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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NAUTILUS HYOSUNG, INC.,
Petitioner,

v.

DIEBOLD NIXDORF, INC.,
Patent Owner.

Case IPR2016-00529 (Patent 7,229,010)
Case IPR2016-00530 (Patent 7,229,010)

Before BARBARA A. BENOIT, GEORGIANNA W. BRADEN and KERRY BEGLEY, Administrative Patent Judges.

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P R O C E E D I N G S

JUDGE BENOIT: Good afternoon. We are convened for oral argument for IPR2016-00529 and IPR2016-00530, which both challenge US Patent 7,229,010. Let's start with appearances at this time. Petitioner.

MR. RIFFE: Good afternoon, Your Honors. Again, my name is Tim Riffe, lead counsel for petitioner, Nautilus Hyosung. With me this afternoon is Kevin Wheeler and Daniel Tishman. They'll be handling the arguments on the 010 patent IPRs.

JUDGE BENOIT: Thank you. Patent owner.

MR. WEEKS: Good afternoon, Your Honor. Joshua Weeks for patent owner, Diebold Nixdorf. And with me is David Frist, lead counsel, Jason Cooper, Christopher Kelly. And we also have Mr. Ed Crooks from Diebold.

JUDGE BENOIT: Thank you.

Each side will have 60 minutes to argue this afternoon. Petitioner has the ultimate burden of establishing unpatentability and can argue first and may reserve rebuttal time. Patent owner has filed a motion to exclude. So patent owner may reserve rebuttal time but may only use rebuttal time to respond to petitioner's arguments regarding patent owner's motion to exclude.

MR. WEEKS: Yes, Your Honor.

JUDGE BENOIT: And with that, petitioner, we can begin when you're ready.

MR. WHEELER: Thank you, Your Honor.

Good afternoon, Your Honors. Kevin Wheeler on behalf of petitioner. I will start out by saying we have a whole host of slides here. I assure you I'm not going to march through all of them. I think it's 70. I just want to pick a few to highlight.

And starting -- and one point also I'll note. We have two proceedings here, of course. And I'm going to -- the issues by and large are joined. There is one instance where they are not. So I'm going to address them together. Of course, I'll note when an issue applies only to one particular proceeding.

And what we will be addressing -- I'll do a very brief introduction of technology overview. I know, of course, you are quite familiar with the patent and the technology; just to frame our discussion.

And then I will address with respect to the 529 proceeding what specifically is petitioner relying on with respect to the Jones reference. And then I will address a

few points on motivation to combine. And then my colleague Dan Tishman will address a couple points with respect to claim 14.

JUDGE BENOIT: Do you wish to reserve rebuttal time?

MR. WHEELER: I do, Your Honor. We'll reserve 20 minutes, please.

And, of course, as I said, we are dealing with the 010 patent. And if we flip to slide five very briefly, here we have two primary components, if you will. Highlighted in the blue are the kind of readily known ATM components; a transport path that simply transports the sheet item as it is inserted and ultimately to what is referred to as the storage compartments highlighted in purple. And that's really where the action is at here with this patent.

And if we flip to slide six, we can dive into those storage compartments. And on the left you've got -- within the storage compartments the whole idea obviously is you have a sorting mechanism that is intended to allow the machine to store a sheet item in one of two bins.

And how it does that, how the 010 purports to do that is on the left, you've got a pair of rails that's

highlighted in yellow. The sheet item comes down vertically. And there is tension with the rails. And you have the plunger member shown on the right in purple. And, of course, this moves in a horizontal direction and can push that sheet item into either bin using the rails as tension. Very simple. Very straightforward technology.

Turning -- well, before I turn to the 529 petition just so we can kind of graphically see the claim, the independent claim one, how it's broken out, the blue -- stuff denoted by blue at the top, these are the generic ATM components; the input, output device, sheet item transport, the things -- the items that are in every ATM or ABM, if you will.

And the items denoted at the bottom in purple, this is the storage compartment. This is where they've claimed the storage areas, the storage compartments, the plunger and the rails, et cetera.

And flipping to slide eight, the 529 proceeding, there are five instituted grounds with the primary combination being Jones and the Kozima reference.

And if we flip to slide nine very briefly, the Kozima reference. On the left you see -- this is the

sorting mechanism of Kozima. On the left we have again the rails, the pair of rails denoted in yellow. And we have the plunger member here also denoted in purple. And, as you can see, on the right the plunger member moves in a horizontal direction to push the sheets denoted by green into either of the two storage compartments. Pretty straightforward. Pretty clear.

And if we flip to slide 10 and turning to the 530 proceeding, again we have five instituted grounds. Here the primary combination is the Swinton reference in combination with the Nobuaki reference.

And if we flip to slide 11, we'll take a look at Nobuaki, the sorting mechanism disclosed there. Again we can see a pair of rails this time denoted by yellow. And, for context, this is a top-down view of the system. And once again, we have a plunger member denoted in purple. And you can see the plunger member can move horizontally to push the sheet item using the tension of the rails into one of two storage bins. Again, very clear.

So we're dealing with a situation here -- I know, of course, you see a lot of very complex technologies. This is rather straightforward, moving, mechanical components and

rather straightforward and clear prior art.

As a result there are very minor if -- well, just one, actually, dispute as to whether or not these combinations disclose all elements of the challenged claims. So by and large there are no disputes as to whether or not these combinations disclose the elements. The only exception is claim 14. And my colleague will address that in a little bit.

But -- so what are the disputes then? And if we flip to slide 12, well, Diebold raised an issue as to what embodiment or embodiments is petitioner relying on in the Jones reference. And if we flip to slide 14, the petition, Dr. Kaufman's declaration in support of that petition makes very clear what it is petitioner is relying on.

And that is the ATM embodiment of the Jones reference as you can see on top of slide 14, for the basic ATM features, the input, output device, the sheet transport item, and is relying on Kozima for the storage related limitations; very clearly laid out in the petition and the declaration.

But if we flip to slide 15, there are, in fact, two embodiments in Jones. One is the ATM, which is being

relied on by petitioners. And a second is a table-top currency counter shown here on the right of the screen.

And so what Diebold has argued is that petitioner is relying on both or it's unclear or that we need to be showing motivation to combine all of these different embodiments. Just to be frank, it's much ado about nothing. Petitioner is not relying on this second embodiment, the table-top currency counter.

And what is the basis for Diebold's argument here? Well, they point to four citations either in the petition or in Dr. Kaufman's declaration that they say cite to the table-top currency embodiment.

Well, in each of these four instances either, one, the citation actually points to the ATM embodiment and not the table-top currency or, two, it's merely a see also citation, that is, additional support to a citation already to the ATM embodiment.

So what do I mean by that? If we just take a quick look on slide 17 starting first with the first citation, paragraph 140, well, paragraph 140 is directed to the ATM embodiment in Jones. If you look at paragraph 140 -- we have it up on the screen -- it refers to Figure 1A.

Figure 1A is right below paragraph 140. Admittedly, it's a block diagram. You can't quite tell which embodiment it refers to, but it doesn't take a lot of work to look at paragraph 99, which refers to Figure 1A and Figure 1B together as the same embodiment. And as you can see by looking at Figure 1B, this is the ATM embodiment.

And Diebold's expert, declarant understood this. And he readily agreed that paragraph 140 relates to the ATM embodiment. So we're a little confused by the argument that Diebold is making here. We assume it's a mistake; but paragraph 140 very clearly relates to the ATM embodiment, which is, in fact, the embodiment that petitioners are relying on.

With respect to the other three citations, these are the three instances where they are see also citations. And in each and every instance, these are citations in addition to citations to the ATM embodiment.

You can see at the top here this is from the petition. We've got it highlighted for you on the screen, see also paragraph 143. The bottom is -- that is Dr. Kaufman's declaration. And you can see this is a -- these are also citations coming after citations to the ATM

embodiment.

Why are they there?

JUDGE BENOIT: Yes. So should we excise them from the petition and not pay any attention to them because they come from another embodiment?

MR. WHEELER: That would be just fine with petitioners. We could -- we could red line them. And from our perspective it would have no impact really on the petition. Why they were there in the first place, it was simply to show the ubiquity of these particular features in the broader category of automatic banking machines, which is what the claim is directed to notwithstanding the fact that we are relying, however, specifically on the ATM embodiment for the obviousness analysis.

But we can just remove them. And it would be just the same to us. And that's why I say this is really much ado about nothing. And I think it's worth just pausing for a moment here and noting in Diebold's papers this is the very first reason they provide to Your Honors as to why you should find the challenged claims to be valid. When they stand up in a few minutes, their presentation, it's the very first reason they're going to provide as to why these

challenged claims should be found valid.

And I note that simply to -- simply to note that that's what they're leading with. And I think it's a bit telling of where we are with this proceeding. And if there's no questions with respect to that, there are some comments I would like to make about motivations to combine.

And to do that, I'm going to jump to slide 20 here. And to frame the issue I always like to start with the case law. And in particular in this instance, we have a situation where the Federal Circuit has issued an opinion that came after the briefing was concluded in this -- in both of these proceedings. That is the Personal Web case, 848 F.3rd. 987.

And I bring this case up because I think it's a nice example. The Federal Circuit in its opinion does a nice job of reiterating what the standard is. It's very fresh, very recent. And when we look at page 991 of the opinion, the Federal Circuit reiterates the long-standing principle that a person of skill would have to be motivated to combine the references to arrive at the invention. Long-held standard.

