures 6A and 6B from the '262 patent, and really all it says is compared to baseline in 6A and compared to the current patient modeled in 6B, but it doesn't give you a flow diagram of what you are actually comparing, what is it about the models you are comparing? What are you doing? How is the software and the controller supposed to be

programmed to do this?

So if the Court has any questions on the "comparing" issue, I'm happy to address those.

THE COURT: Well, I'm not quite sure if it is "comparing" focused, but you are arguing both indefiniteness and lack of enablement; correct?

MS. PESCHEL: Lack of written description and enablement. The Court has already found the comparing means plus function.

THE COURT: Thank you for that. So it is unclear from the briefing whether you have a different basis for those two defenses and if your expert does because, of course, they're not the same defense.

MS. PESCHEL: Right.

THE COURT: So help me on that.

MS. PESCHEL: Well, so on written description, the four corners of the specification don't describe the invention, the comparing; right? It just says the word compare. It just repeats that word. It doesn't say what that means to the invention.

On enablement, it doesn't describe how to use the invention in the comparison because it doesn't even describe how to do the comparison.

THE COURT: All right. So we know as a matter of law, written description, enablement don't always rise

and fall together, but you would say in this case they do because if there is not written description for how to compare, then there can't be enablement for how to compare. Is that the argument?

MS. PESCHEL: Correct, Your Honor.

THE COURT: Okay. You can move on if you want.

MS. PESCHEL: The next issue on written description, enablement I want to address is densitometry. This affects all asserted claims of the patents-in-suit and we know that the Court construed the "tomographic model" terms which include tomographic densitometry model and tomographic model.

The patents require that the models be generated using densitometry, which the Court construed to mean "quantitatively calculated bone density."

So during the claim construction hearing and the briefing in response, Planmeca argued that, well, the patent-in-suit describe dual energy densitometry, but they don't describe single energy densitometry and that shouldn't be included within the scope of the claims.

Osseo argued the opposite, and the Court held that while the specification was emphasizing dual energy method, it is not limiting the claims to that method.

So under *Trustees of Boston University*, because they argued for the broader scope, it is now imperative that

Osseo be able to show that those written description support and enablement for that broader scope.

Our expert in this case, Dr. Pelc explained the lack of disclosure regarding the densitometry models but in specific use for the use of single energy densitometry.

But in response again, Osseo's expert Dr. Kia presented no evidence that they described or enabled single energy densitometry. Instead, what Dr. Kia said, and I quoted from his report on slide 16, the claims in the patents-in-suit are not limited to only a single energy level and this inquiry is therefore irrelevant.

Therefore, he made no attempt to identify any disclosures in the patents-in-suit or describe knowledge of one of ordinary skill in the art that would enable the full scope of the claims using single energy densitometry in order to generate the claimed model.

Would you like me to go on?

THE COURT: Sure.

MS. PESCHEL: So the third issue with respect to the summary judgment motion on 112 issues is the energy source claims. This affects all claims of the '262 patent. So I'm on slide 18.

So unlike the claims of the other patents which require an x-ray source, the '262 patent is a continuation in part. It does have additional disclosures and its claims

require an energy source.

When you look at the additional disclosures in the '262 patent, it suggests using an electron beam source. Therefore, an electron beam source would be in the scope of the broader energy source of these claims.

The problem is that the '262 patent doesn't describe or enable actually using the electron beam source. It is more about you could use it but it doesn't describe how to use it.

Indeed, what Dr. Pelc opined on was that in reality, a person of ordinary skill in the art wouldn't understand how to use an electron beam source because there is no disclosure of the energy levels that are necessary to penetrate the objects that would have been imaged using an electron beam source unless you start adding very high doses of radiation to the patient and magnets and various other things that would take it outside of the scope of what appears to be anticipated by the patent.

Then again, this is another instance where Osseo's expert, Dr. Kia doesn't directly challenge Dr. Pelc's opinion regarding an electron source. He simply says they're not limited, the claims are not limited to using electron beam source and the inquiry is therefore irrelevant.

Indeed, I'm showing a portion of the transcript of Dr. Kia from, on slide 22.

I asked him in his deposition: If you are using electron beam source, is there disclosure of what energy that source needs to be used in order to penetrate the dental structure?

And he said: I'm not -- I'm not -- I didn't analyze that in my study here.

Then I asked: Were electron beam sources routinely used in dental imaging?

And his answer was: No.

So it's not something, is not routine knowledge that one of ordinary skill in the art would know how to substitute in an electron beam source from x-ray source in these systems.

THE COURT: But to the extent you are arguing what you are, lack of enablement, right?, for this one as well?

MS. PESCHEL: Yes.

THE COURT: I need to be able to say that any reasonable juror taking all the evidence in a light most favorable to the plaintiff, that all such reasonable jurors would find by clear and convincing evidence that it is not enabled, that we would need undue experimentation, et cetera.

You have shown me stuff that suggests you have a decent enablement argument, but how do I go a step further

and write a persuasive opinion that says this is unique in front of the jury?

MS. PESCHEL: So, Your Honor, a couple of things.

No. 1, Dr. Pelc provided an extensive analysis, an extensive expert opinion that went unrebutted because Osseo's expert simply thought that the inquiry was irrelevant.

In his explanation, Dr. Pelc describes what was known in the art and what was not known in the art and it was simply unreasonable to think that anyone could use an electron beam source in these types of systems. So I don't think there is any evidence to rebut, there will be no evidence for a jury to find that there was written description or was enablement for these electrons.

THE COURT: Didn't Dr. Kia say things like it would be complicated to do this but he didn't necessarily acknowledge one of skill in the art wouldn't be able to do it, I don't think.

MS. PESCHEL: Well, in his report, Your Honor, I'm showing on slide 21 the sole response to Dr. Pelc's opinion.

He quotes from Dr. Pelc's opinion, and then he says the asserted claims are not limited to using electron beam source and the inquiry is irrelevant.

THE COURT: And in his deposition, he doesn't

deny lack of enablement?

MS. PESCHEL: Just conclusory. I mean he just, he says, he repeats what is in his report, that there is no -- that he believes that there is not a lack of enablement.

THE COURT: Okay.

MS. PESCHEL: Okay. Moving on to the three dimensional claims.

Again, this is a subset of the claims. It does affect all of the claims of the '262 patent and then select claims of the '374 patent as shown on slide 24.

Again, we go back to all of the patent-in-suits claim priority to the '301 patent; and in that common specification, there is no mention of the word 3D or three dimensional.

There is, therefore, no enablement for how to process this radiation data to generate a 3D densitometry modeled.

Dr. Kia makes some citations to the patents, none of which mention 3D or three dimensional or describe how the computer controller would be processing the x-ray data in order to take what are 2D slices and formulate a 3D model.

When asked in his deposition, Osseo's expert, we asked on slide 28: Is there any disclosure in this patent of the way in which you would do the back projections to get

to a three dimensional model?

He agreed: I don't think the actual algorithm, the back projection algorithm has been described in any of these patents.

Nor can you find in any of these patients any flow diagram of how it could be done or any explanation.

THE COURT: Okay. Thank you.

MS. PESCHEL: So.

THE COURT: Yes, let's hold on on invalidity. We'll hear the response on this.

MS. PESCHEL: Sure.

THE COURT: Thank you. Or the rest of the invalidity, I should say.

MR. OSTROW: Good morning, Your Honor.

In our slides which we handed up to the Court, we had intended to argue this motion second, so I'm skipping now to slide 75 just for the record.

THE COURT: Okay.

MR. OSTROW: And I'm probably going to skip through some of the slides to save time for the other arguments.

The Court has touched on, Your Honor has touched on an important issue. Let me sort of start with that. Let me get that cleared up right away.

Planmeca's motion does conflate the issues of

written description and enablement. We pointed this out in our opposition. They don't really distinguish the standards required to prove each of those.

