UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SOTERA WIRELESS, INC., Petitioner,

v.

MASIMO CORPORATION, Patent Owner.

IPR2020-00912 (Patent 10,213,108 B2) IPR2020-00954 (Patent 9,788,735 B2) IPR2020-01015 (Patent 9,795,300 B2) IPR2020-01054 (Patent 9,872,623 B2)

> Record of Oral Hearing Held: August 26, 2021

Before JOSIAH C. COCKS, JENNIFER MEYER CHAGNON, and ROBERT L. KINDER, *Administrative Patent Judges*.

APPEARANCES:

ON BEHALF OF THE PETITIONER:

RUDOLPH TELSCHER, JR., ESQ. Husch Blackwell, LLP 190 Carondelet Plaza Suite 600 St. Louis, MO 63105

ON BEHALF OF PATENT OWNER:

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The above-entitled matter came on for hearing on Thursday, August 26, 2021, commencing at 1:00 p.m., EDT, by video/telephone.

PROCEEDINGS

1 2 JUDGE KINDER: Good afternoon. This is Judge Kinder. 3 Good afternoon everyone and with me on the panel today are Judges Cocks and Chagnon, and today we have four IPR 4 5 proceedings that we're going to hear oral argument in. Each IPR 6 is captioned Sotera Wireless as Petitioner versus Masimo 7 Corporation, Patent Owner and just for the record the IPR numbers are IPR 2020 and the cases are 912, 954, 1015 and 8 9 1054. If we could real quick get a roll call. I want to see who's 10 on the line for Petitioner. 11 MR. TELSCHER: On the line for Petitioner is Rudy Telscher of the law firm of Husch Blackwell. 12 13 JUDGE KINDER: All right. Mr. Telscher, did I say that 14 correctly? 15 MR. TELSCHER: It's Telscher but close enough. 16 JUDGE KINDER: Telscher, I apologize. Are you going to 17 be arguing today? 18 MR. TELSCHER: I will be arguing, Your Honor. 19 JUDGE KINDER: Great. Anybody else with your firm 20 today participating? 21 MR. TELSCHER: Well, with me is Nathan Sportel. If 22 there are going to be arguments over the Motions to Exclude he 23 would handle those. I guess there's a possibility he might say

something but we're planning on me doing most or all of the
 talking.

JUDGE KINDER: All right. Thank you. And Masimo for
Patent Owner, who's representing today?

MS. SWAROOP: Good afternoon, Your Honor. This is
Sheila Swaroop of Knobbe, Martens, Olson & Bear for Patent
Owner Masimo.

8 JUDGE KINDER: All right. Ms. Swaroop, did I say that9 correctly?

10

MS. SWAROOP: You did, Your Honor.

JUDGE KINDER: Okay. Thank you very much. All right.
Anybody else with you today or is it going to be you arguing all
day?

14 MS. SWAROOP: I will be presenting today, Your Honor.

15 JUDGE KINDER: All right. Great. And I do apologize. 16 I'm -- I think ragweed right now so my allergies are acting up so 17 I do apologize if my throat's a little scratchy. First I want to let 18 you all know that the hearing is open to the public. We did have 19 a request so I think we may have one or more people here from 20 the public actually watching in or listening to the hearing. 21 Today the parties are going to each be allotted 60 minutes. If at 22 any time during the proceeding you have technical issues let us 23 know. Obviously if you drop off you probably won't be able to 24 let us know but we will hopefully realize that as quickly as

1 possible and will pause the proceeding. When we pause the 2 proceeding we won't count that against your time, obviously. 3 Hopefully, our team is really good and they usually get people back up within three or four minutes so don't panic if we happen 4 to lose connection. It's not a big deal, it does happen and if for 5 6 some reason the video just isn't working we also have backup 7 telephone numbers for call in that you can use. So that will 8 hopefully not happen, but just to let you know sometimes it does.

9 So one thing that we try to do is everyone mute themselves 10 until they go to talk and then we have the inevitable where we 11 always forget to unmute ourselves when we actually do start 12 talking. But for courtesy the judges and all the staff will try to 13 stay muted until we ask a question and then counsel, please mute 14 yourself if the other counsel is speaking. We have

15 demonstratives. Both sides did a good job of getting us those 16 demonstratives ahead of time and we appreciate that. When you 17 refer to those, please give the slide number that you're referring 18 to in your deck and give us maybe a second or two to pull it up. 19 We're going to be pulling things up on our work stations and we 20 want to follow you as closely as possible so a brief pause helps 21 to do that and this is probably more for us, the judges. We'll try 22 to identify ourselves each time we speak so our court reporter 23 can know who's talking and when.

24

So the Petitioner bears the ultimate burden of proof in this

case and the Petitioner will go first to present their case and they
may also reserve some time for rebuttal arguments. So out of the
60 minutes looking at your time, Mr. Telscher, how much time
would you like to reserve for your rebuttal?

5

MR. TELSCHER: Fifteen minutes, Your Honor.

JUDGE KINDER: All right. So you have 45 and 15. And
then after Petitioner's initial presentation the Patent Owner will
argue its opposition and then present issue for which you might
bear the burden of proof. Patent Owner, Ms. Swaroop, how
much time would you like to allot for your rebuttal reply time?

MS. SWAROOP: I would like to reserve 15 minutes of
rebuttal for Patent Owner.

JUDGE KINDER: All right. So that's pretty easy for us to remember. We will try to keep time ourselves. If you can keep your own time as well, you know, we're going to be obviously liberal with the time just because we don't have an official clock behind us so we are all going to be kind of tracking that. We'll let you know when there's about three to five minutes left in your opening time just so you have an idea.

Important for these four IPR proceedings, the parties have agreed to a single transcript and a single hearing so that's important. The transcript will be used in all four IPR proceedings. If there's any specific issue that only applies to one IPR, try to let us know the IPR number that you're arguing the

specific issue for. It makes things just easier at the end when we
 have to go back and look at the transcripts and review your
 arguments if you can.

All right. I think that concludes most of the formalities.
After the case is submitted and I say "off the record," I'd ask the
parties to stay on the line for just a few minutes so our court
reporter, Julie Souza, can ask you any questions about spellings
or any other things to make sure the transcript is as clear as
possible, and with that are there any questions at this time before
we begin? All right.

11

MR. TELSCHER: None from Petitioner.

12 MS. SWAROOP: And from Patent Owner.

JUDGE KINDER: All right. Thank you. All right. Mr.
Telscher, I'll go ahead and let you begin and your time will start
whenever you're ready to begin. Thank you.