The Federal Circuit goes on in page 994 to say that additionally you've got to explain how the combo, the

combined references are supposed to work. And they talk a little bit about, well, what does that mean, what -- what kind of explanation does -- and in this instance, in Personal Web, it was saying to the board you've got to give us a little bit here to be able to explain how this combined reference is supposed to work.

And with respect to the amount of explanation, they explained that it depends on the complexity of the technology and the prior art and that in a case where there is simple technology and very clear prior art that a brief explanation is sufficient.

And that, of course, is the world we are in with respect to these two proceedings. Very simple mechanical technology. Very clear prior art where there are minimal to no disputes with the -- with respect to what is actually disclosed by the combination of the references vis-a-vis the challenged claims.

What this opinion did not do, just I think to get it all out there, is it did not change the long-standing precedent that to prove motivation to combine that you must somehow prove how the physical embodiments of the two references would fit together.

The court is not saying here you've got to tell us which nut, which bolt is going to go where, how there's clearance, et cetera; merely how would they work together.

So with that, let's jump to slide 24 and talk about what petitioners have provided to the board. And starting first with the 529 proceeding, again just to touch on this to frame, the combination here is the sorting mechanism of Kozima with the well-known ABM features of the Jones ATM embodiment. Okay.

So how do you combine those -- how would those two references work? Well, what petitioner has provided to the board -- this is a figure from Jones. And you can see in the bottom right, there are two storage bins there that have been highlighted.

The idea here is very simple. You take the two storage bins from Jones. And you merely replace those two storage bins with the storage bins from Kozima that already incorporate the sorting mechanism. Very straightforward. And you swap out the two existing bins with the bins from Kozima.

And petitioner has laid this out in the petition at pages 12 through 13. They laid it out in Dr. Kaufman's

declaration at paragraph 42. And then they reiterated this position in the reply at pages 6 through 7 and page 9.

Petitioners went on to provide five different reasons as to why a POSITA would be motivated to combine Jones with Kozima. I'm not going to read through these for you. They are in the petition. It is five distinct reasons as to why a POSITA would be motivated to take the Jones reference and combine it with Kozima. Barring any questions, of course; but I don't see a lot of benefit in just reading it to you.

With that, flipping to the 530 position -- we're on slide 27. Here again, just to orient us, we are combining Nobuaki's sorting mechanism with the Swinton ABM. That's the generic ABM features.

And if we flip to slide 28, okay, how do you -- how do these two references work together? What has petitioner provided? Well, here, very similar to the prior combination, you take the base ATM reference, the Swinton reference. You remove the two storage bins and the pre-existing sorting mechanism. And you replace those two items with the storage bins of Nobuaki, which already has the sorting mechanism as part of the storage bins. And this is

a figure from Dr. Kaufman's declaration wherein he's physically depicted how this would look, what components would be removed and which components they would be replaced with. The petition addresses this at pages 13, pages 41. And the petitioner's reply reiterates this at pages 2 to 3.

And similar to the 529 petition, petitioners in the 530 proceeding have provided multiple reasons as to why a POSITA would be motivated to combine the two references in the manner just described. Here it's four reasons as opposed to five in the 529 proceeding.

Now, Diebold takes issue with the reasons provided. They take issue with whether or not petitioners have shown a sufficient motivation to combine. And in doing so starting first here with the 529 proceeding, Diebold's arguments rest on one of two problems. All of them share these common problems.

Either, one, they're improperly focusing on the combinability of the physical embodiments of the two references whether it be Kozima with Jones or Nobuaki with Swinton or they are simply missing facts that are in the record and very specifically the facts I just walked Your Honors through.

This is an example from the 529 response. Here's a similar example from the 530 response where Diebold is taking issue with petitioner not having explained how the physical element would be combined. It's not the standard. That's not the standard.

How do we know that? Well, I mean, we can start right with KSR where the Supreme Court tells us that a person of ordinary skill is also a person of ordinary creativity not an automaton. This is not just take physical structure from one reference and take physical structure from a second reference and combine them. That's not -- that's not what's happening here. That's not what the standard is.

It's take the teachings of one reference and the teachings of another reference and to a person of ordinary skill who has ordinary creativity, can he combine those teachings and make a working device according to the invention. And that's precisely what petitioners have shown here.

And this is -- this is not a disputed issue in the legal context, if you will. There's been many Federal Circuit cases that have very clearly said, for example, the

test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference.

And this is actually from the institution decision. However, the point here is there's three or four different Federal Circuit cases that hold -- stand for this very proposition. There simply is no requirement to show that the references could be physically combined.

Nevertheless, frankly, petitioners have -- actually have shown how these references could be combined. And as I just walked through, we've shown which components would be removed and which components they would be replaced with.

And just to give an example of what I'm talking about with respect to Diebold's arguments, if we flip to slide 34 -- so we're in the 529 proceeding here. And in response to petitioner's first reason as to why a POSITA would be motivated to combine the Kozima reference with the Jones reference, Diebold argues that the petition does not identify which portion of Jones's ATM would be replaced or provide any assessment of the comparative size; that we don't identify which portions of Jones's ATM would be

replaced.

If we flip back to slide 25, it is exactly what we just walked through; that the two components that would be replaced from Jones are bins 20A and 20B. Those are the storage bins disclosed in Jones. They would be replaced with the sorting mechanism and storage bins of Kozima.

I'm not going to beat a dead horse here. But if we look at another example, jumping to slide 35, this time in response to petitioner's reason number two as to why a POSITA would be motivated to combine, Diebold argues the petition offers no explanation of which components in Jones's ATM would be removed or replaced.

I'm not going to flip back to slide 25, but I think -- I think that offers a bit of flavor of what's going on here. And if we jump towards slide --

JUDGE BRADEN: Actually, Counselor, I hate to cut you off, but I would actually like to hear from your co-counsel and -- I would like to make sure he has sufficient time to address claim 14 because I have questions.

MR. WHEELER: Absolutely. That's no problem, Your Honor. We can certainly jump to claim 14.

JUDGE BRADEN: Thank you very much.

MR. WHEELER: Yes.

MR. TISHMAN: Good afternoon, Your Honors. And may it please the board, Daniel Tishman. I will flip to slide 49 -- slide 50. And, Your Honors, I'll be addressing two issues with respect to claim 14. These issues cut across both petitions. And they have to do with the disclosures in the Swinton reference.

On slide 51, we have shown that in the petition, we relied on Swinton's friction rollers 196 as disclosing the limitation wherein the at least one processor is operative to cause the sheet to be aligned in the first sheet moving direction by moving the sheet in the second sheet moving direction. And that's what we've highlighted on slide 51.

To provide some context, the first sheet moving direction that patent owner explained in their patent owner's response is the direction of the transport path. And it starts at the bottom, left-hand corner at the inlet 422 and continues up to the alignment area 424 up that upward slope to the right.

And Diebold explained as well in their patent owner's response that the second sheet moving direction in

the preferred embodiment of the 010 patent is the transverse direction. That's a right-to-left direction in comparison to the upward direction of the sheet 476 along the transport path.

So in Figure 4, you can see highlighted in red on slide 53 the transverse rollers 466 and 468. And it's illustrated a little bit more in the Figures 9 through 15 at right. As the check 476 -- or it's actually a sheet in the claims. As the sheet comes in somewhat skewed it moves upward. And those transverse rollers cause a slight shift in movement of the check to the right until it becomes perfectly aligned as shown in Figure 15.

So that's the second sheet moving direction that Diebold described in their patent owner's response. Now, what we --

JUDGE BRADEN: Correct me if I'm wrong, but isn't it true that that's also the direction that's described in the specification?

MR. TISHMAN: Correct, Your Honor. They describe the specification -- we don't think the specification is limiting as to what the second sheet moving direction needs to be, but that is the direction that's described in the

specification.

JUDGE BRADEN: Okay. Thank you.

MR. TISHMAN: Moving now to slide 54, Diebold argues that the friction rollers 196 align the check left to right and that they do not move the check in the second sheet moving direction that we identified in our petition with respect to claim 13.

So to provide some context, if you look at claim 14 at the beginning, it depends from claim 13. And claim 13 requires both a first sheet moving direction and a second sheet moving direction that's generally perpendicular to the first sheet moving direction.

So in our petition, we identified a direction as the first direction which is essentially a horizontal direction, right, coming in -- I believe it's transport 38. And the second direction is the up-down direction that's essentially vertical. That's 111.

So what Diebold argues in their petition -- they don't dispute that that second sheet moving direction is the vertical up-down direction. So they agree with us on that. And they don't dispute that as part of the alignment process, there is a slight lift of the check and a dropping of the

check in that second sheet moving direction.

So we're still on slide 54. If you look at the claim, that's all that's required, aligning the check by moving the check in a second sheet moving direction.

JUDGE BEGLEY: How does the vertical movement of the check help the alignment horizontally? Because that's how I read the claim. So --

MR. TISHMAN: Right. So it's -- I think it's most clearly shown in slides 56 and 57. So in 56, we've shown that as that D-shaped roller, which is 196, rotates clockwise, the check that we've highlighted in green in this figure is both lifted upwards and it's moved to the right.