On the issue of written description, the briefs are clear, given theirs that each of the four things that are alleged not to be described are in fact explicitly stated to be in the specification. They're there. So it just doesn't seem to be any meeting of a standard of a lack of written description. There is clearly written description. The issue really I think they are trying to argue, and I think Your Honor touched on this, is whether the description is enabling to one of ordinary skill in art but there is an adequate description.

In each of the four instances, we have facts including expert testimony that one of ordinary skill in the art would find it adequate, would find the description adequate so that in our view right there just precludes summary judgment on any of these issues. I offer you a little bit of this but my intention is to try to save more of my time on some of the other issues but I'm certainly happy to go into it.

THE COURT: Well, certainly it would be helpful to point out exactly where your expert is contradicting Dr. Pelc because the contention is he has not done that.

MR. OSTROW: Okay. Let's start with the

"comparing" terms.

There is an issue which counsel for Planmeca discussed which we have a number of slides, I don't think it's worth going through at this point, that has to do with a little bit of confusion between the arguments made with respect to the means-plus-function element that Your Honor fond indefinite because if it didn't meet the standard for 112, paragraph 6 of having the structure, which in the case of a software would be an algorithm. So to that extent, that is a standard that was used in deciding the 112, paragraph 6 issue which Your Honor has already decided.

On the issue of merely written description and enablement, it's a different standard. The standard would be what one of ordinary skill in the art would have understood.

Here, on slide 77, we have some pages or paragraphs from Dr. Kia, Osseo's technical expert. His validity report, which includes a discussion of their sufficient written description, the issues raised by Dr. Pelc and includes down here that regarding enablement on the issue of comparing, cites to the specification and says that there is sufficient enablement by the following, at least the following, which is it says the computer also includes comparison software (118) which is adapted for digitally comparing baseline and patient's specific dental and

orthopedic densitometry models.

So stepping back on this for a moment.

The patents describe the fact that there are these densitometry or tomographic models as Your Honor will remember.

And these are datasets, they're digital information, and what the patent is saying is that there is software which compares two sets of digital information.

Dr. Kia is saying that one of skill in the art would understand how to do that. It may not be one way. A simple subtraction of the values between the two models could be a way.

There is certainly other ways that one of skill in the art knows how to compare two datasets in a computer, but certainly there is, Dr. Kia has provided that testimony in the end. We're not here today to prove that this is in fact the case, just simply there are sufficient facts that a jury can make this decision.

THE COURT: Is he saying a person of skill in the art would know where to go purchase comparing software?

MR. OSTROW: That is, could be one way. It's not saying here.

THE COURT: The argument is the patent itself doesn't tell you how to compare. Are you saying that's true, it just says, but there is software out there that

knows how to do it and that is adequate?

MR. OSTROW: I'm meaning to say one of ordinary skill in the art, at the time of this invention, would know how to do that, so it meets the standard, yes.

THE COURT: Even if the way they know how to do that is to purchase software that is not disclosed in the patent.

MR. OSTROW: Yes. Again, that is not the only way but that is a way.

THE COURT: What other way does your expert say is the way a person of skill in the art would know how to do it?

MR. OSTROW: What he is saying is that one of skill in the art would know how to compare two sets of data in a computer.

THE COURT: When he talks about how they would know how to do that, other than by software?

MR. OSTROW: This is the basis for his opinion. There may be additional testimony in his deposition which I am just not thinking of off the top of my head, but this is at least found in his report.

THE COURT: All right.

MR. OSTROW: Let me skip ahead to some of the other issues.

The densitometry.

We have explained and that Dr. Kia mentioned this as well. That the patents incorporate by reference other references, other patents. One of them is this Gershman patent, on slide 88 from our slides. And that is cited specifically in the patent for disclosing the known use of single energy level measurements. So by incorporating it by reference, one of ordinary skill in the art would have been enabled how to do the claimed methodology using single energy level measurements.

To the extent that Planmeca is arguing that the densitometry couldn't be achieved using single energy, energy level measurements other than Dr. Pelc saying so, there is no evidence to that effect; and I believe it is based on their misperception of the requirements of densitometry which affects some of their other motions as well.

I mean to say that densitometry, getting bone density values can be done through single energy level measurements and the Gershman patent incorporated by reference contained that disclosure.

THE COURT: Does Dr. Kia identify anything other than this other patent incorporated by reference in support in the patent itself for written description or enablement?

MR. OSTROW: I don't believe so.

THE COURT: So it's all dependent on this

incorporating by reference?

MR. OSTROW: Yes, for the disclosure of the single energy level scanning.

The disclosure of the dual energy level is obviously disclosed in the patent itself which enables also the claim which is not limited to one or the other.

THE COURT: Okay.

MR. OSTROW: Let's see here.

On the other two issues that they have raised, the electron beam source, it's disclosed in the specification so, again, there is an issue between written description and enablement. There is clearly a written description of it, and I don't think Dr. Pelc would disagree with that.

But as the Court mentioned a moment ago, and as we cited in our brief, in our opposition brief on page 11, in his deposition testimony, Dr. Kia did say that while it might be difficult or complicated to use an electron beam source, that it is certainly doable.

As such, there is not enough evidence, certainly at this stage, we think at all, but certainly at this stage to show that there are insufficient facts to preclude -- to provide summary judgment on this issue.

THE COURT: So Dr. Kia did testify that a person of skill in the art would know how to do it.

MR. OSTROW: Yes.

THE COURT: Does he explain at all how they would know how to do it?

MR. OSTROW: Again, I don't recall off the top of my head. So I'll say that at the moment not that I'm aware of.

THE COURT: If he has not in his expert report or in his deposition explained how it is that one of skill in the art would now how to do it, why wouldn't that just be a conclusory statement that really doesn't merit being credited?

MR. OSTROW: Well, that is up to Your Honor. I think he is providing his expert opinion based on his knowledge base. One of ordinary skill in the art would know how to do it. The patent does say using electron beam sources it is possible. It may not have been common at the time in use by dentists, it may not have been in dental imaging machines and the like, but there is no evidence even by Dr. Pelc that it couldn't be done.

THE COURT: Okay.

MR. OSTROW: The same thing with the 3D models. There is disclosure, specific disclosure of the use of 3D models. And Dr. Kia again testified that one of ordinary skill in the art would know, at the time of the invention, how to take datasets and make 3D models out of them. It

was known. We're not professing that that's the invention. It was known at the time, fairly well known by those of ordinary skill in the art how to make 3D models out of image datasets.

The other thing that I think is worth pointing out is that to the extent that Planmeca's arguments are really based on lack of enablement, in order for them to have made the showing, they would have had to show that these things could not be done without undue experimentation. There is actually no discussion in their briefing or even today about any factual basis for how much experimentation would be needed, whether that is due, you know, a due amount or undue amount. There is just nothing. That is completely missing that element from the enablement case.

THE COURT: I thought their expert said 3D, three dimensional isn't even mentioned in the specification.

MR. OSTROW: So it's not mentioned, these patents were, one's a continuation or part of the other. It may not have been mentioned in the earlier patent, but it was mentioned in the later one which has the claims talking about 3D.

THE COURT: The claims that are at issue in this case.

MR. OSTROW: That's my guess.

THE COURT: Okay.

MR. OSTROW: Another issue, just to quickly address it, counsel raised it in their briefing as well. This issue of the priority date, I don't want to spend a lot of time on this, but if there is, if they want to make a case that the earlier specification doesn't have the disclosure to support claims from the later specification, the remedy for that is essentially that their priority date fails and that, therefore, for example, we couldn't use that priority date to overcome prior art. As far as I know, we're not doing that in any of the prior art that is being asserted.

The remedy for that is not that the later claims are not supported because the earlier specification didn't have certain disclosure.

THE COURT: Okay. Is there anything else you want to say on these issues that have been argued to this point?

MR. OSTROW: I'm sorry?

THE COURT: Is there anything else you want to say on this?

MR. OSTROW: No, not on this one.