MR. TELSCHER: Thank you, Your Honors and good afternoon. Because the IPRs have so many issues in common most of my arguments will be germane to also when I'm speaking without referencing an IPR it would signal that I'm talking about all of them. If there's a particular issue germane to one of the particular IPRs I will mention the number.

I'd like to start with the patents themselves. So I have, you
know, one part which is kind of an introduction that I think
frames the issues. I'd like to start at slide 10 of our deck and

then of course we will turn to the actual grounds in the petition and why we believe each of the claims are obvious. So I'll give you a moment to turn to slide 10 but that's where I'm starting with the patents themselves and just by way of nomenclature I might say '735 patent. Because all of these patents have a common disclosure I'm referring to all of them for the most part unless I specify otherwise, and let me know when you're ready.

3 JUDGE KINDER: I think we're there now. Thank you for9 the pause.

MR. TELSCHER: So the first slide I think is a critical 10 11 slide. It shows you what the inventor thinks he invented. So if 12 you look to the left hand of the slide, they call it prior art and 13 you'll see that there's an SP02 sensor attached to the finger, that 14 was conventional. You'll see that there was a wire with a port 15 plugging into unit 160 around, you know, a receptacle I think it's 162 but you see plug 144. So there's been a lot of discussion in 16 17 this case about whether it would have been obvious to use a 18 sensor ported to an electronic device in a medical context.

The '735 patent and all of the patents here admit that ports are prior art. In fact when you read these patents there are pages of discussion from Mr. Oslan, their expert, talking about why you wouldn't use ports in a medical device context, noise, cost, things of that nature but right here in figure 1 the '735 patent refers to a porting connection from a sensor to the electronic

1 device as the prior art.

2 When you look to the right hand side of your screen you'll 3 see what the invention really was and the patent admits that 4 around this timeframe the idea of transmitting vital signs from some kind of a remote monitor -- what we see here is a wrist 5 6 monitor but it could be something that straps to your belt -- the 7 idea of transmitting wirelessly from the patient in a monitor 8 there to the remote monitor 360 was no. The patent doesn't 9 debate that they came up with the idea of wireless transmission 10 for medical sensors and vital signs. What did they say they 11 invented, and it's the adaptor and you'll hear me throughout this 12 proceeding talking about an adaptor and that's what this patent 13 was all about. Go back and look. There were seven patents that 14 predate the patents we're talking about and for fifteen years, the 15 patents were filed in 2002, for fifteen years the patents were 16 directed to the adaptor interface. The abstract, the spec, all of it 17 was directed to the adaptor interface and you'll see that the idea 18 was instead of plugging the remote sensor, the sensor the SP02 sensor into the remote monitor you would then -- if you look to 19 20 the right side of slide 10 -- you would plug it into the wrist 21 monitor. The wrist monitor could display the vitals and then it 22 could wirelessly transmit to the adaptor and if you read this 23 patent I mean most of the figures, by far most of the discussion, 24 has to do with how do you transmit from that wrist monitor to

the adaptor and that was the invention and if you're reading what 1 they were talking about and this probably was a good idea. What 2 3 Masimo said is look, we don't want hospitals to have to change 4 up all their equipment so instead of having the SP02 sensor plugged directly into that piece of equipment, the remote 5 6 monitor, we're going to use an adaptor and by using that adaptor 7 now, in this wireless system, we'll work with all the hospital's 8 existing equipment and again for fifteen years their claims were directed to an adaptor interface. There were no claims directed 9 10 to ports for combination of analog and digital sensors. So that's 11 what went on for 15 years and now we've got -- and look, all of 12 us that are on this feed right now are aware that patent owners 13 change their claims, they broaden them, they narrow them, 14 there's nuances to them.

15 What happened in this case is 15 years later the claims 16 went in a completely different direction. They were not directed 17 to this adaptor interface and what happened during those 15 18 years is that our client entered the scene in around 2013 or 2014. 19 There was a trade secret lawsuit that didn't work out as Masimo 20 wanted and in 2017 when that trade secret lawsuit ended they 21 prepared nine new patents, four of which are in this IPR. We 22 have another IPR proceeding coming up in a couple of weeks on 23 other patents. But these four were four of the ones brought in 24 2017 and so that's kind of the context for where we're at.

1 Now, turning to slide 11. Slide 11, and as we all know 2 when you get to the new patents you can change the abstract, but 3 in continuation patents they couldn't change anything else. So 4 the spec's all the same, the summaries all the same, you know, they can try to change the claims according to patent law but the 5 6 abstract is something they could change without creating new 7 matter and so when you look at the abstract it's different from 8 the abstract of the prior seven patents and what does it talk 9 about? It talks about wire management. So in 2017 the new 10 direction, they never tried to patent this before but this was the 11 new direction, was to have the wrist monitor 400, you've got 411, connecting to the SP02 sensor which is 310 and what they 12 13 said is by running that wire 420 perpendicularly down to the 14 SP02 sensor it prevented tangling, it was wire management and 15 this was the smarter better way of doing it.

16 Now again, for 15 years they never tried to patent anything like this, but they did and I'm not saying they weren't entitled to 17 18 do that one way or the other, but flip to page 12. And, by the 19 way, on 11 there's no discussion about some signals are analog 20 and some are digital or ports are the big invention, it was about 21 that wire management concept we just discussed. And when you 22 switch to slide 12, Goldberg shows the exact wire management 23 concept of running a wire from the front face down to an SPO2 24 sensor that's on the finger and the new concept was blown out of

1 the water. Akai shows the same exact thing, they're clearly prior2 art.

3 Now again, one of the things that I mentioned is these 4 patents were never about combinations of A and D signals or ports and I'm not asking the panel to take my word for it. Look 5 6 at the summary of the invention. I'm on slide 13, thank you. 7 Turning the page my colleague reminded me I did not signal a 8 QT, so I'll give you a moment for slide 13. Are you at slide 13? Thank you. And so for slide 13, again, they describe this 9 10 problem. And the problem was wireless transmission of these 11 vitals was known, but boy, the hospitals would have to change 12 all of the equipment. So the idea was an adaptor and if you 13 switch to page 14, it's just more exemplary. I would invite the 14 panel to read the entire summary. I'm not going to go through it. 15 There is nothing in the summary of the invention that talks about 16 even wire management, analog and digital combinations, much 17 less specific sensors that have analog and specific sensors that 18 have digital. There's no discussion of any of that. It's all about 19 this adaptor transfer. And as I said, for 15 years seven patents 20 were all directed to that, that receiver interface. And our expert 21 goes into all of that in his expert report.