So it's moved in the second sheet moving direction as part of the alignment process as that D-shaped roller rotates. And it moves the check until it gets to lugs 172, which are shown there. It's really small on this figure, but they're a metal protrusion that extends above the transport path.

JUDGE BRADEN: But doesn't Swinton talk about the fact that it's actually lug 172 that does the alignment?

MR. TISHMAN: So what lug 172 does is it's moved upward. And there are two small pieces of metal. As that

friction roller 196 is engaged it moves the check over to the right. And when the check bumps against that lug 172, the check is then aligned.

So the alignment process requires that friction roller 196 to rotate, which both lifts the check and moves the check to the right. And Dr. Kaufman, our expert --

JUDGE BRADEN: But isn't it the movement of the right and hitting up against 172 that is the alignment? I don't see where -- and I know that this was -- discussed in some of the deposition transcripts. But I'm not sure I understand, as Judge Begley asked, how merely lifting up in the vertical gets you to the alignment by moving.

MR. TISHMAN: So the claim does not require that the alignment occur only by moving in that single second sheet moving direction. And what Dr. Kaufman explained -- and this is in his deposition. He explained it very clearly at page -- let's see. It's at page 51, line 6 through 52, line 25. Sorry. That's the wrong citation, but what Dr. --

JUDGE BRADEN: Well, no, I recall the -- I read it. But here's my problem -- is that I agree that the claim in and of itself is not exclusionary. But it does require

To be aligned by moving the sheet in the second sheet moving direction.

So even if you have alignment by a third direction, I don't see how that's actually relevant because the alignment has to occur by moving the sheet in the second moving direction.

So I'm not sure how moving upwards gets you to that to be aligned when, in fact, it's actually this way movement that gets you to the alignment.

MR. TISHMAN: It's both --

JUDGE BRADEN: Am I reading that incorrectly?

MR. TISHMAN: I don't think you're reading it incorrectly, Your Honor. It's -- well, I'd submit to you that it's both. And Dr. Kaufman explained that the rotation of the check, the lift is a very important part of the alignment process.

Because if you look at the D-shaped roller, if it -- if it didn't extend above the transport path and lift that check up, the check would not be pushed over to the right. So the D-shaped roller both lifts and moves the check to the right.

So it's sort of a fluid motion. It's both upward and to the right at one time. And that's what the claim requires. It moves the check in that second sheet moving direction as part of the alignment process.

JUDGE BRADEN: Okay. I think I understand your argument there. So go on.

MR. TISHMAN: Okay. And I'll just add, Your Honors, that that's -- that movement upward is necessary to eliminate the friction caused by the transport path in that first moving direction.

So moving on, nobody disputes how this works. Diebold agrees with us that there's a slight movement. And they even agree with us that this is a slight movement in the second sheet moving direction upward.

And their expert, Dr. Kurfess, admitted in his deposition at lines -- page 36, line 15 through page 37, line 1 that even a slight movement constitutes a transport. And he also admitted that the claim does not require only moving in that second sheet moving direction. It doesn't require only moving right, left. And that's at page 176, line 1 through 6.

Moving to the next slide, slide 59, it's worth

noting, Your Honors, that Diebold's interpretation that they laid out very clearly in their patent owner's response of what the claim requires based on the preferred embodiment is exactly what Swinton does.

So Diebold stressed that the first sheet moving transport is the belt flight. And this is in the 010 patent. I'm on slide 59. That that's the first direction and that the second sheet moving direction is the transverse rollers 466 and 468.

Now, in Swinton that's exactly how it works. The first sheet moving direction is the direction forward. Now, we identified the second sheet moving direction as up-down. But based on their interpretation that this claim needs to be read as the preferred embodiment, Swinton does just that by moving the check in what Diebold has labeled on this Figure 8 the direction of alignment which is a right, left direction just as in the 010 patent.

JUDGE BRADEN: Okay. So now let's address that issue, because I'm looking at your petition. Where in the petition is there an explanation about friction rolls 196 moving in the second sheet direction?

MR. TISHMAN: So in the claim chart, Your Honor --

and I'll find the page. I'll look at the 529 petition for ease of reference.

JUDGE BRADEN: Please do.

MR. TISHMAN: So in the 529 petition on page 54, we explain how the friction roller is used as part of the alignment process. And we didn't -- we didn't understand there to be a dispute as to how the friction roller 196 operates, but we explain that this is the -- this is the element that satisfies this limitation in this claim chart.

Does that answer your question, Your Honor?

JUDGE BRADEN: I'm actually trying to find it. I'm on page 54. And I'm looking at Swinton.

MR. TISHMAN: Okay. It turns out I'm looking at the 530 petition. So it's on page 57. 56.

JUDGE BRADEN: 56?

MR. TISHMAN: 56. Thank you. Of the 529.

JUDGE BRADEN: Okay. So I see where it talks about how the friction rolls 196 move the check into a correctly aligned position. Is there any discussion about those rolls moving in a second sheet moving direction or this explanation about how it's moving upwards and then you have to have this movement over against lug 172?

MR. TISHMAN: That level of detail is not provided in the petition, Your Honor. We didn't understand there to be -- this shouldn't be something that's beyond dispute.

And Diebold's response indicates very clearly that they don't disagree with us on how the reference works. We identified in the petition the roller 196. And when it was called into question, we provided a little bit more context in the reply.

JUDGE BRADEN: Okay. Thank you.

MR. TISHMAN: And are there any further questions on the alignment, the first element of the alignment? The second element being the noncontact sensor issue. Okay.

Your Honors, moving now to the second issue with respect to claim 14, the issue is whether Swinton discloses -- and I'm moving to slide 63 -- whether Swinton discloses sensing the sheet with a plurality of noncontact sensors. And in our petition, we identified optical sensors 216, 218, 220 and 222 as satisfying the requirement of sensing the sheet with a plurality of noncontact sensors.

So I think it's important to start with what we agree on. Diebold does not dispute in their papers that these sensors are noncontact sensors. They also do not

sense -- they do not dispute that these sensors are used to sense the sheet.

Moving now to slide 64, what is disputed is that -- Diebold argues Swinton's alignment is --

JUDGE BRADEN: I'm sorry. I thought they disputed that optical sensor 218 -- I thought it was used to check for something and then stop the machine.

MR. TISHMAN: They dispute -- they dispute whether it satisfies the limitation. They do not dispute whether it's an alignment sensor. Sorry about that. They do not dispute that it's a noncontact sensor. And they do not dispute that it senses the check. Okay.

So moving now to slide 64, what is disputed is they argue that the sensor -- that the alignment is mechanical. And, second, they argue that sensors 216 through 222 don't satisfy the limitation because they're not used in the alignment process.

Now, as to the first issue that the alignment is mechanical, there's absolutely nothing in the claim language that precludes a mechanical alignment. In fact, in the 010 patent, it is a mechanical alignment. And it needs to be. In order to move the check physically right to left, it needs

to be a mechanical movement.

As to the second issue, whether these sensors are used in the alignment process, in the petition we presented the broadest reasonable interpretation of this limitation, which requires simply sensing the sheet with a plurality of noncontact sensors.

However, Diebold argues that the sensors need to be used in the alignment process. And we presented our argument that sensors 216 and 218 are, in fact, used in the alignment process. So the way it works in --

JUDGE BRADEN: Okay. But where do you present that argument in the original petition?

MR. TISHMAN: In the petition, we rely on these sensors; 216, 218, 220 and 222.

JUDGE BRADEN: As being part of the alignment process?

MR. TISHMAN: Correct. With the board's indulgence, I'll find the page.

JUDGE BRADEN: Is that on page 16 of the petition or are you going to refer to the claim charts?

MR. TISHMAN: I think it's in both places. So we'll start with, let's see, page 16. So with respect to

this claim, we've identified these sensors as positioned along the feed path. And we describe their functionality.

And we explain that -- that the alignment is with the -- with the friction rollers 196. The electronic control means operates with those sensors to initiate operation of the alignment motor. So that's on page 16.

Does that answer Your Honor's question?

JUDGE BRADEN: Well, I want to make sure that I understand. So I'm looking at page 56 and the claim chart. And then I also looked at page 16 of the petition. You're saying that you're relying on -- it looks to me like we have sensor means 218 sensing leading edge of the envelope or check and sensor means 220 sensing the leading edge of the check.

MR. TISHMAN: Right. And we also identify sensor 216 on page 16. And I'm not sure if that's referenced on page 56, but it certainly is referenced on page 16.

JUDGE BRADEN: Okay.

MR. TISHMAN: Okay.

JUDGE BRADEN: And is it your -- is it petitioner's argument that this 216, 218 and 220 are actually sensors that are used for the alignment?

MR. TISHMAN: So to clarify our position, we do not take the position that sensors 220 and 222 are used in the alignment process. As for the alignment process, we have explained that sensors 216 and 218 do the alignment.

And the way it works is as the check enters into the transport path it's -- one of the first sensors that it reaches is sensor 216. And I don't have a slide on it, but it's best illustrated in Figure 2 of Swinton.

As you can see, one of the first sensors is 216. And it's a thickness sensor. And what 216 does is it determines is this an item that needs to be aligned. If it's an envelope, it doesn't need to be aligned. However, if it's a check, if it comes in skewed, we need to align it so that the magnetic strip on the check lines up with the magnetic reader. So 216 essentially starts off the whole alignment process and answers the question do I need to align this sheet item, yes or no.