THE COURT: We'll turn it back to the plaintiff.

MS. PESCHEL: Your Honor, would you like me to address any of those issues?

THE COURT: I'm sorry?

MS. PESCHEL: Would you like me to address any of the remaining?

THE COURT: Now would be the time for rebuttal, if you want to. It's up to you.

MS. PESCHEL: Very quickly. I want to use my time efficiently.

Counsel put up slide 77 and he quoted language that was not from the common specification. So what Dr. Kia quoted from is from 564 to 69 of the '262 patent, and even just a reference to comparison software still doesn't tell you how to do it. There is not a description that describes to one of ordinary skill in the art how to make and use the invention when it comes to the comparison limitation.

THE COURT: If it were the case, if they could prove that one of skill in the art would go to the store and buy software, and they knew how to go to the store and buy software, wouldn't that be enabling?

MS. PESCHEL: Only if that was what was known. And there is no evidence in this record that that was the case.

That because what we're -- we're not talking -- allegedly we're not talking about just tomographic images which were known in the art, we're talking about very specific tomographic densitometry models, and the idea that you could go to the store and pick up software that would

compare those models seems to me -- and again this is a theme we'll get to -- would render the claims invalid over the prior art because if you could just go to the store and be able to compare them, that means that the software would have to anticipate that those things existed in the art anyway.

THE COURT: Okay. Is there anything else you want to say on these issues?

MS. PESCHEL: With respect to densitometry. Dr. Kia did not identified the Gershman disclosures that allegedly support the single use, single energy level densitometry, nor did he describe them or explain how one of ordinary skill in the art would understand from a very small reference in the Gershman patent how do single entering densitometry in the context of the invention that they're claiming.

THE COURT: It is incorporated by reference, but Dr. Kia doesn't explain what difference that makes.

MS. PESCHEL: Yes. And then with respect to the other two issues, Dr. Kia's testimony and reports are merely conclusory. They merely say that there is written description and there is no lack of enablement without any supporting explanation.

THE COURT: And that includes his deposition testimony, merely conclusory.

MS. PESCHEL: Yes.

THE COURT: All right. Do you want to move on?

MS. PESCHEL: Yes, Your Honor. Moving on to the motion for summary judgment of no infringement.

This motion contains a couple of aspects. In particular, focusing in on the tomographic modeled limitations which require the use of densitometry to make the models. We do not meet that limitation.

There is no viable theory under the Doctrine of Equivalents and the asserted claims are invalid over the prior art.

I want to orient the Court just a little bit now that we have reached the stage where we're in summary judgment.

I want to orient the Court as to how the accused systems function.

So on slide 32, there is a picture on the left of the x-ray unit of the system. And in that system, the patient would put their head into, on top of that blue chin rest and their forehead against the top rest, and then there is a C arm and the C arm rotates around the patient's head.

What it does is it collects information. So there is an x-ray source on one side and there is a detector on the other side and it detects how much radiation has been attenuated by sending three units here, and I only get one

out here because there is some object in the middle of the x-ray beam which is causing a continuation of that x-ray beam.

That data goes from the x-ray unit, it's represented as pixel voxel values in 2D so you think of it as slices it's collecting data on planes.

That data is then sent to a reconstruction server so specific computer. It runs a particular algorithm that uses the back projections of the 2D image data to recreate a 3D volume data set.

So for every 2D reading, that 2D reading is impacted by the surrounding structure.

So this is a very complicated mathematical algorithm to resolve those issues so that you can generate a 3D data set.

Those 3D gray scale values are then, they're scaled and they're represented as Hounsfield unit values in the 3D volume data set. That data set is sent from the reconstruction server to a computer running Romexis which is where the user would see the images.

So what you see on slide 33 on the left is a picture of what images you might see.

So you see on the bottom right quadrant there is a 3D image and the other images are just 2D images.

So Osseo's theory of infringement, so we went

through claim construction and we determined that gray scale values were not enough. That it had to be quantitatively calculated bone density. And so what Osseo's theory of infringement has been was that scaling to Hounsfield unit values is infringement.

I'd like to show you why that is not the case. So pardon the diversion into a little bit of math, but this is how Hounsfield values are scaled.

So new in this equation on slide 35 represents the linear attenuation of x-ray beams through an object. So this is what is being measured as you are going through the patient.

And it is corrected for that linear attenuation of air and water for the machine, so it's scaled.

Now we know that Dr. Kia has admitted, okay, the x-ray data, that hasn't been scaled so just the gray scale is not enough. It doesn't have density information.

So then the question is, well, do Hounsfield units, are those quantitatively calculated bone density? And the answer is no.

Hounsfield units that measure linear attenuation coefficient depends on a number of things.

It depends on the mass attenuation co-efficient of the material and the material's density.

There is no allegation that Planmeca's accused

systems take the step to solve for density. The allegation is merely that the Hounsfield units suffice, and we believe that to be wrong.

Now, I said it's the product of the mass attenuation co-efficient of the material and density.

The mass attenuation co-efficient depends on a number of things, including the x-ray photon energy of the system and then the materials elemental composition, so diffraction by weight of each, how much calcium is there, how much carbon, how much oxygen? That all impact these calculations.

Now, when we deposed Dr. Kia, he admitted that, yes, there may be some things that affect the linear attenuation co-efficient but he hadn't really studied how it impacts the Hounsfield unit values.

He admits in paragraph 50 of his expert report that Hounsfield units are not absolute measurements of material density and they simply haven't shown any evidence that the accused systems perform any of the additional calculations that would be necessary to get to density.

On slide 30, I have a couple places of Dr. Kia's deposition transcript where he admits that the Hounsfield unit equation is not specific for bone. And that he doesn't view it -- it doesn't change any part of his opinion that the Court included the word "bone density" instead of just

saying "quantitatively calculated density."

I'll move on to the DOE issue, Your Honor, unless you have questions.

THE COURT: That's fine.

MS. PESCHEL: So there is no literal infringement because we don't meet the densitometry requirements of the tomographic modeled limitations.

There also should be summary judgment that there is no infringement under the Doctrine of Equivalents. Dr. Kia's sole paragraph on infringement under the Doctrine of Equivalents is paragraph 63 of his report which is shown on slide 42. It is conclusory, doesn't have the particularized testimony and linking argument required. There is no explanation for why one of skilled in the art would consider HU values equivalent to quantitative calculated bone density.

And when we took his deposition, his testimony confirmed the circular logic of his analysis.

I asked him: Can you explain your opinion as to how the gray scale or HU values calculated by the accused product meet the densitometry model limitations under a Doctrine of Equivalents theory?

And he says: No, I mean it's all in that paragraph.

Then on slide 43 on the right, I asked: Well,

if they don't literally meet the densitometry model limitation, how can they be said to achieve that same result?

He said: Well, I have to point you to the first statement in the paragraph. If the gray scale issue values calculated by an accused product are not found to literally meet the densitometry model limitation.

So it is a very chicken or eggs argument or heads I win/tails you lose.

His argument is if I lose on literal infringement, then they must infringe under the Doctrine of Equivalents, without any explanation of why one of ordinary skill in the art would consider those two things in insubstantially different.

Your Honor, we briefed this issue, but to the extent that their Doctrine of Equivalents theory would cover Hounsfield units, it would ensnare the prior art. In particular, Cann 1980. Hounsfield units have been around since the 1970s. Dr. Hounsfield won a Nobel prize for them back in that time period. And in Cann 1980 on slide 44, you see that Hounsfield units were being used to create tomographic images.

THE COURT: Let's hold off on the invalidity.

MS. PESCHEL: Sure.

THE COURT: Let's hear the plaintiff's response

on these infringement arguments.

MR. OSTROW: Okay. The issue that we would have to prove to establish infringement of these patents is not whether anything calculated in Hounsfield units represent bone density because it is clearly not the case. Hounsfield units are a generic calculation for any material, not just bone, and they're related to many different applications.