If you switch to slide 15. All that we're fighting about now
are ports, analog and digital signals, single or multi-sensor
embodiments, wrist monitor clipped on. When you read the

1 patent, I mean we have got four IPRs and more briefing that we 2 can count, and if you read the patent the sum total of the 3 disclosure is minimal on these points. Why? Because that was 4 not the focus of the invention. But I want to point something else out when you read this. It's what I call the "this or that" 5 6 patent approach. When you start to get into details that don't 7 matter, well the signals can be analog or digital. It can be ports 8 or it can be hard wire. It could be wrist monitor or it could be 9 clipped on. It could be a single sensor or it could be multi-10 sensor. So it's what I call "it could be this or that" and when I see patent owners doing the "this or that" it's because those are 11 12 details that don't matter; right? One skilled in the art would 13 know that you can hard wire or you could port it. One skilled in 14 the art would know you could use analog or digital signals. One skilled in the art knows that if you want to measure one vital 15 16 sign use one sensor and one port. If you want to use multiple 17 vital signs which I think call it (audio interference) in the 18 medical context when you're monitoring certain conditions you 19 might need three to five vital signs being monitored.

The experts all talk about it, the prior art talks about it. So the patents, and I'll give you an example. Say our client's device in 2014 was hard wire. They could have delivered the same claims to you and called them hard wire versus ported and they would claim that was their invention because their patent talks

about it being either ports or hard wire. Just poll (phonetic) the 1 2 options. Make it a list and it is all digital signals and they would 3 have pointed to the snippet here that says it could be analog, 4 digital or both and if our client's device was all digital they would have drafted claims to all digital and then we would have 5 6 been on this chase to try to find prior art that specifically shows these what I would consider basic design details and that's what 7 8 our expert testified to.

9 Slide 16. There's been a lot of discussion in these IPRs 10 about an analog SP02 sensor connecting into a monitoring 11 device, a wrist monitoring device by a port. This patent on slide 12 16 says figures 1 and 2 illustrate a conventional post-oximetry 13 system used for the measurement of blood oxygen and it shows a 14 conventional sensor plugging into a port. The sensor is typically 15 attached to the finger. If you read that first block on the left 16 hand side the sensor has a plug that inserts into a patient cable socket. In this case Mr. Oslan has gone on for pages of 17 18 Declaration telling us why ports have noise, ports are costly, 19 they're too big but there is nothing in the '735 patent that talks 20 about any of those problems. In fact, the '735 patent says that 21 the use of ports on a medical device was known and if you look 22 to the right hand side of slide 16 from the patent again it says the 23 sensor's conventional and now here we are in an IPR arguing 24 about whether an analog SP02 sensor connecting to a port is

somehow a point of novelty when the patent itself describes that
 it is conventional activity.

3 You know, maybe Masimo's response to that would be our claims are more detailed. When you look at claim 20 it requires 4 5 an analog SP02 sensor but it requires maybe a digital 6 temperature sensor and a digital EKG sensor. I would ask the 7 Board to read this patent. There is no disclosure of any 8 embodiment that it talks about an analog, digital or, excuse me, 9 SP02 analog sensor with a digital temperature sensor with a 10 digital EKG sensor. There's no disclosure of that anywhere and 11 I'm not making a 112 argument. I know this panel is not here to consider 112. But the point is all the patent says about analog 12 13 and digital is that the conventional sensors can be analog, digital 14 or a combination of analog and digital. All of the experts that 15 are before you agree that conventional sensors could be analog or 16 digital or both. We all know that one skilled in the art when 17 they're monitoring patients they're going to choose do I want an 18 analog sensor, do I want a digital sensor and again I don't want 19 you to take my word for it. Look at their expert report at 20 paragraphs 110 to 115. He goes into a long description of how 21 one skilled in the art would know about analog sensors, digital 22 sensors, the benefits to one or the other and of course that's 23 right. I mean let's think about it for a second. We have analog 24 signals and digital signals. If we thought analog signals were the

end-all-be-all there would be no digital signals and if we thought
 digital signals were by far the best there would be no analog
 signals. But we live in a world where there are analog and
 digital signals. You have two choices. One skilled in the art
 would know about these choices.

6 When we turn to the concept of multi-parameter monitoring7 and I'm on slide 18 now. I'll give you a moment.

3 JUDGE KINDER: Hi, this is Judge Kinder. You can just
9 pause for a brief second or two, you don't have to give us too
10 much time. We can catch up pretty quick.

MR. TELSCHER: Okay. Thank you. So I want you to 11 compare the disclosure of multi-parameter monitoring in the '735 12 13 patent with that of Goldberg. There's the same limited 14 disclosure in both. It's uncanny. When you look at the '735 15 patent figure 4A on the left, figure 4A shows an SP02 sensor 16 ported into a wrist monitor and you can see the wrist monitor 411. Might be (indiscernible) 450, 410 excuse me. So it's 17 18 ported in. There is no figure in the '735 patent that talks about 19 how you would make three ports on the device shown in figure 20 4A. Goldberg is the same. Goldberg says exactly what the '735 21 patent says, that we can work -- and they describe seven 22 different vital sign sensors in Goldberg and they say at the top of 23 column 5, lines 3 to 8,"Our device will work with one, all or 24 some combination of that."

1 Goldberg has the same general description as the '735 patent does and why is that? It's because one skilled in the art 2 3 would know how to build a device that has a display that fits on 4 your wrist that has at least three -- that's what the claims require at least three ports. But we've got page after page after page of 5 6 Mr. Oslan telling this panel why one skilled in the art would not 7 think to use ports on a wrist monitor device because it would be 8 too costly. There would be noise. There would be size 9 problems. The only problem with Mr. Oslan's arguments is he 10 ignores the '735 patent. It doesn't have any disclosure at all, 11 none about how you would build something with three ports. 12 The only thing it shows is what's in figure 4A.

13 So again, I'm not here to argue Section 112 to this panel. 14 That's for District Court, but I would submit to the panel that the 15 reason why '735 and Goldberg don't get into that level of detail 16 is because by 2002 one skilled in the art knew that they could 17 build a wrist monitor that would wirelessly transmit vitals to a 18 remote computer and you could put at least three sensors ported 19 to it and probably more. But they knew it, but let's say that it 20 was going to be the problem that Mr. Oslan says. Well, where 21 does the '735 patent explain the size, noise and cost issues with 22 this three port wrist monitor? And by the way when you look at 23 the left hand side of figure 4A on slide 18, I mean you can look 24 at that. I mean it's hard to image that you wouldn't have to make

1 that bigger if you were going to put three ports on it. One skilled in the art is going to understand if you want to put three 2 3 ports that it's going to get bigger and you're still going to put it 4 to the wrist just as the '735 patent says. It doesn't show a three port embodiment, it just says in passing you can monitor more 5 6 than one vital sign. I don't even think that it says three. I think 7 that the claims talking about three is not something the patent is 8 even talking about, it's some magic number.