JUDGE BRADEN: Okay. So how does that -- how does that fit in with the claim language that says the -- at least one processor is operative to cause the sheet to be aligned by moving the sheet and sensing the sheet?

How does 216 which is basically a check yes or no

-- how does that in there cause the sheet to be aligned by moving and sensing?

MR. TISHMAN: In operation with the processor it begins the alignment process. So it causes the alignment process to take place once that answer -- once that question is answered, yes, it is an item that needs to be aligned. And sensor --

JUDGE BRADEN: Okay.

MR. TISHMAN: Okay. Did you have anything further? Sorry, Your Honor.

JUDGE BRADEN: No. Please go ahead.

MR. TISHMAN: Okay. And on slide 60 -- and just to clarify for the record, this paragraph that's shown on slide 65 is cited in pages 56 through 57 of the 529 petition.

Moving onto slide 66, we've shown -- and, again, if you look at Figure 2 of Swinton, you'll see a different -- a different way of seeing what I'm explaining. But as the check moves along the transport path, it gets to that print, slash, alignment control sensor 218 which is shown in Figure 10 of Swinton at page -- at slide 66.

So what the -- what the print, slash, alignment

control sensor does is explained in that same paragraph we were just looking at highlighted in different places on slide 67. What it does is -- sensor means 218 determines is the check positioned over that D-shaped friction roller 196 that we were just talking about and, if it is, begin operation of the alignment motor 204 to move the check to a correctly aligned position.

JUDGE BENOIT: And you're getting in your rebuttal time.

MR. TISHMAN: Okay. And unless there are any further questions, we will reserve the remaining time for rebuttal. Thank you, Your Honors.

MR. WEEKS: Good afternoon. May it please the board. May I proceed?

JUDGE BENOIT: Please do.

MR. WEEKS: Your Honors --

JUDGE BENOIT: First, would you like to reserve any rebuttal time?

MR. WEEKS: I would, please. If you would give me five minutes to address the issues that may come up with regard to the motion to exclude.

I'd like to go ahead and jump pretty far into the

demonstratives, Judge Braden, and start with claim 14 since there were quite a few questions on that. And as --

JUDGE BRADEN: That would be fantastic. I would ask that you either step closer to the microphone or move it up towards you. It's kind of hard to hear. Sorry.

MR. WEEKS: Can you hear me a little better now? Great. Okay. So --

JUDGE BRADEN: Yes. Thank you.

MR. WEEKS: So starting with a quick discussion of claims 13 and 14 -- and, as we've already established, that's clearly an issue that goes across both the 529 and the 530 IPRs.

And so starting with claim 13, what we have are a claim that recites a first sheet moving transport and a second sheet moving transport. And those sheet moving transports define first and second sheet moving directions.

Now, that's important because those same transports and sheet moving directions are repeated again in claim 14; meaning that 13 provides the antecedent basis for them. That will be significant later because we have to read those two claims together. They must be read consistently.

So if you take a look at 13, in the first sheet moving transport, you see the first sheet moving transport moves the sheet in the first sheet moving direction. We then see those same terms appear in 14, the first direction and the first sheet moving transport. Of course, the same thing is true with regard to the second sheet moving transport.

Now, I'd like to walk through the embodiment of the 010 patent. And I'll do this quickly because I don't think there's a lot of dispute here, although in petitioner's -- in petitioner's reply there was maybe a little more question.

So what the embodiment of the 010 patent describes and is claimed in claim 14 of the 010 is a first sheet moving transport that takes a sheet and moves it up into an alignment area. And you can see this pictured in Figures 9 and 11.

So in Figure 9, you have the check 476 being driven upward by that green transport. That's the belt flight 442 and the rollers 444. And it's moving upward into the alignment area shown in Figure 11. We then have the second sheet moving transport. And that consists of transverse

follower rollers and a transverse transport roll.

Now, you can't see them very well in these photos; but I've indicated them with arrows in blue and sort of shaded that area in where they appear. And what those rollers do is move the sheet from left to right. And you see that movement in claim -- in Figures 13 and 15.

And what's significant about this alignment area or alignment mechanism is that the second sheet moving transport moves the sheet until it is aligned with the plurality of noncontact sensors 474.

Now, I'm not suggesting that the claim is limited to moving it in this precise manner to align it with these three noncontact sensors; but I am absolutely saying that the second sheet moving transport must align it and that there must be a plurality of noncontact sensors that are used in calling the alignment of the sheet.

So one of the things that I'd like to focus in on is moving the sheet in the second sheet moving direction. And, Judge Braden, again, I agree with you completely in your interpretation of this claim. It says the processor must be operative to cause the sheet to be aligned by moving in the second sheet moving direction.

So petitioner has identified two sheet moving directions with regard to claim 13 that are the transport 38 -- that was the first sheet moving transport -- and the transport 111, the second sheet moving transport. And to make things a little easier to see we colored them in; so that you have petitioner's first sheet moving direction going generally left to right along that first transport and then the second one vertical.

Now, I do want to make one comment to what Mr. Tishman said. We don't agree that the vertical direction is the second sheet moving direction of claim 14, but I do agree with him that that is the second direction that petitioner has identified as satisfying that claim limitation.

So the problem that petitioner has here and has tried to fix now is that it's impossible to align a sheet by moving it in the two directions that you see here. And the reality is that Swinton's transport or Swinton's alignment mechanism just doesn't work that way.

And since we've already talked about it a little bit, I'll skip ahead to slide --

JUDGE BRADEN: But what do you say about

petitioner's argument that Swinton lifts up and over at the same time for the alignment process?

MR. WEEKS: Well, Judge Braden, going back to the claim language, what the language says is that the movement in the second direction must cause the sheet to be aligned. So we have to be looking at not just where the sheet moves, it's the movement that aligns the sheet; right?

So in terms of Swinton -- and if you look at slide 31 -- and I apologize. I haven't been giving you slide numbers. I'll do a better job.

If you look at slide 31, in Figure 8, as we've been discussing, the direction of the alignment is generally from left to right. So here we have a figure where we're looking down the transport path. That's the petitioner's first direction -- is into the screen in front of you.

And the actual direction of alignment is from left to right along the green arrow, but what petitioner has identified in the petition is vertically up and down as indicated by that red arrow.

Now, yes, it is true --

JUDGE BRADEN: So -- wait. I want to make sure I understand this. So your argument is that their

identified second sheet moving direction isn't a vertical up and down, it is only down.

MR. WEEKS: No. No, Your Honor. I wouldn't limit it that way. I'm fine -- yes, they did point to only down. But the reality is if you pick a check up, you have to put it down too.

JUDGE BRADEN: Okay.

MR. WEEKS: So I don't -- I don't think that really matters one way or the other.

But with regard to that vertical motion of the check, we do know that that doesn't align the check. There's nothing about picking a check up and putting it down in the transport path that aligns it.

And, in fact, we know that because Dr. Kurfess told us that in his declaration. He said the motion -- the vertical motion of the check is not what causes the check to be aligned and that moving a check up and down relative to the transport path will not cause a misaligned check to engage the alignment lugs.

And that's the key problem. It's the movement from left to right that causes the sheet to engage the alignment lugs, not the vertical motion.

We questioned Dr. Kaufman about a hypothetical that's similar. And when we asked if we were to pick a check up and set it back down in Swinton's transport, it would be in the same alignment, right -- and he confirmed, yes, that's correct. If it starts out unaligned and you don't align it, then it will be unaligned when you put it back down.

And the point there is that simply moving a check up and down has nothing to do with the alignment process of Swinton. It's the left to right motion.

Now, one thing I do want to point out here is that what petitioners have now come back and identified in their reply is them saying, well, if the vertical motion of the sheet doesn't constitute the second sheet moving direction, they have now argued that it is the left to right motion that can satisfy the second sheet moving direction. The problem with that being we're now looking at three different directions. And the claim requires two.

So here on Figure 8 on the right you have -- if you labeled the direction of alignment to be petitioner's new second sheet moving direction, that would be left to right. And then you have a movement up and -- the first

direction would be into the page. On the left, you have two different sheet moving directions. And, as I mentioned earlier, you have to read claims 13 and 14 consistently.

Now, from petitioner's reply what they've said is that the left to right motion of the check caused by the D-shaped roller satisfies claim 14 under patent owner's new interpretation. I'd like to say for one that's not a new interpretation. That's just the plain reading of the claim. And we've been interpreting it consistently throughout.

But the other thing here is that I do not think this is actually responsive to anything in the patent owner's response. I do believe it is a new position. And I would encourage you not to consider it for that reason.

But if you do, note that it only says claim 13. And petitioner has only made this argument with respect to claim 13 not with -- I'm sorry. With respect to claim 14, not with respect to 13. And so now we have a problem of reading the claims inconsistently. It's not possible --

JUDGE BRADEN: But wait a minute. How is that? Because in 13 they're talking about pathway 111 going up and down. And they're talking about friction roller 196 going up and down. So aren't those the same? Aren't they the

same?

MR. WEEKS: Sure, that's the same direction of movement vertically up and down. But what the new position here provided in the reply is -- is that it's the left to right motion. So that would be the new second direction. So we're not talking about --

JUDGE BRADEN: If I recall correctly, they were saying that there is movement in the second sheet moving direction up and down by friction roller 196 and then there's an additional third movement left to right that comes in that pushes the check then up against lugs 172.