What we have to prove is whether Planmeca's machines, the accused products of the -- let's see, I've got this listed -- the Pro-Max device which counsel for Planmeca has described its operation with the Romexis software which we're going to get into in a little bit. Whether those products do a calculation that in effect represents the density of the bone. In this case, the bone at issue is teeth.

Whether those Hounsfield units represent, for example, the density of someone's tongue is irrelevant for the cheek or other soft tissue that might have been in the range of the image. That has nothing to do with this defense. These patents as Your Honor has construed them are talking about doing a calculation, quantitative calculation that represent bone density.

What we're going to show is that there is more than sufficient evidence that that is exactly what these machines do. That Planmeca knows it. It tells its

customers that. That it's 30(b)(6) witness says that. There is plenty of evidence to that effect.

But just to remind the Court, we've got these three patents.

Another issue that I believe is sort of a central fallacy of Planmeca's argument is what the computer system, what the accused system has to actually operate on. It's not densitometry data, it's the resulting model.

So, for example, in slide 4, we've got the '301 patent, claim 1, one of the asserted independent claims which talks about the storing, for example, in the first element of a pre-existing tomographic dental densitometry model or an output device which outputs the densitometry model, not densitometry or densitometry data but the model.

The reason why that is important is the Court has already gone through this in the claim construction process.

"Densitometry" is defined as "quantitatively calculating bone density" which again is some of the evidence in a moment, but turning to what the claims actually process, what they store, what they compare, that is the model.

So the Court has construed the tomographic model, similarly the densitometry model ended up being the same in the Court's construction as "merging information or

the merged information from multiple tomographic scans of an object to produce a representation of the subject/said representation depicting quantitative density differences" -- not values, differences. And there is tons of evidence that this is exactly what their product does. It depicts quantitative density differences.

I'm going to walk through some of that evidence now. I'll skip through. I have the other claims as well to support the idea that what is being operated on is the models, not just densitometry, but let me get to some of the evidence here.

So one of the components, for example, just to make the case in their Romexis software is called an implant verification tool. So this is a tool that the dental professional, dentist, uses and after taking the images, in determining whether there is an implant in someone's tooth compared to the tooth itself. All right?

So this is, for example, a screenshot from the Romexis manual which shows the image. And this is what they call a verification dialog which displays information, including scans of the patient's bone along with density of the bone, quantitatively calculated by their products, and represented in the HU units of measure, which in the case of this application effectively are representing density, bone density.

So, for example, and I'll come back to this in a moment, the Court may note that this is one of their screenshots. They refer to these density colors, but I will come back to that later. They, themselves refer to what is being shown, the data as density values.

But what is shown here is this is an implant. This is I guess some sort of metal device which obviously has different density than the surrounding bone or tooth. And they show, these are obviously quantitative. I don't know that this is a big issue in dispute, but, for example, their product that has this portion of the screen, which we have mean values outside and inside the implant are shown. So inside the implant is this orange and outside is this purple line. These are based on values. These are based on what are effectively density values of the bone and compare it to the implant, so the dentist can see the difference.

Similarly here, this is another portion of that verification dialog is a screen where the user can move the mouse curser on top of the images. The Hounsfield unit, the HU value will show at the bottom, so there is quantitative value. That is what I'm trying to show here. And as the user moves around, the value presumably changes depending on what the curser is on.

As I pointed out before, I'll get back to that in a moment.

So how do these represent? What is the evidence they represent bone density?

Let me see what is the best way to pull this up?

Counsel for Planmeca went through and they got it here as well, that the value of the Hounsfield unit value depends on effectively three things:

One is the density. So that's part of how the value is calculated. And the other thing is the linear attenuation, the mass attenuation co-efficient which depends on the materials elemental composition, and the x-ray photon energy.

So there is plenty of evidence that with respect to the teeth being imaged, which is what the issue is here, again not generally in all the physics, how this works, but for teeth, bone teeth being imaged by the accused systems, that the material's elemental composition, meaning the teeth is effectively the same, across all teeth. Again, the goal here is to have a model which shows the differences, the density differences.

So the material elemental composition of teeth is effectively the same, within a range, acceptable range.

Similarly, the photon energy of the scan that's used would be the same within a range. There is testimony from Dr. Pelc that because the quantum effects and things of that sort, there may be some variation in the energy level

even within a given scan that creates certain inaccuracies. I'm talking through some things for which there are many slides just for the interest of time. So those inaccuracies may create differences in bone density values between teeth being scanned in the same image, but not sufficiently that it's not useful.

So Dr. Pelc testified, Dr. Kia as well, that the issue is whether the machine is sufficiently accurate. So I would suggest the facts, one factual issue is whether the machine's measurements are sufficiently accurate to reflect the differences in bone density across teeth. We believe that it is but for purposes of today there is plenty of evidence that it is.

All right. So Dr. Kia, Osseo's expert explained that the images consist of pixels and they have quantitative -- the value of the pixels are a quantitative measure of the radiodensity of the bone based on the Hounsfield, and they cited evidence from the documentation and also from Planmeca's 30(b)(6) witness, Timo -- I forget whether it is pronounced Muller or Mueller, I'll say Mueller. I may be wrong about that. It has been awhile since I took his deposition. Again, Planmeca showed this equation. But when we go to Planmeca documents, they refer to what is being shown as bone density.

So, for example, this is from the Romexis

manual. They say, they discuss click on a point of high bone density in the 2D views. Click inside the 3D measurement you made in the first step on the density that you want to measure. So they are telling dentists we've got many sources for this.

This is from the Romexis manual, I've got a page here which says. These are just samples. I can't possibly go through all the evidence. These are samples of the evidence.

Planmeca tells its customers that when performing intensity measurements, it should be noted that after certain image processing operations, relative intensities of the objects may be affected by the neighboring objects which may affect the reliability of, e.g., bone density measurements with the help of the calibration step wedge.

What this is saying is if the dentist used fairly common device multi-calibration step wedge, that neighboring object may affect the bone density measurement, but it's taking a bone density measurement. That is what dentists are using this for. These machines, the values that are calculated are bone density measurement values.

Similarly, when they talk about removing artifacts from images, again, it talks about settings in the software that allow the selection of artifact removal

applied to an image. Higher settings should be used with patients who have more high density materials.

Then coming back to this implant verification tool dialog. And I apologize, I'm trying to rush through it quickly. There is a lot of evidence.

But this is what I had shown before. In their Romexis manual, when they described to the customer what is going on on the screen, it's down here, I just enlarged it. This density color option is described as colors corresponding to HU values and dialog to adjust them.

And you can adjust color of implant or HU measurement layers using the density color. Change the colors of the densities in the image. That is what they're saying that is what the HU values are representing.

Again, that doesn't mean that in all of imaging or all of physics, HU always represent that. There are many applications for which the variation of material composition is so variable that the density is just one factor. Here, it is the primary factor.

THE COURT: So their argument seems to boil down to they don't take the HU values to solve for density. And you are saying all of this directly contradicts that?

MR. OSTROW: Well, I'm saying that I'm not sure that that matters, but the calculations that they're doing result in what they confer to as bone density.

THE COURT: All right. There is a factual dispute about whether they take the HU values to solve for density?

MR. OSTROW: No.

THE COURT: No, okay. So your argument is it doesn't matter?

MR. OSTROW: Right. The calculation that they're doing is a bone density. For purposes of this application, these accused products, this calculation, the bone density calculation.

THE COURT: And you say you just have to show that they're calculating bone density. It doesn't matter that they're, by your own admission, not using the HU to solve for density.

MR. OSTROW: Right. Because the HU value in this case shows the density differences which is what the claims require in the tomographic models.

THE COURT: So they do use the HU but they don't use it to solve for the density.

MR. OSTROW: Right, a mathematical point of view, but it is a quantitative calculation that represents bone density. That's what the facts show.