9 JUDGE KINDER: This is Judge Kinder. Really quick10 question.

11

MR. TELSCHER: Yes, sir.

JUDGE KINDER: So I, and I'm thinking of the column in Goldberg that talked about using multiple types of sensors and one was I think pulse ox and then it said it could at least be used with others. Does it contemplate using two at once? At least two different types of sensors at once?

MR. TELCHER: Yes, it does. So column 5, lines 3 to 8, very short passage. It says, and by the way this is column 5. If you read the previous three to four paragraphs of Goldberg starting on column 4 it describes EKG sensors, SP02 sensors, respiratory sensors, all the common vital signs that doctors need to monitor and then when it gets to the top of column 5 it says,

23 "Our invention will work with one, all or any combination24 of them."

1 And that's exactly what really the '735 patent says. The 2 '735 patent gives no more detail than that. Why is it? Because 3 doctors think, let's be clear Masimo and Sotera are not telling doctors what vital signs to monitor. You're a doctor and my 4 5 patient's got diabetes, I know the signals I've got to monitor. If 6 they've got a heart condition I know the signals they've got to monitor. All that Goldberg, Masimo and even our client Sotera 7 8 are doing is delivering a device that allows them to plug in 9 sensors that allow them to monitor the vital signs they need. But 10 Goldberg is explicit that it could be all of them and he lists at 11 least seven and says others, and again this is what doctors need. 12 I mean the invention of the '735 patent wasn't directed to new 13 sensors, it wasn't directed to combinations of sensors. There's 14 no disclosure of any of that. What was the '735 patent directed 15 to? An adaptor that allowed you to wirelessly connect to an 16 adaptor on a remote station so that the existing hospital equipment could be used. Just one second. I'm getting a cite 17 18 here. And also from the '904 patent, Goldberg and it's column 4 there's another citation to what he's given. In column 4, line 50, 19

"The sensors 104 are positioned as to sense physiological
characteristics of the monitored person. In the preferred
embodiment the sensor 104 an be associated with one or more of
the monitored person's blood pressure, pulse, oxygen hemoglobin
saturation, glucose, body temperature, respiration and

1 electrolyte."

So clearly Goldberg in at least two places now
contemplates monitoring multiple signals and again, Your Honor,
any system that would be usable in a hospital would have to
monitor more than one system in a lot of applications. Does that
answer the question?

JUDGE KINDER: Yes, thank you. I know you'll probably
get into more of the size and configuration argument but you
would at least have to admit if it's going to be a wearable device
there probably is a limit though in the number of ports it could
have in the size; right?

12 MR. TELCHER: Of course there would be, Your Honor. 13 You know, and one skilled in the art is going to know what are 14 the size of ports, what are the electronics that it takes to 15 interface and they're going to be able to figure that out. But I 16 want to point something out to you. When you look at figures 13 17 and 14 of the '735 patent which is their multi-port embodiment, 18 Masimo says sensor one, sensor two and then it's got sensor to 19 the nth degree. So Masimo in the '735 patent doesn't try to place 20 a limit on it. They says there could be the nth degree of sensors 21 in figures 13 to 14 and again the reason for it, it goes right to 22 your question. One skilled in the art is going to know that if you 23 get to a certain number of ports that it's going to be too many. 24 But certainly that number of ports is not three which is what the

claims require. Maybe we would have an interesting question if
 we got to eight or nine ports but let's turn to slide 31 when you
 get a chance. I'm going to skip a little bit here to answer your
 question with something different, and I'll assume that you're
 there.

6 So on the right hand side of slide 31 to the very far right is 7 Money. It's labelled at the bottom, it says "Money Exhibit 8 1008." Money was 1994. So remember that Money is 1994 and as of 1994, and we all know electronics get smaller and faster 9 10 over time, as of 1994 we had this unit. It doesn't say whether it's 11 monitored to a wrist or monitored to the patient some other way, 12 but it's 1994 and it's one inch thick and six inches long and three 13 inches wide, and they say roughly that and not more than that 14 and not more than a pound and that's 1994.

15 Now on that same slide go over to Kiani which is the 16 second one. So this is a medical monitoring device in 1999, just five years later, and in 1999 Kiani shows three ports and 17 18 admittedly they're not all sensor ports. But it doesn't matter. 19 The point that you're asking is how many ports can you have on a 20 device and still have it be portable? Have it be small enough? 21 So as of 1999 Kiani shows a device with three ports and when 22 you look at Kiani there's plenty of room for more ports. It's not like Kiani ran out of ports. That's all the ports they needed for 23 24 that invention because it was some kind of an adaptor type patent

1 in the medical field for vital sign monitoring of SP02.

But now look to your right, 1997. By 1997 Akai clearly 2 3 shows a device that can monitor multiple signals with a housing that fits on the wrist by 1997 and then if you look to the far left 4 you've got Goldberg. This is 2001 and by 2001, and all of the 5 6 experts in this case agree that electronics were getting smaller 7 and faster over time. I can cite you to Oslan's declaration which 8 is paragraph 98 of Oslan specifically talks about how electronics have gotten smaller over time. Our expert, Yanulis, also talked 9 10 about how electronics have gotten smaller over time and when 11 you look at what I have on slide 31 we see this kind of 12 progression of miniaturization and one of the things that Masimo 13 said that they tried to claim that we didn't argue that, for 14 example, Money could have been made smaller by 2002, that one 15 skilled in the art wouldn't appreciate it. But I would like to tell 16 the Court that at page 96 of our petition at least we specifically 17 say that alternatively Akai teaches a housing size and shape to 18 secure to the wrist and so when you look at paragraph 294 of 19 Yanulis's declaration a POSITA would have been motivated to 20 modify Money's housing in view of Akai so that the housing 21 would secure to a patient's wrist. Paragraph 54 and 190 of 22 Yanulis's declaration, he talks about describing the natural miniaturization of electronic devices over time. 23

24

So you asked a great question. By 2002 which is the filing

date of this patent we see Money 1994, we see Akai 1997 which 1 2 is already showing wrist mounted with multiple signals. We've 3 got three points on Kiani by 1999 and by 2001 you've got 4 Goldberg saying seven. So as electronics get smaller and faster, we're able to put more ports on. But to answer your question, 5 6 one skilled in the art is readily going to know how big are the 7 ports, how big must my device be, taking in signals I need 8 processing circuitry, I need a controller and I need to wirelessly 9 transmit. I've got to put all of that in a housing, how big can it 10 be? What cannot be disputed is by 2002, the filing date of these 11 patents, three ports would have been simple. Kiani shows three 12 ports in 1999.