MR. WEEKS: Yes, Your Honor. You're absolutely correct. There are effectively three motions in Swinton's mechanism. But they presented two separate identifications of what that second sheet moving direction is.

The first one is vertically up and down; right? And, as we just discussed, that vertical motion is not what aligns the check and so, therefore, I would argue is not the motion that's in claim 14; right?

JUDGE BRADEN: But what do you say about petitioner's argument that the claims are not limited to only two directions, that there could be a third direction

that also helps with alignment, that it's not restricted to alignment only by moving the sheet in the second sheet moving direction?

MR. WEEKS: I don't dispute that it doesn't say there can be no other directions, but the plain language of the claim says that the movement in the second direction is what has to cause the sheet to be aligned. And the movement vertically is not what causes the sheet to be aligned. It's the movement from left to right -- is what causes the sheet to be aligned.

And having recognized that error in the original petition, that's why petitioners have now come back in the reply and said that the movement from left to right can satisfy claim 14.

And my point there is that that is -- that contradicts the identification of the first and second sheet moving transports and directions in claim 13. So we're now reading the claims inconsistently even though claim 13 provides the antecedent basis for claim 14.

Does that answer your question?

JUDGE BRADEN: I believe so, yes. Thank you.

MR. WEEKS: Your Honors, I'd like to move on and

discuss the alignment sensors of -- generally with respect to the 010 patent. And I believe that the plain language of this claim requires that these sensors be used to cause the alignment. And we know that for a couple of reasons.

The plurality of noncontact sensors have to be disposed along the first direction. And that first direction just so happens to be the direction in which the sheet is aligned. They also are in operative connection with the at least one processor. And that processor, again, is the thing that causes the alignment of the sheet.

And then finally we get to the actual language of limitation C itself. It reads, cause the sheet to be aligned by doing two things; by, A, moving the sheet in the second sheet moving direction, which we've just discussed, and sensing the sheet with a plurality of noncontact sensors. What the claim does not say is that it simply causes the alignment process to start.

Now, if you'll look at slide 38, we can compare that functionality to what we saw briefly in the embodiment of the 010 patent where we said the transverse transport rolls move the document 476 in a direction transverse to the direction of prior movement. And they do so until a

longitudinal edge 478 is aligned with the alignment sensors.

So our interpretation of claim 14, looking briefly back at slide 37, is perfectly consistent with the embodiment in the 010, which requires that the noncontact sensors be used to align the check.

Now, notably petitioner's expert actually agrees with us on this point. We asked Dr. Kaufman during his deposition about the last limitation of claim 14. And we asked him where it recites the plurality of noncontact sensors, would you agree that those noncontact sensors are used during the process of aligning the sheet.

And his response to that was that the sensors tell the processor where the edge of the sheet is. And that information the processor uses to de-skew the check or document or whatever it is. That's a plain reading of what this is getting at.

So here you have petitioner's expert agreeing that those sensors have to be used to align the sheet. And, of course, you also have Dr. Kurfess, patent owner's expert, who says the same thing. And for your reference, you can see that in his 529 declaration at paragraph 86.

So having laid out what the claim means, I'd like

to spend a few minutes going through --

JUDGE BRADEN: So -- hold on. I have more questions. So does this indicate then that the sensor has to be used during the entirety of the alignment process?

Because I'm looking at the claim. And it says to cause the sheet to be aligned. Is there something in there that's limiting this to being functional and being used during the entirety of the alignment process?

MR. WEEKS: Your Honor, I don't read anything in there, in the specification to say that it has to be used during the entirety of the alignment process. But I think what's important is that it does have to be used during the process of aligning the sheet, which is what Dr. Kaufman and Dr. Kurfess said.

So what I mean by that is there has to be some sort of feedback going to the processor essentially indicating the degree of skew or the position of the check. There has to be something helping the processor actually know whether the sheet has been aligned or not.

I'm not talking about a sensor that just happens to be in the transport path or one that starts or stops, you know, one that says maybe you should align this because it's

a check or don't align it because it's an envelope. It has to give feedback that is indicative of the alignment.

Does that answer your question?

JUDGE BRADEN: I guess I'm trying to find that language in claim 14.

MR. WEEKS: Well, I think the language is just the last limitation where it says that the noncontact sensors -- and you can slide back to slide 37. It says cause the sheet to be aligned by sensing the sheet with a plurality of noncontact sensors.

So those sensors have to be used to cause the sheet to be aligned. And if you look at the expert testimony and the specification, I think the only --

JUDGE BRADEN: So isn't it if you have a sensor that says, hey, this is skewed, turn on the alignment process, because I know once the alignment process goes through it will be aligned, is that not enough to satisfy this limitation of cause the sheet to be aligned by sensing the sheet with a plurality of noncontact sensors?

MR. WEEKS: Your Honor, if you had a sensor or a series of sensors that were gathering information indicative of the skew of the check and providing that information to

the processor which then started the alignment process, I would say that that would satisfy this claim limitation.

JUDGE BRADEN: And it is patent owner's position, though, that petitioner has not shown that?

MR. WEEKS: That's absolutely correct. And I will walk through those now if that is --

JUDGE BRADEN: Okay.

MR. WEEKS: -- unless there are any more questions on this.

So there -- as we established earlier, there were really four sensors that petitioner at least initially pointed to as alignment sensors that would satisfy this last limitation of claim 14. Those are 216, 218, 220 and 222.

And on slide 40, I've circled those in red and have them indicated in Figure 2 of Swinton on the right. I also have highlighted the alignment mechanism in blue so that you can get some sort of frame of reference as to where these sensors are located versus the alignment member itself.

Now, I won't spend much time on it; but I do think it's worth noting that 220 and 222 apparently are no longer at issue as Mr. Tishman conceded that they are not involved in the alignment process any more, despite being both listed

in the petition and having Dr. Kaufman opine that they were.

Probably the reason for doing that is because when we asked Dr. Kaufman about a paragraph in his declaration that said noncontact sensors 218, 220 and 222 are used during the alignment process, he said that that was somewhat poorly worded and agreed that those sensors are not used during the process of aligning the check.

So the two sensors we have left are 218 and 216. And I'd like to focus on 218 for a minute. That's on slide 43, Your Honor. The specification of Swinton is clear with regard to 218. The role of the sensor is to sense the leading edge of a check or an envelope. And you can see that in these three quotes you have on the screen.

The reason it does that, if you read the bottom quote, is so that the processor knows when the check is positioned above the friction rolls 196 and is in a position to be aligned. There is no other purpose for the sensor. And it has nothing to do with the process of aligning a check. It's simply to tell the processor where the check is at that current point in time.

Now, we asked Dr. Kaufman about potential other uses for the sensor during his deposition; maybe, say, for

alignment. And when asked whether he was aware of any other uses for the sensor 218 he said, no, he is not aware of any.

He went on to actually confirm that the alignment process does not require the 218 to be part of it. So there's really no dispute here between patent owner or even petitioner's expert. 218 has nothing to do with aligning the check.

So one thing that I think we should note is that in the words of the 010 patent, 218 is not an alignment sensor. It's a position sensor. And if you would go look at column eight of the 010 patent -- and I'm going to read from lines 23 to 33. It says, position sensors --

JUDGE BRADEN: Of the 010 patent?

MR. WEEKS: Yes, ma'am.

JUDGE BRADEN: Okay.

MR. WEEKS: It says position sensors for documents are included in the document alignment area and such sensors are operative to sense when the document has moved sufficiently into the alignment area so that the document can be aligned.

That's the 010 patent calling that a position sensor. And that's the exact function of sensor 218 in

Swinton. There's no difference.

Now, while we're on sensor 218, the petitioner came back and raised a new argument in its reply that argues that sensor 218 could actually be implemented as multiple sensors.

And that obviously, Your Honors, was the subject of our motion to exclude a portion of Dr. Kaufman's declaration saying effectively the same thing. And we, of course, stand by that and would like for you to strike that portion of his declaration.

And the reason for that is because whether or not 218 can be implemented as multiple sensors has nothing to do with the issues that were raised in patent owner's response. The issue here is whether sensor 218 is an alignment sensor within the meaning of claim 14, not whether or not it could possibly be implemented by one of ordinary skill in the art as more than one sensor.

Even if you do want to consider that argument, though, I'd urge you to look a little deeper into Dr. Kaufman's rationale there. The function of the sensor is simply to tell the processor where the check is. There's no need to add another sensor there to do that. One is going

to say yes. It's going to sense the leading edge of the sheet and say it's here or it's not. And that's the end of it.

There's no need to add duplicative functionality. There's only one leading edge of the check. So adding two sensors to do that job doesn't accomplish anything. That's just merely a way of petitioners coming back in case none of the other sensors -- in case you disagree with them that any of the other sensors are actually alignment sensors.

The last sensor that the petitioner has relied on is sensor 216. And sensor 216 is a -- which is on slide 45, Judge Braden. And sensor 216 is a thickness sensor. It's used for one purpose. And that is to determine the thickness of deposited media so that the processor can decide whether or not the item that was deposited is a check or an envelope.