Again, similarly, after this I'm fine from this, from the documents, but again describing that implant verification tool, they wrote: Use the density color

options to enable pseudocoloring of the data to enhance differentiation between different anatomy densities. So now they're talking about anatomy densities, not even just densities in general.

All right. I'll skip the rest of those.

Again, I mentioned the deposition of their 30(b)(6) witness, Mr. Timo Muller, their technical witness as well.

We've got a bunch of testimony that we included that we referenced in the brief we included here. Let me just see in the interest of time which we're talking about here.

I asked him about differences in mass.

THE COURT: (Sneezing.) Excuse me.

MR. OSTROW: Gesundheit, Your Honor.

Which one would be lighter in terms of the attenuation when there is more or less mass? He said, if, for example, the material is thicker with the same material, then the end result would be lighter. If the mass is higher of the same volume material, then the image would be lighter. This is him testifying his recognition that the factors that affect the value that they are calculating are mass and volume. Mass and volume for the same material. Teeth are the same material so that part of it is taken out of the equation.

Then, of course, I asked if him density equals mass per volume. And after a little bit of false starts, he admitted after just physics, he said, yes, that is a physical fact. If you have mass of a particular -- of the particle and you divide it with the volume, you get the density. That is a physical fact.

So having said that, what affects the value they're calculating, mass and volume, he acknowledges that that is density.

There is more of the same here, you see.

Let me turn to, there is a bunch here.

Again, I asked him many of the same, within the same vein.

When I asked him about the documents, and I read that sentence that I just read to the Court, where it says use the density colors to distinguish between the different anatomy densities, his answer was the sentence was correct if the word "density" is changed for gray scale values.

THE COURT: Is changed to gray scale values?

MR. OSTROW: It says for, but I guess that is what he meant.

THE COURT: So I did want to understand your view. We had talked previously about gray scale values; right?

MR. OSTROW: Yes.

THE COURT: And so how does that all fit into this? Are you relying on gray scale values or are you not?

MR. OSTROW: Gray scale is sort of an analog concept. It is the differences between shading and an old time x-ray. The image you would see of a broken hand is a gray scale. What their software does is digitizes it and runs it through something called a phellercam algorithm to generate these HU values.

So they're doing calculations off of that. It is not just merely gray scale values. Then they're generating the 3D model based on that.

THE COURT: If you were accusing just gray scale values, could you show infringement?

MR. OSTROW: In the analog sense, no.

THE COURT: Hold on.

MR. OSTROW: In the analog sense, no. In the digital sense, if it's just digital gray scale values, then they're probably not -- that is not the only thing required by the claim. So there probably would be other problems. For example, you couldn't show the merging of tomographic scans to create a tomographic model because the data wouldn't have been merged.

THE COURT: If the only thing you were pointing to was gray scale values under the Court construction of these claims, could you show infringement?

MR. OSTROW: I believe the Court construction precluded that.

THE COURT: Okay. Are you relying in part on the gray scale values as to show infringement?

MR. OSTROW: It's part of their process. So I'm relying on it only to the extent that part of how they get to the data at the end if that is their starting point.

THE COURT: Do you agree that you have to show that there is a quantitative calculated bone density in order to show infringement?

MR. OSTROW: That is how the Court construed the term, yes.

THE COURT: But you are not contending it's the gray scale by itself because you can't; right?

MR. OSTROW: Right.

THE COURT: And you are not contending it's the HU value because you acknowledge that they're not using that to solve for bone density.

MR. OSTROW: I'm contending in this application that is a representation of bone density. That is clearly something that was quantitatively calculated, and it represents, according to them and their own witness, bone density.

THE COURT: You are saying that something that is a representation of bone density has been itself

quantitatively calculated?

MR. OSTROW: Right.

THE COURT: Where are you pointing to in quantitatively calculated bone density?

MR. OSTROW: That is what we're relying on.

THE COURT: A representation that itself was calculated.

MR. OSTROW: Yes.

THE COURT: Or quantitatively calculated.

MR. OSTROW: Yes.

All right. Since we didn't get into the -- oh. On the issue of the Doctrine of Equivalents, this paragraph which Planmeca cites, and we discussed this in the briefs so not worth taking the time, links together the function-way-result test, how each of those will be satisfied be what the accused system does, but it's not the only discussion that Dr. Kia has. He has other paragraphs which describe the background to those things, and what the functionality and what it does that he is in effect relying on when it came to the linking.

So this is paragraph 63 and our slide 53, and Planmeca cited it as well, provides the linkage for each of the function-way-result tests, but the discussion of what these things mean appears elsewhere in his declaration and in his deposition testimony. So I cited some things here.

THE COURT: Does he talk about substantial or insubstantial differences?

MR. OSTROW: That would be here (indicating).

THE COURT: In that same paragraph 63?

MR. OSTROW: Yes.

THE COURT: Is this particularized linking testimony?

MR. OSTROW: I don't understand the question, Your Honor.

THE COURT: Is this something other than just a summary paragraph saying, hey, if I don't persuade you on literal infringement, is there my equivalence?

MR. OSTROW: No, this is things that have been discussed elsewhere in his declaration. He is showing that they have the same function, way, and result. It links each of the specific functions, ways, and results.

THE COURT: Does he respond to the ensnarement point?

MR. OSTROW: I would say, Your Honor, maybe not explicitly so, but implicitly because he addresses all the prior art and how they're distinguished in other ways.

THE COURT: Including the prior art that supposedly is ensnared by the DOE theory?

MR. OSTROW: Yes.

THE COURT: Okay.

MR. OSTROW: I can get into that now, but it is more responsive to their prior art argument than this one.

THE COURT: All right. We'll go back to defendants on infringement points first, if you have anything you want to add.

MS. PESCHEL: Just a couple of things, Your Honor. I don't want the Court to be confused.

There are citations to the Planmeca product manual. Those really need to be looked at in context.

I have on slide 40 two of the citations. The first one is the one that is talking about that calibration step wedge; and, again, that is not sold with the accused systems. That is just something that a user might look at to be able to tell between two different images. Maybe they were taking it different.

You would think of -- in x-rays, you would think of a slightly different exposure. One x-ray might be slightly darker than the other. How do I compare before and after with my patient? But it is all qualitative, and it is all that gray scale qualitative analysis.

What we heard from plaintiff's counsel is that they're not accusing the Planmeca accused systems of actual quantitatively calculating bone density. The accusation is that HU units substitute, and that is not true on the undisputed facts.

Again, so on the right of slide 40, there is another reference that they have cited with respect to using the word "density." And, again, that is -- so this one has to do with a region growing tool which is a functionality allowing the user to pick a particular area and determine what size it is.

And it's telling the user, okay, pick a region of pretty uniform density. And, again, that is a qualitative analysis. They're looking at it and saying, okay, this is the area I want to measure. I want to draw my box here, and that has to do with the grade scale values and HU values which are not bone density.

I also wanted to dispel the myth that simply because you're measuring teeth, the bone density is going to be the same.

The whole point of these accused systems is that the dentist is able to look at the teeth and see where the density has changed, where things have gone wrong.

It is not true and you can see in the images that it is not true, that there is differences across these images.

Again, that's still qualitative from our perspective.

Then I want to address the accuracy point. The accuracy citations that plaintiff's counsel has pointed to

come from one of two places: either the deposition of Dr. Pelc or parts of his report where he is responding to Dr. Kia's use of certain articles in a way that he thinks was not correct, and so it's a rebuttal to those.

But in all those situations, his mention of accuracy is addressing the idea that HU units substitute for quantitative calculated bone density, which everybody admits they do not substitute. Okay? Mathematically, they do not substitute for quantitatively calculated bone density.

So in this particular exchange in this transcript at 1123, 7 to 18, he was asked some hypothetical.

And he answered: Well, what is required to be measured is bone density. And under the questions assumption that that is what you are actually measuring, you know, that measurement would have to be sufficiently accurate to be useful in order to meet the densitometry requirement.