13 Just switching back to where I was. And again the one 14 point that I think is really critical here. There is no disclosure in 15 the '735 patent of an embodiment that has three sensors and three 16 ports on a wrist watch. What they say is our wrist watch could 17 accommodate more sensors. You could have as many sensors as 18 you need is what they basically say. Obviously there are limits 19 but we all know that. But I mean the gist of it was, and as I said 20 figures 13 and 14 show sensor to the nth degree. The disclosure 21 in '735 is no different than the disclosure in Goldberg and yet 22 Mr. Oslan says that one skilled in the art would think that you 23 couldn't build one of these with three ports in 2002. Even 24 though there's no disclosure in the '735 patent of that and the

reason I would submit to Your Honors it's not a 112 issue, it's
 because one skilled in the art as of 2002 would have had almost
 no difficulty designing a wrist monitor device that fits on the
 wrist comfortably that would monitor at least three, and as
 Goldberg says up to seven.

6 I think the prosecution history here is also important at 7 page 22. At page 22 the primary reference that was being used 8 by the examiner to reject the claims of the '735 and the others was Amano and Amano was an exercise watch. So it was a 9 10 watch, wasn't a healthcare device and it had a SP02 sensor that 11 would go from the side of the watch -- I'll get you a figure in a 12 second, you don't have to use your imagination here. I will get 13 to the figure -- but it had a sensor connecting into the watch and 14 what's important is the examiner, one of the big arguments on 15 Goldberg which we disagree with, they say Goldberg's limited to 16 household use. Let me be clear. The Patent Office relied on 17 Amano which is not even a medical monitoring device of sorts, 18 it's more of an exercise watch to check your pulse rate or oxygen 19 rate. I think it's pulse rate actually. But Amano was an exercise 20 watch.

So when you turn to slide 23 and slide 23, and it goes kind of to your question, Your Honor, Masimo tried to argue that Amano only shows one port and we're talking about multiple ports and it wouldn't be obvious to add more ports to Amano, and

the examiner said no. Of course it would be obvious. If you
 want to monitor more signals you would just make more
 connections to Amano. So he rejected the multi-parameter
 argument and if you turn to slide 24.

5 So the examiner's rejecting the notion that multi-parameter 6 could be patentable. The examiner's rejecting the notion that 7 Amano is for exercising and Masimo's for hospitals. It all 8 related to monitoring a vital sign. Monitoring vital signs is monitoring vital signs. So how did they get the patent allowed 9 10 over the Amano rejection? Well, in slide 24 what they said is, 11 and it's underlined at the bottom, they had the language the wired 12 connection on figured to extend from the first sensor port along a 13 path substantially perpendicular to the first side of the housing 14 and if you remember from slide 10 which is the figure, all it is it 15 means that when you have the Masimo monitor on your hand 16 you've got a wire that extends down your wrist and essentially 17 hooks to your finger. It was the wire management concept and if 18 you remember when we looked back to the abstract to these new 19 patents that were again, patented 15 years later, they shift their 20 focus to wire management. If you run a wire perpendicularly 21 down your wrist it uses less wire and that's how they got it done 22 and it's because the wire connection configured to extend from 23 the first sensor port along a path substantially perpendicular. 24 First sensor port along a path of the first side, so look at the

language first side. If you look to the left you've got Amano.
 Amano's wire did not extend from the first side. It extended
 from not the side facing the hand but the side that faces away
 from the hand if you can see that. Now it seems -- that seems
 like a very thin way to get a patent allowed but it doesn't matter
 because the prior art shows that in Goldberg and Akai. But that's
 the language they used to get this patent allowed.

8 When you turn to slide 25, the same types of arguments they're trying to make here were rejected by the Patent Office. 9 10 So if you look at slide 25, the first reason they said Amano didn't 11 matter is because -- and you're going to hear this, I've already 12 seen it in their slide deck -- you're going to hear it today from 13 Masimo. We're a hospital and hospitals have all these stringent 14 requirements and the equipment that would be used in a hospital 15 you couldn't take guidance from Amano's wrist monitor or wrist watch that senses the vitals. Patent Office said no. It's 16 17 measuring a vital sign. You're going to hear the same arguments 18 about Goldberg. They're going to argue long and hard that 19 Goldberg is limited to the home environment. Now I will 20 disagree that it's limited to the home environment because even 21 as their expert cites, column 2 of Goldberg says it's to be used 22 also by medical care professionals, healthcare professionals. But 23 even if it were true that Goldberg was limited to the house some 24 way and that medical professionals would not be involved at all,

the Patent Office has already rejected the notion that because it was for vital signs measured in the household it wouldn't be relevant to the design of a system for a hospital and that's not to say the hospital might not get into more complicated electronics but these patents have nothing to do with more complicated electronics. They have to do with basic design features.

7 So if you turn to slide 26. The examiner ultimately allowed 8 -- oh, here's where he rejects it. I'm going to skip that. I want to go to slide 27, excuse me, because my time is running low. If 9 10 you turn to slide 27 he says two things. The prior art does not 11 teach a port in conjunction with two additional ports and he says, 12 and it has to do with that wire configuration, so he allows it 13 under wire configuration and the wire that runs perpendicularly 14 down and then he also allows it because the prior art he said does 15 not show one device that has both an analog and a digital vital 16 sign thing which I don't even understand why having one sensor 17 that's digital and one that's analog would make any difference. A 18 sensor can be analog or digital. It's what the '735 patent says. It 19 could be analog, digital or both. But that's what the examiner 20 found, but the prior art of record refutes both of the examiner's 21 reasons for allowance.

Goldberg, and now I'm on slide 28, Goldberg expressly
shows a wire running perpendicularly down to the cuff. If you
look to the right Money undeniably shows a device that has both

analog and digital signals. So the examiner's reasons for 1 allowance have been completely rebuffed. What is Masimo's 2 3 response going to be on the Money one? I know exactly what it's 4 going to be. They're going to say that Money shows an SP02 5 sensor that's digital and the rest are analog and their idea is to 6 have an SP02 sensor that's analog and the rest digital, and I'm simplifying and the claims get more specific but that's -- there is 7 8 no disclosure in the '735 patent at all of the combination that is 9 an SP02 sensor that is analog and a thermometer and an EKG or 10 something like that that are digital. None. There's no disclosure 11 of that at all.

You might say well, where did they get that combination for these claims from? Our client's product. They drafted claims in 2017 that were intended to read on our client's product and they're now claiming that this combination of analog and digital is patentable. You know, the patent doesn't say anything --

17 JUDGE KINDER: This is Judge Kinder.

18 MR. TELSCHER: Yes, sir.

JUDGE KINDER: A real quick question. For the priority
date time in 2002 what was most -- is it in the record? Do you
have any evidence? What was most common for an SP02 sensor
in that time frame?