Now, we confirmed with Dr. Kaufman that there was no other purpose for the sensor during his deposition. And his testimony was that he didn't recall the thickness sensor being used for any other purpose; meaning it's not used for alignment. It just tells whether or not -- it just tells the thickness of the deposited item.

And, as I've discussed earlier, sensors that do things other than align the sheet or provide feedback for aligning the sheet are not alignment sensors or are not noncontact sensors within the meaning of claim 14.

Your Honors, if we have any questions on claim 13, 14 or the disclosures, I'm happy to answer them. Otherwise, I will go back in the presentation and discuss a little bit about Jones and motivation to combine.

JUDGE BRADEN: I actually do have one question. And it regards Swinton's Figure 10, item 218 where it refers to sensor 218 as the alignment control sensor.

MR. WEEKS: Yeah. Absolutely.

JUDGE BRADEN: Is that not indicative or what's your argument that that is not indicative to a person of skill in the art that sensor 218 is not responsible for alignment or alignment control?

MR. WEEKS: Well -- so, for one thing, I will note that that's only in one figure and it calls it a print, slash, alignment control sensor. But I think what we really have to do is look at the function of that, because it doesn't really matter what Swinton calls it. I think there's enough description in Swinton about 218 to say

exactly what it does. And we have to compare that functionality in Swinton to what the 010 patent says.

And, as I mentioned earlier, because what Swinton -- the sensor 218 senses the leading edge of the check in order to tell the processor when the check is in a position to be aligned. In the words of the 010 patent, going back to column eight, that's a position sensor. It's not the sensors that are being used to align the sheet.

And so, yes, Swinton does call it a print, slash, alignment control sensor; but it doesn't actually control alignment within the meaning of claim 14 of the 010.

Does that answer your question, Judge Braden?

JUDGE BRADEN: I think I understand your position. Thank you.

MR. WEEKS: Thank you.

Okay. I'd like to go back briefly and talk about a few things that Mr. Wheeler mentioned earlier. And one of those is the multiple embodiments of Jones. And I won't dwell on this. Excuse me, Your Honors. I apologize. And, Judge Braden, I'm on slide number three for your reference.

One of the things that Mr. Wheeler mentioned was the multiple embodiments of Jones. It seems that there's no

longer a debate about whether or not there are two embodiments. There are. One is an ATM. And one is a currency counter.

The thing that's important here is that, as Dr. Kurfess told you, there's no disclosure that the ATM and currency counter are anything other than entirely different machines.

Now, petitioner initially unquestionably relied on the ATM. And we specifically walked through today why they're doing that earlier. But they also try to walk back from their reliance on the currency counter embodiment.

And if you take a look at slide six, you see a quote from the petition, which is the -- actually a quote from the claim chart at page 25 that we were discussing earlier citing the paragraph 143.

Now, 143 unquestionably discusses the table-top, the stand-alone currency counter unit. The problem is this isn't just one citation, Your Honors. If you go through and look at pages 25 through 58 of the petition -- those are the claim charts -- this same paragraph is cited over 11 times.

Now, they also relied on the testimony of Dr. Kaufman and particularly paragraphs 30 and 31 where he

identifies the currency counter as satisfying certain limitations. One example of that is seen in the bottom of slide six, which says that Jones shows such a sheet item transport in the device, namely, the curved guideway 211 in yellow and the transport plate 240. And you can even see on the right the figure that he annotated himself in the currency counter embodiment identifying that limitation.

I think it's clear that they initially at least in the petition relied on this embodiment. And I'm not aware of any authority that says that a see also cite doesn't mean your -- doesn't mean that that doesn't support your position. I know that was a double negative.

So the question is why is the petitioner trying to walk away from this now. And I appreciate Mr. Wheeler recognizing that the petition wasn't clear earlier. And I'd like to point out that it was petitioner's job to make the petition clear from the beginning.

But the reason that they are walking away from it is because Dr. Kaufman, their expert, didn't realize that they were separate machines. When we asked him during his deposition how he would describe the machine of Jones as shown in Figure 1S, he said this is one embodiment of the

inside, what presumably is behind the front cover of that machine. So Dr. Kaufman thought that instead of being separate machines that one was physically inside the other.

And why that matters is because the Federal Circuit has been clear that you have to provide an explicit obviousness rationale. You have to provide an obviousness analysis when there are multiple embodiments even when they're within the four corners of the same document.

These are two separate and stand-alone machines, not just minor tweaks to one machine that are described within the confines of another document. And I think if you go look in --

JUDGE BEGLEY: Sorry to interrupt.

MR. WEEKS: Go ahead.

JUDGE BEGLEY: I'm not sure where this gets you. If petitioner is correct that -- let's just say they relied on both; right?

MR. WEEKS: Sure.

JUDGE BEGLEY: And now petitioner has said you can just ignore the see also cites; right? If they have made a case that goes through with one embodiment in full, I'm not sure where this argument leads.

Is there a particular limitation where they needed to rely on the second embodiment that we're now ignoring? Do you see what I'm saying? Like is there --

MR. WEEKS: I do.

JUDGE BEGLEY: -- is there a limitation where it's necessary? Otherwise, we can just go on one.

MR. WEEKS: Sure. I do understand your question, Your Honor. I think the problem is, one, it evidences the, you know, lack of clarity in the petition. It didn't distinctly point out their grounds in their petition. And I also think it matters when you start looking at the proposed combinations.

And while petitioners are saying that, oh, we can only rely on the ATM embodiment and it discloses all of the features, I think when you look at motivations to combine where they're saying, well, you know, you can take the ATM of Jones and use the storing mechanism of Kozima and the end result of that would be a smaller or a more reliable machine, there's no basis in -- in the record at all for that opinion unless you're going to start looking to the currency counter of Jones.

So, no, on an element-by-element basis I can't say

there's nothing -- I can't say that there is an element that's missing from the ATM embodiment, which they rely on it, not off the top of my head; but the disclosures aren't there to support the rest of their rationale if you only rely on the ATM. Does that make sense?

JUDGE BEGLEY: Yes. Thank you.

JUDGE BRADEN: But if in the 529 petition they provide five rationales for combining Kozima and Jones -- and one of those was, you know, smaller, faster, whatever it was.

But -- you say that's based on the currency counter. But the other four reasons such as, Jones contemplating having a two-bin configuration, Kozima has two bins and a mechanism for sorting into those two bins -- I guess I follow on with Judge Begley -- is where does that get you if the ATM embodiment with Kozima reaches all the limitations and there's four other reasons to combine.

MR. WEEKS: Well, for one, Your Honors, I -- and I was going to go through this in a little bit, but I'm glad you asked. It goes to the credibility of Dr. Kaufman. You know, he obviously didn't understand that these were separate embodiments.

And we are having to rely on his testimony regarding motivations of one of ordinary skill in the art and whether or not they would combine these machines. So I do think that weighs heavily and should impact your decision with regard to his positions.

You know, the other thing is that providing a motivation to combine in and of itself just isn't sufficient. You can't say here are a bunch of reasons why. The board and Federal Circuit cases have even said you have to provide how. And that was recognized by petitioner's counsel earlier today even.

And I think that's notable because when you walk through the motivations to combine one by one -- and I would like to start doing that on slide 11 with regard to the 529 IPR -- you're going to see that they're either contradicted by the testimony of their own expert or they're really nothing more than just conclusions. There's not actually an analysis there.

So starting with slide 11, the first reason that petitioner provided to combine Jones with Kozima was that Kozima provides an extremely simple and compact construction for a small size ATM.

Now, there's absolutely no disclosure in Jones regarding the size of its ATM or the storage bins. So during the deposition, we asked Dr. Kaufman do you know whether Kozima is more compact than the currency counter embodiment disclosed in Figure 1T of Jones. And his response was, not offhand. There's no way to know.

We followed up and asked whether or not the specification provided detail that would allow him to know how big it was. And his response was, that's not part of the patent.

So while petitioner contends that combining these two references would result in a smaller size ATM, there's actually nothing in the patents or in the record that can support that conclusion. It's just a hypothetical why but no how.

The same is similar with regard to the second reason, which is that Kozima would provide a simplified structure with fewer moving parts and, therefore, fewer components that could potentially break down and require service.

Now, we again asked Dr. Kaufman if he knew how many moving components were in Kozima's bill sorting

mechanism. And his response was, not offhand. He continued on to say that he would have to spend months in front of a CAD program or in front -- in a machine shop actually designing and building the system in order for him to know that. Quote, you can't necessarily just select and say, well, this is going to be less likely to jam or this is going to be simpler or whatever.

The point here is that once again, the petition and Dr. Kaufman are giving reasons without any support. And he's admitted during his deposition that there is no support for this position.

Reason number three with regard to Jones is similar. And the petition says that a goal of Jones's ATM -- and I'm on slide 13. A goal of Jones's ATM is to transport checks or bills into separate compartments. And Kozima teaches a specific mechanism for achieving this goal.

Now, when we asked Dr. Kaufman about whether the common goal of transporting bills or checks into a specific mechanism would have motivated a person of ordinary skill in the art, presumably someone like Jones, to use the structure of Kozima his response was, why would he, I don't know. There is no reason or rationale underlying this particular

motivation.

JUDGE BRADEN: But when I look at Jones, Exhibit 1004 at paragraph 140, it specifically says that your output receptacle can consist of dual bins. And then it cites to Figure 1E. And it says that that dual bin, first bin, second bin -- you can either do identified documents, unidentifiable documents. You could do it -- separation of currency of particular denominations.