It is simply not adding an accuracy requirement to the Court's construction. It is saying when you look at the Court's construction what it requires is a quantitative calculation of bone density, and that is not present in the accused systems.

THE COURT: So by accuracy, it just means there needs to be some quantitative calculation?

MS. PESCHEL: Right, Your Honor. It doesn't

have to be -- for instance, from a purely scientific perspective, it doesn't have to be plus or minus .05, right?, on an average basis to reach some sort of scientific reliability. If we're talking about "I calculated bones density" and whatever the margin of error would be for the dentist would be acceptable, that would be fine. That would be a calculation. If you calculated bone density, you calculated bone density.

THE COURT: Because you acknowledge there is no express accuracy requirement in the claim construction?

MS. PESCHEL: Correct, Your Honor, but there is a requirement for the bone density.

THE COURT: It needs to be bone density, it needs to be quantitatively calculated; right?

MS. PESCHEL: Yes.

THE COURT: Okay. Is there anything else on infringement?

MS. PESCHEL: No, Your Honor.

THE COURT: Do you want to move on to your invalidity?

MS. PESCHEL: Yes, Your Honor.

So, again, with respect to invalidity, I want to emphasize the point that the majority of conflict in the briefing over whether or not the asserted claims are invalidated by the prior art has to do with the tomographic

model limitations.

There are admissions, and we cite those on slide 46. I have given where those citations are.

Dr. Massie, the listed inventor, and Dr. Kia agreed that the majority of the claim limitations were well known as of the priority date. And we have discussed those extensively in hearings before the court, but x-ray sources, x-ray detectors, those is types of things are known in the art, and there is not a dispute as to that.

Now, when Dr. Pelc provided an extensive invalidity report that addressed five primary references, only three of those references we brought in our summary judgment motion, and then we added in, of course, the Cann 1980 reference which is the reference that shows HU units were known in the art. It's simply their position on validity can't be reconciled with their position on infringement.

If tomographic models is what is novel to this invention and HU values suffice, then we know that Cann 1980 was showing those.

So let me separate two things. Cann 1980 shows the use of HU values to generate images of bone structure, and so under their theory that would invalidate the asserted claims.

In addition, Cann 1980 discloses further methods

that specifically calculate bone density. So I've got HU values and now I go further and I do some different things or use some different methods which would enable me to get to a quantitatively calculated bone density. That is the way that Dr. Pelc relied on Cann 1980 in his affirmative opinion.

In the briefing -- I do want to make this clear for the Court. In the briefing, Osseo cites portions of Dr. Kia's report that relate to the analysis of the Webber '686 reference. That reference is not part of our summary judgment motion.

So Osseo is claiming Dr. Kia disagreed with Dr. Pelc regarding in particular the part of the construction for tomographic models regarding merging and the reasons to combine in these paragraphs 59 to 85 of his report.

If you look at those paragraphs, they are either specifically addressing Webber and providing conclusory opinions about, well, the other references also don't show this or they're just simply conclusory on their face.

So on slide 49, I have given some specific examples of that.

For example, paragraph 72, he is talking about whether or not -- and this is Dr. Kia. He is talking about whether or not Weber '686 discusses merging tomographic scans, and then he simply says I don't think any of the

other references teach a merging of a plurality of tomographic scans, and he doesn't specifically address the disclosures that Dr. Pelc provided.

I also want to clarify that Dr. Pelc did not add information to his declaration. Because we removed references from the invalidity report explanations from what we were presenting in summary judgment, we presented a declaration that removed paragraphs. There is a citation at the end of every paragraph in the declaration that says where that language came from in his invalidity report.

There is an issue in the briefing about paragraph 150 of his declaration. That is identical to paragraph 266 in his invalidity report, so I wanted to clarify that.

THE COURT: You didn't add anything, you subtracted things.

MS. PESCHEL: Yes.

I also want to respond briefly to a point with respect to Cann 1980 as being the "comparing" limitation.

Dr. Pelc pointed out to Cann 1980, and the way he does this in his invalidity report, which I believe was attached to the response at Docket Entry 105, Exhibit A, I believe, the entire invalidity report is attached.

What he did was he took the primary references and then for the limitations that were not met by the

primary reference, he provide reasons to combine and he provided other analysis. And he did so with respect to Cann 1980, particularly for me, the "comparing" limitations of the certain comparing claim.

What Dr. Kia responded with is a quotation of what the opening invalidity report says and a conclusory statement that it fails to disclose the "comparing the tomographic model" claim limitation.

So, again, that is not evidence in opposition to Dr. Pelc's opinion. It is merely conclusory expert testimony that should be excluded pursuant to our motion to exclude.

THE COURT: Does your brief explain where your expert explained the motivation to combine or do I have to go hunting through his report to find that?

MS. PESCHEL: The brief does have some very specific citations to the motivations to combine, but his declaration does say for each paragraph that addresses a new prior art reference, that paragraph and potentially the paragraph subsequent to that describe why one would be motivated to combine. And what is he says in his declaration is in each of these situations, we're talking about x-ray systems that were commonly known and known to being used in different applications, and that it would have been -- there would have been a motivation to combine a new

technique, a new software, a new analysis of the data with that same equipment.

THE COURT: All right. Is there anything else?

MS. PESCHEL: No.

THE COURT: Okay. We'll hear from plaintiffs.

MR. OSTROW: I just want to come back to one issue on measurements.

Counsel for Planmeca just indicated -- that she may have misspoken, but she indicated in showing the image of the x-ray images of the patient's mouth that the dentist needs to know the difference in density, she said, between different portions of the tooth so they know maybe there is a cavity.

That is exactly our point. Their machines will show the dentist the difference in the density because the material, all the other factors in that HU calculation are the same. The material is the same, the scanning, using the same energy source within a range of accuracy, but the density is different. That is exactly what we're saying. That is what the machine is being used for.

THE COURT: If the density difference is just simply a qualitative or gray scale view, that does not infringe; correct?

MR. OSTROW: Correct, but it is not. They run calculations and then they can show those. We walked through

that in the first round showing where the calculations are shown.

In addition, and I skipped over this before but it is a little bit more relevant now. In Dr. Kia's report, he cites an article where there is some research was done on these issues by Pauwels.

So this it slide 33, paragraph 50 of Dr. Kia's infringement report, and this is a quote from the article. This is not even Dr. Kia standing behind it but he is quoting the article.

It says: Materials or tissues that absorb more x-rays such as bone have a higher Hounsfield unit value. Although Hounsfield unit values are not absolute measurements of material density, they can be used for clinical purposes to quantify bone material density.

And that confirms that is what we're saying. That is the support for what we're saying. This application, these values quantify bone density. This is from the Pauwels paper that Dr. Kia cited.

On the issue of the prior art. And I recognize we're sort of running short on time, and I am compelled to ask the Court, I believe the Court has something at noon.

THE COURT: You have 11 minutes.

MR. OSTROW: All right. For the rest of the motions?

THE COURT: Yes.

MR. OSTROW: Well, we briefed the issue of the prior art. I do point out that they're arguing for summary judgment combining four references, and they're obviously issues of material fact. Dr. Kia has disputed that these references disclose all the elements. It's not enough they disclose calculating HU units. That is not the invention.

THE COURT: You are saying he is disputing?

MR. OSTROW: Yes.

THE COURT: I don't think you mean -- it was an ambiguous statement. He is not disputing many of the elements are in fact disclosed in one or more of those four references. I had a "not" in there. But tell me, are you contending that your expert has said none of the elements are disclosed in any of these four references?

MR. OSTROW: If I stated that, I misspoke.

THE COURT: No, I think it was ambiguous.

MR. OSTROW: I apologize.

THE COURT: Does it turn on the tomographic model limitations or does it not?

MR. OSTROW: It largely does. It turns basically on two things. I have slides here but it is in our briefing. The tomographic model requires merging of the scans. That Cann 1980 reference does not disclose that. Also, Pelc did not say it disclosed it in his original

report. This is a new disclosure, and we have some slides showing everything he said about Cann 1980 does not include the merging step.