MR. TELSCHER: Well first of all, Your Honor, the '735
patent itself says that the SP02 sensor was conventional. So the

analog sensor would have been conventional by their own 1 2 admission. Both experts, all experts, three experts of record 3 agree that analog and digital sensors were common and that's the 4 whole point. One skilled in the art is going to say do I want an analog or a digital? I told you their own expert, Oslan, at 5 6 paragraphs 110 to 115 says specifically that the difference 7 between analog and digital sensors predating this patent were 8 well known in the art and they were. I mean we're talking about 9 analog and digital and Akai and Kiani show analog SP02 sensors. 10 There is no debate that there were both analog and digital 11 sensors and I can give you more cites on that too. It's in both 12 expert reports. There is no debate on this record that prior to the 13 date of this invention there were both analog and digital sensors 14 for any sensor type and our expert expressly says that in his 15 declaration and there's no debate about that. I don't think there's 16 any debate on this record about that.

But to be clear again, the '735 patent never discusses that 17 18 there was this, for example, let's say that Masimo really thought 19 this was inventive. Here's how the patent would rad. The patent 20 would say look, heretofore the art had used digital SP02 sensors 21 and the analog thermometer and EKG sensors. We have realized 22 that there's some synergy if you reverse that. Our idea is to 23 reverse it and we're going to now use an analog SP92 with digital 24 temperature and EKG and that's our invention and then they

1 would explain to you why that produces a synergistic result. But I want to back up just to a point of common sense here. 2 3 When I'm measuring SP02 I can use an analog or a digital. The 4 '735 describes an analog SP02 as conventional. I can use analog 5 or digital, it's my choice. Money shows a digital SP02. The '735 6 talks about a conventional SP02. But I'm measuring oxygen 7 saturation with an SP02 and I'm a doctor. I want to measure 8 temperature. There is no interrelationship between whether I use 9 an analog or digital sensor to measure temperature. It's -- they're 10 independent. There's no relationship. If you read their expert 11 report they keep talking about this unique combination of analog 12 and digital. They don't even explain why it would matter. There 13 is no interrelationship between measuring SP02 and measuring 14 temperature. They're completely different vital sign measuring points. So, and again there's no disclosure of this. They do not 15 16 explain how this combination could be patentable. They just say that it's not shown in the prior art. Their patent doesn't disclose 17 18 it and all the experts agree, including their expert, that analog 19 and digital sensors were known.

I would turn you to slide 29. This goes to your point, kind of at least. Their expert admits that even as a grad student he was teaching both analog and digital circuits which would have been back in the 80s. My background's electrical engineering. I was taught the same thing in the 80s. This is the most basic of

basic and the MPEP actually, and I don't know if I have that cite,
 the MPEP actually has a section directed to the fact that
 switching between these signal types is not patentable. It's in
 our slide deck somewhere. Slide 49.

5 JUDGE KINDER: While you're looking at that, this is 6 Judge Kinder. You have about, in your opening you have about 7 five minutes or so, so you're welcome to cut into your rebuttal 8 time but I just wanted to let you know.

9 MR. TELSCHER: Thank you, Your Honor. So on slide 49 10 it says modification of the signal type is a mere reversal of parts 11 and that's what were talking about here. One skilled in the art 12 certainly by 2002 and well before, if they wanted to use an 13 analog sensor they'd know how to do it. If they wanted to use a 14 digital sensor, they'd know how to do it. You know, you've seen arguments in the record from Masimo about Akai's got a fiber 15 16 optic cable and you couldn't use a fiber optic cable with a wire. 17 The bottom line there are fiber optic cables. There are analog 18 cables that are digital cables. One skilled in the art if they want 19 to use a fiber optic knows how to interface a fiber optic into 20 their monitoring system and if they want to use an analog system 21 they can interface or analog in. One skilled in the art is not 22 going to have any problem with the sensors. The '735 patent 23 describes the sensor as conventional. There is no disclosure in 24 the '735 patent about a particular sensor type being patentable or

a sensor type being analog or digital and that's patentable.
 That's not in there.

3 If you look at slide 50 and that answers your specific 4 question. It's a cite to the record where, you know, our expert says that analog and digital sensors were well known. Our other 5 6 expert, Bergeron, also says the same thing. Oslan does not 7 disagree that analog and digital sensors were both known. Both 8 Goldberg and the '735 patent describe sensors of all types, 9 analog and digital and as we pointed out there's only two types 10 of electrical signals, analog and digital. So if we were to grant 11 patent protection on, you know, somebody has an analog for SP02 or they've got a combination, Masimo could come up with 12 13 five more patents that have different combinations of analog and 14 digital. None of these combinations are described in the '735. The only support for any of these claims would be one statement, 15 the sensors could be analog, digital or mixed and from that one 16 statement they're not creating combinations. So if that's the 17 18 basis for the combination that's in SP02 that is analog and then a 19 digital that's digital, and a EKG that's digital well they can make 20 up any combination they want off of that one sentence and they 21 could have a patent that's directed to these are analog and those 22 are digital or they're all digital or they're all analog and that's, 23 you know, everybody else in the industry has got to try to design 24 around these specific combinations and you might go why

wouldn't the prior art talk about it. It's the same reason they 1 didn't talk about it. The '735 patent doesn't talk about it. 2 3 Goldberg doesn't talk about it because it's a basic design detail. 4 None of these patents were directed to whether you're using analog or digital signals. What was it directed to? An adaptor 5 6 system so that you could connect into existing hospital 7 equipment. How much time do I have left? I'm going to rest 8 unless you have further questions for me.

9 JUDGE COCKS: Mr. Telscher, this is Judge Cocks. I do 10 have a question. You mentioned both sides' experts quite a bit today and you haven't mentioned, I believe Patent Owner had 11 12 expressed that Dr. Yanulis was -- doctor or mister, I don't recall 13 -- had taken some inconsistent positions between District Court 14 and the proceeding here. I'd like to get -- I don't see that you had necessarily addressed that assertion in a reply so I'd like to 15 16 get your take on that and specifically with respect to the claim 17 feature of a tail.

MR. TELSCHER: I'm not aware of any inconsistency on that. I was aware of an inconsistency, Your Honor, that related to claim construction and we did address that by saying we had different claim construction in the Federal Court and we were saying claim construction didn't matter here. So we disagree that there was an inconsistency on that. As to the tail, the only thing I can say about a tail is we did not know what a tail meant and I

don't know that I've seen Masimo explain what tail means. We
think a tail just means a wire. So if there's a specific
inconsistency I'm happy to address it but on any of the material
points I'm not aware of an inconsistency. But if Masimo reminds
us all of what that is I'm happy to address it in my rebuttal.