I'm not sure where pointing to Dr. Kaufman saying I don't know why they would do this -- when it's almost like Jones has this right here.

MR. WEEKS: Sure. Yeah. Absolutely, Judge Braden. Jones does say that there are two output structures, but the point here is we -- that the petitioners are required to show why a person of ordinary skill in the art would have combined these.

And when we asked Dr. Kaufman during his deposition why that would be done, it's not just sufficient to say, well, this has two and this has two, therefore, we're done. The point is there was no reason or no rationale that he could articulate as to why someone would put them together.

One of the other motivations to combine provided by the petitioner was that Kozima's payout mechanism -- incorporating that into Jones would allow deposited bills to be paid out for customers.

Now, that has a couple of problems insofar as it overlooks some elements of Jones. One of those being that Jones already includes a separate dispensing unit. So it already has something to pay out bills to customers.

It also only has a one-way path from its input receptacle to its output receptacle. And the problem there is that if you're going to incorporate Kozima to have this payout functionality within the machine, there's no way in Jones to actually make that work. There's nowhere for the bills to go. So they can't -- you can't just incorporate this machine and have it work. Once again, the petitioner is saying why and not how.

And then you get into a bigger problem with regard to this motivation when you look at claim 25. And I'm on slide 15. Claim 25 reads, the machine according to claim 24 wherein the sheet comprises a check.

Now, it's common sense that tells us if you were to go deposit a check into an ATM that you don't want that

check to be given back out to the person that's standing in line behind you. So a person of ordinary skill in the art recognizing that would have known that you don't want to incorporate payout functionality of Kozima with respect to Jones or else you're going to start doing that.

If you take a check in, deposit it in Kozima's functionality and then pay it back out, well, now you have a security problem. As Dr. Kurfess told us, you don't want to do that because of the sensitive nature of the information printed on checks including account numbers and routing numbers. Of course, if the combination were made, you would also have to reconfigure Jones's transport, as I mentioned.

Now, the petitioners have come up with a slightly new theory in their reply and said, well, you can actually eliminate one of the output bins of Kozima or eliminate the payout functionality from one of those storage chambers.

Now, for one, that is a new theory that was not previously addressed. And it's completely absent in the petition. But, two, it doesn't work in practical terms.

If you think about it, you would have one bin dedicated to checks. And then you would have another bin dedicated to cash. So if a user came and made a deposit,

checks would go in one and cash would go in another. And according to the petitioners you would just pay the cash back out to other users.

The problem is cash can come in ones, fives, tens, twenties, maybe fifties, hundreds. I don't tend to carry those myself. But if someone is going to go put those into an ATM, you don't want that being redistributed to another user. You need to be able to control the denomination.

So I think that's notable, because in Kozima it was a vending machine. And it worked fine to have payout functionality in two storage chambers, because in a vending machine you have ones. Maybe you even accept fives. But it's pretty uncommon for a vending machine to accept twenties or hundreds.

So where you have a smaller denomination of currency, it could work, but here one of ordinary skill in the art would appreciate that there is no way to make this functionality compatible with the full-function ATM of Jones.

The last motivation to combine provided by the petitioners with respect to Jones and Kozima is that modifying Jones's ATM to include Kozima's bill sorting

mechanism would be merely the use of a known technique to improve similar devices in the same way; obviously parroting language from KSR.

Well, Your Honors, this is nothing more than a legal standard. At very best, it's a bald conclusion. There's no analysis or explanation, because in reality, the devices would not be performing the known functions in a known way.

We talked about incorporating the payout functionality of Kozima into Jones, but in order to do that, we would have to either eliminate part of the payout functionality or we would have to re-engineer Jones to have this new transport mechanism in order to get the bills back out of storage; neither of which are addressed in the petition.

But the problem with regard to this particular motivation is that that's not using a known component in a known way. That's modifying a known component and using it in a previously unknown way. And that's not obvious following the rationale from KSR.

I'd like to transition quickly to talking about the motivations to combine in the 530 IPR. And I think

you'll see that there are similar deficiencies. Obviously in the 530, we're talking about the motivation to combine Swinton and Nobuaki.

Now, the first reason provided by petitioners is that incorporating Nobuaki's device allows for less frequent refills of the currency dispensing portions of Swinton because deposited bills can be paid out to other customers.

Well, as an initial matter, Swinton tells us very early on in the specification that its disclosures are primarily directed to a check depository. So all of the features and transports and storage areas that we've been talking about today are directed to storing checks not to storing cash. And obviously for all of the reasons that we just discussed, you don't want your check being paid out to another user.

Swinton also has the similar problem of having a one-way transport. And Swinton's apparatus tin is -- is configured for processing checks along a one-way path; meaning that it goes from the entry slot 14 to the two storage bins 138 and 140, not back the other way.

So, again, if you were to incorporate Nobuaki for the payout functionality, you still have no way of getting

the bills back out of the system.

The second motivation to combine in the petition is that it would allow for quicker service as withdrawal and deposit operations can be performed simultaneously.

Now, I think we should note that Swinton actually despite being directed to a check deposit system, already includes a currency dispenser; meaning there's something to allow users to make deposits in Swinton and something to allow them to receive cash.

So there's no need for this redundant functionality that the petitioner has alleged. What you're doing is adding more parts. There's going to be more reliability issues. And it's going to be undesirable according to the motivations that the petitioner previously provided.

The third reason is that a person would have recognized the goal of Swinton's ATM is to transport checks or bills into separate compartments. And Nobuaki teaches an improved mechanism for achieving this goal.

But there's not a substantive response to this, because there's really no substance here. Again, this is a bald conclusion. It's been repeatedly rejected by the

Federal Circuit in cases like *In re Nuvasive* where the Federal Circuit vacated and remanded the board's findings of obviousness because they amounted to nothing more than conclusory statements. Conclusory statements are insufficient alone. A finding of obviousness must be supported by a reason of explanation.

The last motivation that the petitioner provides with regard to Swinton and Nobuaki is -- the combination is combining prior elements according to known methods to yield predictable results again invoking KSR and I would submit to you is deficient for the exact same reasons that that similar language with regard to the 529 petition was.

So in conclusion on these motivations to combine, it is our position that none of these motivations can support a finding of obviousness because the motivations are contradicted by the evidence in the record. They're contracted by patent -- by petitioner's own expert, in fact.

They also are generally just bare legal assertions. They're conclusions. They may state why, but they don't state how. And it's been made clear, as Mr. Wheeler acknowledged, that you have to include some rationale as to how the references will be combined. I

think if you go back and look at the petition, however, you will see that none are there.

Judge Braden, I'm going to skip to the very end of my presentation. It's the last two slides. I did a terrible job of that. But I'd like to talk for a minute about the credibility of Dr. Kaufman since you asked earlier, Judge Begley, about why the two embodiments of Jones matter.

Well, I think it goes to his credibility here. And Dr. Kaufman's credibility has been compromised in several instances. One of those is that he used a hindsight bias analysis which the Federal Circuit has rejected. If you look at a quote from his deposition, he says he only looked at how these various documents, the prior art -- whether the claim language read on the documents.

So what he's doing there is he's sitting with the 010 patent, reading the claims and then trying to compare that to the prior art and hunting and pecking to find the elements that he needs.

And he also failed to understand the prior art references. Obviously, I reference Jones here, but he also didn't fully consider Swinton. In fact, during his

deposition -- and this is on pages 130 -- 183 and 184 -- he admitted that parts of his declaration were inaccurate, that he had not thought in much detail about Swinton at the time he wrote his declaration and that if he had the chance to write it again, he would have worded it differently.

You know, that comes through during his deposition when he contradicted himself. He contradicted himself regarding motivations to combine in saying that you could combine references or you would do so to make things smaller or faster or more reliable but then admitting that he had no basis for those opinions.

And it also comes through with regard to Swinton's sensors where he immediately caved and said, actually, no, not a single one of those sensors, 216, 218, 220 or 222, are used during an alignment process.

One final example that I have for you of him providing no opinions with no bases is that in his declaration, Dr. Kaufman says that choosing features or modules to include or omit from an ATM is generally a business decision.

The problem with that is that Dr. Kaufman doesn't have any business experience in the ATM industry. In fact,

he said, I've never been involved with ATMs and that his technical involvement is peeking into the slot as he was a customer in a drive-through.

So while Dr. Kaufman has provided us plenty of opinions ranging from issues on motivation to combine to the specific disclosures in the references, I think it's clear that he didn't fully appreciate, as he -- as he said during his deposition, the disclosures in many of those references and proceeded to provide opinions on them anyway. Your Honors --

JUDGE BRADEN: So, real quick, in -- I believe -- was it Dr.
Kurfess's declaration?

He notes that the level of skill in the art at the time of the invention -- he says would have been somebody with a combination of experience and education in mechanical engineering typically consisting of a minimum of a bachelor's degree in mechanical engineering or a related field and at least four years of working experience in the area of mechanical engineering.

And he says that that falls within the definition of a person of ordinary skill offered by Dr. Kaufman and

which the board adopted in the decision to institute.

I note that patent owner doesn't state in its response or any of its papers its assessment of the level of skill in the art. Do you stand by Dr. Kurfess or are you accepting of the level of skill in the decision to institute? What say you?