But Dr. Kia nevertheless in his report here, we show everything Dr. Pelc said about it.

THE COURT: I've got to focus on the merging stop, and what is the other one?

MR. OSTROW: And the comparing of the models.

So we've got a bunch of slides. It's probably not a good use of time to go through all of them.

THE COURT: All right. Then on the motivation to combine, at least by the time we finish reading the reply brief, and now I have the argument, haven't they in fact identified where their expert says there would have been a motivation to combine?

MR. OSTROW: They may have, and we have our expert who says there would not have been motivation to combine because these technical fields were different, so it is a battle of experts.

THE COURT: Fact.

MR. OSTROW: Yes.

THE COURT: Is there anything else you want to add?

MR. OSTROW: No. Thank you, Your Honor.

THE COURT: Okay. Anything further on this

motion?

MS. PESCHEL: Just one thing, Your Honor.

On the Pauwels article that Dr. Kia cites in paragraph 50 of his report, I'm showing on slide 60.

Dr. Kia cites, quotes the sentence that is right before the second highlighting on the bottom. He quotes: "Although Hounsfield unit values are not absolute measures of material density, they can be used for clinical purposes to quantify bone material density."

Then this reference describes what that means. You can convert Hounsfield units to bone material density or you can do these other methods that allow you to calculate density without doing Hounsfield units.

THE COURT: Okay.

MS. PESCHEL: I just wanted to be clear about that. I think at this point, given the time, it would be a good idea to switch to the damages issues.

THE COURT: Right. That was next on my sense of priority. Each sides has about eight minutes, eight to nine minutes left. How would you propose jumping into the damages issues?

MR. QURESHI: Your Honor, I'll discuss those for Planmeca.

I think I can fold in once Planmeca's motion to strike Justin Blok's opinions, our motion to strike the

apportionment opinions of Dr. Kia, and then also to go ahead and rebut their *Daubert* motion on bone. I think I can do it.

THE COURT: Why don't you do all of this, and then obviously plaintiff will have a chance to address all of that.

MR. QURESHI: So, Your Honor, our motion to strike the plaintiff's apportionment and damages opinions I think are pretty straightforward; and frankly I think our argument that Osseo's damages opinions are unreliable are supported by what their own damages expert did when I sat down with him during deposition, as to Mr. Blok.

The entirety of Osseo's damages model relies on Dr. Kia's feature analysis table which is spoken often in the briefing, and that is shown here on the left on slide 95.

Mr. Blok, their damages expert, testified that his damages opinion solely rested on Dr. Kia's feature analysis table. There is no other basis Mr. Blok was able to identify by which he arrived at a reasonable royalty. It is all limited to this feature analysis table.

The way to read this feature analysis table that Dr. Kia provided in paragraph 64 of his infringement report is that in the first -- in the middle column, what he is saying is that 55 percent of the features in the accused systems relate to what he has identified here as 3D CBCT/model scan.

Then in the last column, what Dr. Kia is saying, that 55 percent of the features in the accused products, 100 percent is attributable to what the patents allegedly invented, and he arrives at an 85 percent apportionment to the patents. So he is basically saying of all the features in the accused products, 85 percent are directly attributable to what was invented in these patents.

This is the entirety of what Dr. Kia said about this feature analysis table, this being what I have here on slide 96. And I won't read it to the Court, but it's conclusory. It's simply says, in summary form, that I arrived at 85 percent based on looking at these features, but he doesn't talk about how these features are specifically tied to the accused products and how he came to this last column where he is saying 100 percent of several of these feature sets are attributable to the asserted patents.

Again, slide 97, this is just Mr. Blok confirming that he, himself did not do any apportionment analysis. He solely relied on that table that Dr. Kia supplied.

On slide 98, it contains some pricing information for Planmeca's accused systems, so I won't put it up on the screen because I see there are some individuals who aren't under the protective order, but I will refer to slide 98, and Mr. Blok's damages model is taking the average

selling price, multiplying it by 25 percent to gross profit margin, and then that is where his 85 percent apportionment factors comes in. He multiplies the resulting number after taking the profit margin and multiplying it by 85 percent, and then he says that, in the hypothetical negotiation, each side would have agreed to a 50/50 split. Although we take issue with that model, our *Daubert* motion is focused on the reliability of the apportionment factor.

Here is how Osseo basically undercut their reliance on the Kia feature. When I sat down with Mr. Blok at the beginning of his deposition, he said he had a correction to the 85 percent number that he relied on the damages report, and that correction stemmed from the testimony Dr. Kia gave a few weeks before Dr. Blok's deposition where he said that this second feature, this volume stitching/SmartPan is not fully accused. And specifically he was referring to SmartPan and he said, well, SmartPan is about half of that 20 percent, and then in testimony he said SmartPan doesn't infringe.

So what Mr. Blok did is he said, okay, well, I'll change that 20 percent in the second feature set to 10 percent and so that changes the apportionment to 75 percent.

That is an admission that by Dr. Kia's testimony of certain things not being accused or in the prior art that his apportionment factors should have been adjusted, that

that should have been equally applied for other features that aren't accused, don't infringe admittedly by Dr. Kia or are in the prior art.

This is again slide 100. This is where he applied the 75 percent apportionment factor.

And this is detailed. What you see on slide 101 in the following two slides, all the citations to these bullet points are detailed in the citations provided in the bottom of the slides. But when Dr. Kia sat down for deposition, and this was months after he provided his feature analysis table, he admitted that various aspects of what he listed in the feature set are either not accused in the prior art, and then the same with the named inventor. Dr. Massie admitted he didn't invent tomographic scanning or densitometry. But neither Mr. Kia, nor Dr. Blok made any adjustment for these admissions that various aspects of these feature sets were known in the prior art, not infringed or not accused.

And this is true for, on slide 102, for volume stitching/SmartPan. Although Mr. Blok do not make an adjustment for SmartPan as I discussed, he did make adjustment for volume stitching which Dr. Kia talked about only applied to a subset of the accused products. There was no adjustment.

Similarly, for open patient positioning, the

fact is the prior art, you had to have an opening in order to put a patient into the scan. But he made no adjustment and, instead, Dr. Kia said 100 percent of open patient positioning is attributable to the patent-in-suit and Mr. Blok didn't adjust for that after Dr. Kia later on in deposition testified people knew how to do that.

Same for the SCARA robotic arm. There was no adjustment.

So by failing to adjust the apportionment numbers of Dr. Kia's main feature analysis table, Dr. Blok -- Mr. Blok failed to appropriately apportion based on case law that the Court is quite familiar with.

Similarly -- well, not similarly, moving on to a different point. The accused functionalities rest in this optional Romexis software package, an optional 3D upgrade kit.

That should have been the starting point for Mr. Blok in terms of for apportionment. Instead, he relies on the average selling price of the entire device. Much of it is for Tuti, which isn't accused, and much of it includes features that Planmeca openly markets that aren't related to any of the features that Osseo said these patents touch.

THE COURT: You are nearly out of time. Touch briefly, if you would, on your expert's alternative apportionment analysis.

MR. QURESHI: Right. So his affirmative alternative apportionment analysis is simply that these features I just mentioned are part of the Romexis software package and so what he did for his affirmative apportionment analysis is he took the pricing of that, which includes the optional set and the standard set, and subtracted out the standard set which doesn't include any of the accused functionalities, and the math on that was about $200, and that is what he says should be the affirmative royalty rate.

Osseo is claiming their *Daubert* motion against Mr. Bone is Mr. Bone didn't apportion far enough, and I'll just leave the Court with this since my time is out.

On the one hand, they're saying that a reasonable royalty is, you saw the numbers, several thousand dollars a unit. But on the other hand, they're saying Mr. Bone's testimony on apportionment is unreliable because his $200 rate isn't apportioned down far enough.