JUDGE COCKS: Okay. Thank you. So just to be clear,
there is no -- in your view there's no inconsistency. Tail can
mean a wire. I think I just heard you say that and I believe you
expressed that in your petition.

10 MR. TELSCHER: That's our position. We think a tail's a 11 wire and I don't really know how that would compare because all we're talking about -- so the tail is the part, so imagine the SP02 12 13 sensor that's on your finger and that wire, that's the tail that 14 comes and connects it to the wrist monitor. It's a wire so I don't 15 know that there's a big debate on whether a tail or a wire going 16 from that SP02 sensor to the wrist monitor is a patentable 17 distinction. So I'm not aware of that being a big issue but if Masimo corrects me on that, I'll be happy to address it in my 18 19 rebuttal.

20 JUDGE COCKS: All right. Thank you.

21 JUDGE KINDER: This is Judge Kinder.

22 MR. TELSCHER: Thank you.

JUDGE KINDER: I guess I have one question and it's the
 construction of "sensor port" or "sensor communications port"

and I believe we invited the parties to address this, and I
appreciate that they did. It was your position that really no
construction was needed and I'm trying to figure out essentially
why under the proposed combinations we would need to construe
"sensor port" because whether or not Goldberg is hard-wired or
it could be a port, don't your secondary references specifically
go to the port being removable?

8 MR. TELSCHER: Your Honor, that's been our position all 9 along. The only reason claim construction got opened up as best 10 I can tell is in the Institution decision you said if either party's 11 saying there's a special meaning to the sensor port you should define it. Then Masimo in their Patent Owner response 12 13 following Institution said we don't think there's special meaning. 14 It's plain and ordinary meaning but then they went on to define it 15 and then I don't even know that we should have done it, but then 16 we started talking with them about -- I mean if you go look at 17 slide 13 of their expert's report where they cite the dictionary 18 definitions technically a port does not have to be removed. I 19 think in the more normal sense of a port it's removable but even 20 if you look at slide 15 of their deck, the dictionary definitions 21 don't require removable. It does not matter. We've got prior art 22 all over the place here that shows ports that are removable so 23 you do not need to reach that issue.

24

JUDGE KINDER: This is Judge Kinder. The issue would

be relevant if you only had Goldberg alone though. right?
MR. TELSCHER: No, I do not agree with that respectfully.
Our position has been Goldberg specifically says that the means
for connecting the sensor to the wrist monitor are known to those
skilled in the art and there's really only two to do it, hard wire or
ports.

7

JUDGE KINDER: Okay.

8 MR. TELSCHER: So we believe that Goldberg does teach 9 it but Kiani clearly shows it and again I'll remind the Court that 10 the '735 patent itself in figure 1 lends support to the prior art. 11 So I don't know that there could be anything more basic than the 12 use of ports to connect sensors to monitoring equipment in 13 hospitals.

JUDGE KINDER: Okay. So but your position is Goldberg
is not used alone. You always use it with Kiani and Kiani, I
believe its element 550 shows an actual sensor port under either
party's definition?

18 MR. TELSCHER: It does three ports, not just one: three. 19 One sensor port, excuse me, and then two other ports which we 20 could debate on what they are but they're ports.

21

JUDGE KINDER: Okay. Thank you.

MR. TELSCHER: So not only does Kiani show a sensor port but it shows that from a size perspective you could have three ports.
1 JUDGE KINDER: Thank you.

2 MR. TELSCHER: Thank you, Your Honor.

JUDGE KINDER: All right. I think that's it. You have about ten minutes or so for rebuttal, and we'll go ahead and transition to the Patent Owner's opening case and Mr. Swaroop, as soon as you're ready you can go ahead and we'll start your time whenever you're ready. Thank you.

8 MS. SWAROOP: Thank you, Your Honor. This is Sheila Swaroop, counsel for Patent Owner Masimo Corporation. As 9 10 Your Honors may know, Masimo is an innovator in patient 11 monitoring and in fact has been innovating for many years and 12 that's really important because the patents here claim priority 13 back to 2002 during a time in which hospital grade monitoring of 14 patients was done with large bedside monitors, not the wearable 15 devices claimed in the patents at issue or what you may all be 16 familiar with today.

17 Now we heard a lot from Petitioner's counsel about the 18 disclosure of the Masimo patents but that's not what this 19 proceeding is about. The deficiency of the disclosure of 20 Masimo's patents is not at issue. What is at issue is whether 21 Petitioner can show by a preponderance of the evidence that the 22 prior art that it has set forth in this proceeding demonstrates 23 obviousness of the challenged claims. In an attempt to support 24 that obviousness challenge we believe that Petitioner Sotera has

greatly oversimplified the claim language and uses hindsight to
 combine the prior art.

3 The record is also clear that Sotera has made numerous 4 shifts in its arguments from what they had originally presented in the Petition and I do have a couple of comments on Sotera's 5 6 slides that I wanted to address before I go to my slide deck. I 7 also wanted to answer Judge Cock's question about the tail 8 limitation and Your Honor is correct. Dr. Yanulis did take inconsistent positions with regard to the tail limitation that is in 9 10 our Patent Owner response, I believe it's around page 22 and the 11 inconsistency was that in District Court Dr. Yanulis had opined 12 that he had no idea what a tail meant. But in this proceeding he 13 did offer opinions about what a tail meant and in his mind he 14 differentiated it from a cable or a wire. So from a auxiliary 15 cable, I believe was the distinction here.

16 JUDGE KINDER: This is Judge Kinder. Let me ask you a17 question I guess point blank then. What is a tail if not a wire?

MS. SWAROOP: So, Your Honor, the specification of the patents describe the tail as coming from the sensor directly and so I think the patent specifically, and I can find this the cite in the specification.

JUDGE KINDER: I think I've read that part of the spec and
it just says, you know, how it's directed out of the sensor -MS. SWAROOP: Yes.

JUDGE KINDER: -- so it sounds like it could just be a
 normal wire, right?

MS. SWAROOP: It's differentiated from the auxiliary cable 420 at column 5, lines 43 through 45 of the specification and it explains that the sensor 310 can have a tail that connects directly to the wrist worn module instead of the auxiliary cable connector which would have a connector to the wrist worn module (indiscernible) direct connection.

JUDGE KINDER: Okay. Thank you.