MR. WEEKS: We accept the level of skill in the decision to institute. I will note that while I certainly don't disagree with Dr. Kurfess, I don't think it matters for purposes of this proceeding which level of skill is used.

JUDGE BRADEN: Fair enough. Thank you.

MR. WEEKS: Thank you, Your Honors.

MR. WHEELER: And, Your Honor, while -- Your Honors, while we rejigger here, roughly how much time did we end up leaving ourselves for rebuttal?

JUDGE BENOIT: You have 17 minutes.

MR. WHEELER: 17 minutes. Perfect. Thank you. Mr. Tishman will start off. And then I'll have a few comments.

MR. TISHMAN: Thank you, Your Honors. Just a moment to plug in the projector here.

Your Honors, with respect to the alignment, there are two issues that came up that essentially relate to causation. And the first issue -- sorry. The presentation is not coming up. One moment, please. I think I got it.

All right. And the first issue relates to the alignment process --

JUDGE BRADEN: Where are you?

MR. TISHMAN: I'm on slide 64.

JUDGE BRADEN: Thank you.

MR. TISHMAN: Sorry. I should be on slide 54 now. So I'm moving now to slide 54, which relates to the D-shaped roller 196.

Mr. Weeks said in his presentation that the movement in the second direction must cause the alignment. And I just wanted to clarify that that's slightly different from what the claim actually says. And what the claim says is that it must cause alignment by moving in the second sheet moving direction.

So the difference is the claim language does not require only the second sheet moving direction. In fact, I thought Mr. Weeks agreed with me on that; but he did say at one point that there are only two sheet moving directions in

the claim. And that's true. But the claim does not preclude using a third sheet moving direction as well.

But even if it required that the movement cause the sheet -- sorry. Even if it required that the movement in the second sheet moving direction be what causes the sheet to become aligned, 196, the D-shaped roller, does that. Because but for the lift of the check, the check would never become aligned. It would just simply get stuck on the transport path.

So as Your Honors, I'm sure, recall from law school and from criminal law, causation -- and from torts -- causation -- but for is a causation element. So we submit that that's satisfied with respect to the alignment process.

Moving now to slide 64 with respect to the noncontact sensors, there's also an issue related to causation. Now, first I did want to clarify that in slide 36 of Diebold's presentation, they cite some deposition testimony from Dr. Kurfess about what the noncontact sensors do.

And I submit to Your Honors that that was describing the preferred embodiment, not the specific language at issue here in claim 14. But essentially what

they're arguing with respect to these noncontact sensors is a claim construction argument.

They're arguing that the sensors must provide feedback; that there's some sort of back-and-forth discussion between the sensors and the processors. And they also point to a portion of the 010 patent discussing position sensors. I submit to Your Honors that that was nowhere in their papers and you shouldn't consider this new claim construction. But I'd like to discuss specifically each of the sensors.

JUDGE BRADEN: Well, I do -- I do want to make sure that we're clear that the claim just based on the plain language, grammar, the fact that this is a prepositional phrase modifying a -- an adverb prepositional phrase modifying the verb language, the cause the sheet to be aligned by moving and sensing go together. Is that your understanding or are you reading the and sensing to be a separate clause?

MR. TISHMAN: We're reading it to be a separate clause under the broadest reasonable interpretation. There's some ambiguity with the claim. And under the broadest reasonable interpretation, that would be a separate

clause. Nonetheless, we submit that it's satisfied under even Diebold's narrower interpretation because of those sensors 216 and 218.

Now, sensor 216, as I think Your Honor recognized, Judge Braden, with your questioning, it causes the alignment. But for the question do I align, yes or no, you would have no alignment. So sensor 216 causes the alignment. Next, sensor 218, that also causes the alignment. It's an alignment sensor. It couldn't be clearer in the patent.

Now, they also -- Diebold's counsel also points to a citation to Dr. Kaufman's deposition testimony. But if you look more closely at the questioning, you'll see that the questioning related to whether or not the sensor confirms alignment.

And this goes back to this new feedback argument that they're presenting that the sensor has to provide feedback back and forth and that it can't be a position sensor.

JUDGE BEGLEY: Can we go back --

MR. TISHMAN: And that's nowhere in their papers, Your Honors.

JUDGE BEGLEY: Can we go back to whether the sensing is an independent limitation? Where -- if your -- under your view of the claim, where does the and sensing fit in?

MR. TISHMAN: We submit that it's ambiguous. So because of the ambiguity the broadest reasonable interpretation governs. And the claim simply requires sensing the sheet with a plurality of noncontact sensors.

We did, however, provide the alternative argument that these noncontact sensors are, in fact, used as part of the alignment process. So we -- it doesn't really matter how it's interpreted because it's satisfied under either interpretation.

JUDGE BEGLEY: Okay. I understand your position. But I'm trying to -- that it meets both. But I'm trying to understand your lead argument. And --

MR. TISHMAN: I would not qualify this as our lead argument. I think that our lead argument is that sensors 216 and 218 sense it and are part of the alignment process. We submitted this argument --

JUDGE BRADEN: So are you saying that 216 and 218 -- you would say are disposed along the first

direction?

MR. TISHMAN: Yes, they are. I believe we have somewhere in our slides Swinton's Figure 2. And I'll pull it up. We have a modified version of it from the motivation to combine section. And it is slide 28.

And it's a little bit difficult to see in this -- in this slide, but 216 is right at the beginning of the transport path. It's one of the first things in the transport path. 218 is still along that first direction. So 218 is slightly down in the transport path in the alignment area of the check.

And, Judge Braden, I'm on slide 28 which shows a modified version of Figure 2 from Swinton. So, yes, to answer your question, yes, these are along the first sheet moving direction.

Diebold spent some time on sensors 220 and 222 in their presentation as well. As we explained to Your Honors, 220 and 222 sense the check and they are noncontact sensors. But we do not submit that they are used in the alignment process. For that, we rely on sensors 216 and 218.

Now, Mr. Weeks also touched on our alternative argument regarding a plurality of sensors 218. And that is

the last slide in my presentation today, which is number 68. Again, this is an alternative argument. We presented the argument that 216 and 218 are a plurality of noncontact sensors.

But in response to Diebold's claim construction, we also explain how you could implement as a mere design choice a plurality of sensors 218. And what this would be used for is to sense different parts of the check and to align the check in that way.

And unless there are any further questions, I'll pass the mike to Kevin Wheeler to discuss the remaining issues. Thank you, Your Honors.

MR. WHEELER: So very briefly, Your Honors, I want to address just a couple points about motivation to combine and Dr. Kaufman that were raised by Diebold's counsel.

He used the lovely tactic of showing a two-line snippet from an eight-hour deposition where the expert gave an answer of I don't know and tried to use that to convince each of Your Honors that that means he doesn't understand what's going on with motivation to combine, he didn't have any rationale or analysis to support petitioner's motivations to combine.

And I know, I'm confident all three of you have already done so and I encourage you again to look at Dr. Kaufman's declaration that was submitted with the petition; for the 529 petition, paragraphs 40 through 44 and for the 530 petition, Dr. Kaufman's declaration at paragraphs 51 through 54.

With respect to Dr. Kaufman himself, he has a Ph.D. He has close to 50 years of experience in handling mechanical devices such as those at issue in these proceedings. He's had experience as a -- building these machines. And he's had experience as a professor including at MIT and now at G.W.

JUDGE BRADEN: Well, I thought that he stated that the only experience he had with ATMs was as a consumer looking through the slot.

MR. WHEELER: So --

JUDGE BRADEN: Is there a different statement?

MR. WHEELER: What I'm referring to is mechanical machines such as those that are at issue in the proceeding not ATMs in particular.

Having said that, Judge Braden, he does specifically have experience with machines handling sheet

items much like an ATM and, I will note, unlike Dr. Kurfess who has no experience with ATMs and no experience with sheet item handling machines at all.

And I bring this up, frankly, just to note that the fact that Diebold is challenging this gentleman's credibility I think is telling as to where we're at on that issue. And if there are any further questions, I'm happy to field them. Otherwise, petitioners will rest.

JUDGE BENOIT: No further questions. Thank you.

MR. WHEELER: Thank you, Your Honor.

MR. WEEKS: Your Honors, if I may briefly, with regard to the motion to exclude specifically, Mr. Tishman did touch on the testimony regarding the additional sensor 218 and how it could be implemented as multiple or whether it could or not.

The only thing that I want to do is point out that the petitioner still offered no explanation as to how that -- how that testimony is not new or how it was responsive to an issue raised in the petition.

The issue is whether or not that sensor is an alignment sensor within the meaning of claim 14 not whether or not it can be implemented as multiple sensors. Thank

you.

JUDGE BENOIT: All right. It appears we have no more questions. Thank you very much for your presentations today. We will issue a final written decision in due course.

(Off the record at 3:07 p.m.)

CERTIFICATE OF SHORTHAND REPORTER

I, CAROL A. LOWE, the court reporter before whom

the foregoing hearing was taken, do hereby certify that the foregoing transcript is a true and correct record of the proceedings; that said proceedings were taken by me stenographically and thereafter reduced to typewriting under my supervision; and that I am neither counsel for, related to, nor employed by any of the parties to this case and have no interest, financial or otherwise, in its outcome.

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Carol A. Lowe, RPR