So to the extent that this Court is at all inclined to say that Mr. Bone's apportionment analysis is unreliable, that clearly should also have the result of Mr. Blok's damages opinions being struck.

THE COURT: All right.

MR. QURESHI: Thank you, Your Honor.

THE COURT: And we will give the plaintiff the rest of their time. About nine minutes, it looks like.

MS. PFEIFFER: Good afternoon, Your Honor. I'll try to be brief, and also try not to speak too quickly.

THE COURT: All right.

MS. PFEIFFER: So, first, I just want to kind of focus on the main difference between Osseo's motion to strike Mr. Bone's report and on Planmeca's motion to strike Mr. Blok's report because it comes down to fundamentally whether you are challenging the underlying methodology or the facts and conclusions that they reach.

Osseo has challenged the methodologies that Mr. Bone has used while Planmeca has only raised issues that are appropriate for cross-examination.

As was set forth in the *Active Video* case, it's not appropriate to -- where disagreements are with conclusions and factual assumptions and considerations underlying those conclusions, that is not appropriate for exclusion. And that is exactly what Planmeca is doing when challenging Mr. Blok's report.

I have just pulled up this slide so that I am not flashing between too many slides.

What we can see is Mr. Blok spoke with Mr. Kia which is permitted under the *Artic Cat v Bombardier* case. That is entirely allowable for one expert to refer to another, and he does refer to Dr. Kia to provide his technical background to identify a number of important

features, along with their technical weight to the product, and then the value that those values derive from the patent.

Planmeca doesn't challenge this methodology, they challenge the conclusions that were reached. This is not appropriate for exclusion.

But, importantly, Mr. Blok's opinion doesn't rely only on Dr. Kia. Mr. Blok relied on 14 *Georgia-Pacific* factors, all of which served as a check on his ultimate conclusion regarding the appropriate royalty in this case.

THE COURT: All right. Hold on a second.

So if part of the criticism is your expert assigned any nonzero weight to things that are not novel in the patent, and I take it that is part of the criticism, why shouldn't I view that as a methodology criticism and not just a conclusion criticism?

MS. PFEIFFER: Because his method is appropriate. He is still looking to the -- it's basically a criticism of whether or not he believes those are attributable to the patents-in-suit and a direct relationship with the prior art. And as we all know, these are combination patents. A lot of times, the value of a patent comes from the combination itself, not just from any one element. So just because an element was taught in the prior art doesn't mean that it derives no value. It's a more complex look, and that is exactly what cross-examination is for.

THE COURT: What if it is a feature that is not even accused of infringement?

MS. PFEIFFER: I believe Dr. Kia adjusted his analysis on that, so I don't know whether it's pertinent.

THE COURT: You would concede he can't properly give value to a feature that is not accused of infringement?

MS. PFEIFFER: Yes, that would be accurate. But again, and this is detailed more in the briefing, Planmeca only provided revenue data for products accused of infringement. So to the extent any features are not accused of infringement, they weren't captured in the revenue data so it is not really a pertinent consideration.

But I do want to turn quickly to Mr. Bones' report to make sure to discuss the primary issues.

THE COURT: I guess one other question.

MS. PFEIFFER: Sure.

THE COURT: On essentially the smallest saleable unit type criticism of your expert, could you respond to that?

MS. PFEIFFER: Sure. The best approach to that is really the *Exmark* case cited in our brief. That is where the claims are directed to an entire system or product, it's appropriate to look to the entire system or product, and there is more than one way to conduct a reasonable royalty analysis.

Mr. Blok chose one way, and he followed through on appropriate methodology in relying on technical information.

The *Exmark* case dealt with a lawnmower patent and note the parties did not dispute that the true novelty lies in one element, but the Court -- the Federal Circuit still held it was proper to look to the entire lawnmower as the starting point as long as the expert went through the necessary steps to apportion the value, which is exactly what Mr. Blok did throughout his analysis.

He started with the average sales price. Then he applied the gross profit margin. Then he applied the apportionment factor. Then he looked to all of the specific *Georgia-Pacific* factors and applied profits to it.

So Mr. Blok didn't start at the average sales price and randomly assign a three percent royalty rate, he engaged in analysis to reach his final conclusion.

THE COURT: Is it true that all of the accused features are in the optional software?

MS. PFEIFFER: Your Honor, again, the problem with this is that the elements of the claim require many features, and that is why the average sale price is the appropriate starting point. I apologize for this but I just want to take a look at the claims.

The claims are for the whole system and include

controllers, microprocessors, input device. You can't just infringe with the software or the upgrade. You need all the hardware components and all these parts working together to get infringement; and that is why the best starting point is the average sales price, and then we move from there to get down to a lower value that is more reasonable and reflects the status of the parties at the time of the hypothetical negotiation.

THE COURT: Okay. You can move on to Mr. Bone.

MS. PFEIFFER: The main problems with Mr. Bone's affirmative theory is that he decided to use the smallest saleable unit; and while we disagree that that is the appropriate small saleable unit as we discuss in the briefing, even if it were, the Federal Circuit has explicitly stated in the *VirnetX* case that it doesn't stop there. Mr. Bone has testimony throughout his report that claims that there are features unrelated to infringement. In fact, he claims, he assigns a zero percent value to a number of them during his comparison to Mr. Blok's opinion, but he makes no attempt to apportion those out.

The thing here is a damages number isn't more reasonable because it is lower, it is more reasonable when it follows an acceptable methodology, and Mr. Bone completely failed to do that. He took absolutely no steps to apportion out features that he repeatedly says are

unrelated to infringement. So that is the problem with his affirmative theory.

His adjustment, which I have put up here, suffers from a problem in that he engaged in no methodology. The problem isn't that he used Mr. Blok's methodology as a starting point, it was that when he was adjusting it, he didn't tie it to the facts of the case.

For example, Dr. Kia had assigned these weights on the left here to various features in the accused products. Excuse me.

Planmeca then provided a list of 27 additional features, and Mr. Blok -- or Mr. Bone, excuse me, randomly added three with very little explanation and no reliance on a technical expert to support that.

Then Mr. Bone modified all of the five percents down to four percent, 20 percent down to 17 percent, 55 to 48, with no explanation or independent evaluation. He did it because mathematically he needed to get to 100 percent.

This absolutely is not tied to any facts in the case, and it is not a reliable methodology that can be sent to the jury. It is not up to the jury to decide what portion. It's his job to conduct the apportionment and tied it to the incremental value of the patent and he didn't. He wanted to get to 100 percent without tying this to the actual facts of the case or a technical expert. Mr. Bone

can't offer that opinion, and he repeatedly testified he is not a technical expert, he is not trained to do that.

In his report, he only cited to the discussions with Dr. Pelc that were not put in his report, only discussions. And then when Dr. Pelc was asked about this at his deposition, he said that he told the lawyers he was not trained to do an apportionment and didn't provide that input.

Mr. Bone is not qualified to offer the technical analysis, and it's clear that he did this so randomly. So even the alternative theory fails because it's not based in any methodology. It's a random number assignment that has nothing to do with actual facts in this case.

Do you have any more questions?

THE COURT: I don't.

MS. PFEIFFER: All right. I will defer to briefing on that.

THE COURT: All right. I will give you an extra minute on that.

MR. QURESHI: Yes. Your Honor, I would just ask that the Court to apply the logic of their *Daubert* motion on Bone to Mr. Blok's damages analysis.

THE COURT: Okay. Thank you. Do you want to briefly respond to that? You can survive that analysis.

MS. PFEIFFER: I can survive that.

THE COURT: All right. Well, thank you. I know

we had to move pretty quickly. If I need further assistance on any of the other many motions that we did not get to, I will let you know. But for now, I will take everything under advisement, and we will be in recess.

(Oral argument hearing ends at 12:10 p.m.)

I hereby certify the foregoing is a true and accurate transcript from my stenographic notes in the proceeding.

/s/ Brian P. Gaffigan
Official Court Reporter
U.S. District Court

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