10 MS. SWAROOP: Your Honor, if we could go to slide 18 of 11 Sotera's presentation. This is where Petitioner's counsel had a 12 side-by-side comparison of the Masimo patent and Goldberg. 13 Let me know when you're there.

14 JUDGE KINDER: This is Judge Kinder. You can presume15 after a quick pause, you can go ahead and go on. We'll find it.

16 MS. SWAROOP: Okay. Thank you. And what we heard 17 from Petitioner was that the disclosure in the Masimo patent and 18 the disclosure in Goldberg was virtually identical. I think we 19 heard him say over and over again the disclosures are the same. 20 But there's a huge difference between the Masimo patents and the 21 Goldberg disclosure and the issue is that Goldberg does not 22 disclose a port and that is undisputed. Their own expert, Dr. 23 Yanulis in Exhibit 1003 paragraph 72 stated that, "Goldberg does 24 not expressly teach a port."

⁹

But I think that's a pretty big difference between Goldberg
 and the Masimo patents here.

JUDGE KINDER: This is Judge Kinder. Why is that relevant? Presume we agree with you that Goldberg is hardwired or as their expert talked about it, you know, presume that's relevant. They explicitly rely upon Kiani to teach a port, so why is it relevant, unless for some reason the hard-wire connection wouldn't be compatible with a port of Kiani?

9 MS. SWAROOP: It's relevant, Your Honor, because their 10 first argument was that Goldberg somehow implicitly teaches a 11 port and we disagree with that, and if they can't show that Goldberg teaches a port then they do need to go to Kiani and 12 13 show that there's a motivation to combine Goldberg which is a 14 device that a user wears, and we'll go into the context of 15 Goldberg, with Kiani which is not a wearable device. Kiani is a 16 handheld embodiment and their motivation for combining 17 Goldberg with Kiani falls apart and we have explained that --

18

JUDGE KINDER: Okay.

19

MS. SWAROOP: -- and with Mr. Oslan.

JUDGE KINDER: So, this is Judge Kinder again and I think, you know, based upon what the Supreme Court said we limit petitions pretty strictly to what they claim. There's no grounds with Goldberg alone, absent Kiani, so that's kind of the point I'm making. I don't think we're going to look at Goldberg

alone, we're going to look at the combination because that is the
 grounds they put forth. I know they did make arguments that
 Goldberg alone would be sufficient but their actual grounds have
 Kiani so I think that is where we're at.

MS. SWAROOP: And certainly we believe that they have 5 not established sufficient motivation to combine Goldberg with 6 7 Kiani and again we heard a lot of arguments about ports and 8 (indiscernible) and ports were known, but this obviousness combination was very specific with regard to the ports and in 9 10 particular the second sensor port allegedly in Goldberg being the 11 blood pressure sensor and whether that in fact is a port -- there is a port there whether there'd be a motivation to include a port 12 13 there. That's a very specific argument that we didn't hear 14 anything from Petitioner's counsel about, but that is a critical 15 part of their obviousness case which we think they have failed on 16 as well. And I will address that as well.

17 I did want to also briefly address Petitioner's counsel's 18 comments on the prosecution history and we heard a lot again about the prosecution history and if we go to slide 27 of 19 20 Petitioner's deck they have excerpted and selectively highlighted 21 the examiner's statements for allowance and you heard from 22 Petitioner's counsel that it was the positioning of the port and the 23 combination of signals that the examiner relied on. But if you 24 look at the unhighlighted portion and you look at what the

examiner actually said it was clear that the examiner was talking 1 2 about the lack of teaching in the prior art, not only with regard to 3 positioning of the port and in conjunction with these other 4 features but also expressly relied on the fact that it was that in combination with the other claim features and that's the third line 5 6 that was unhighlighted from Petitioner's slide deck. So I think 7 it's important to understand that the statements for allowance did 8 not rely on one point of novelty or one particular feature, it was 9 a combination of features recited in the claim and it's a 10 combination of features that needs to be analyzed here in 11 assessing whether Sotera has met its burden.

And then finally if Your Honors could turn to slide 31 of 12 13 Petitioner's deck, this is where Petitioner has included images of 14 some of the key pieces of prior art across the four IPRs and I 15 think this is a good slide because it allows us to really 16 understand the deficiencies in Petitioner's obviousness 17 challenges here. So on the left we have Goldberg and as we have 18 discussed and I think we all agree now, there is no showing of ports in Goldberg. We certainly have put evidence forth from 19 20 our expert, Mr. Oslan, that there is no port shown at all for the 21 blood pressure cuff. The context for Goldberg is home use, not 22 by clinicians and Petitioner's counsel has relied very heavily on 23 its figure 2 schematic of Goldberg to imply port and to imply 24 that there is a port even in the blood pressure sensor cuff

configuration, when in the briefing themselves in their reply at
 page 7 they admitted that Goldberg lacks details. Then we turn
 to Kiani which is shown here in figure 5 which is --

JUDGE KINDER: I'm sorry to interrupt. This is Judge Kinder again. I think your expert addressed this a little bit, but what if not a port or not hard-wired, what other options would there be for that connection in Goldberg?

8 MS. SWAROOP: Well, it's not clear that there would be a -9 - Your Honor is asking about the blood pressure sensor?

10 JUDGE KINDER: Not necessarily 104 but all of the port, 11 all of the SP02 sensors in Goldberg, the wire running in, what 12 would it be if not a port or not hard wired? Are there any other 13 options?

14 MS. SWAROOP: So, Your Honor, with regard to that 15 sensor that's running from the monitor to the sensor, I believe 16 one expert talked about it, the hard-wired versus the ported 17 connection. I think you're right on that. But 104B which is the 18 blood pressure cuff sensor is the one that Sotera also needs to 19 show a port for and we don't believe there's any port shown in 20 104B or any motivation to add a port there and that is the second 21 sensor port that they relied on for their obviousness combination 22 here.

JUDGE KINDER: Okay. I think I understand you have
 separate arguments for 104B because of the positioning on the

rear and the structure would be somewhat impacted. But I guess
 my question was broader and, you know, looking at the Supreme
 Court and the case law it looks like we have one of two options
 here essentially, is that right? It's either a hard-wired connection
 or a ported connection.

6

MS. SWAROOP: Well --

7 JUDGE KINDER: It's part of their argument, right?

8 MS. SWAROOP: Well, I think if you look at it and I think 9 it's in their slides Goldberg also discloses a wireless connection

10 as well. So it's not necessarily just hard-wire or ported,

Goldberg itself describes wireless and I can point you to the citeand that I actually believe it's in Petitioner's slides here.

JUDGE KINDER: I agree with you and I think I remember that part but, you know, looking at the SP02 sensor that has the wire running into the device, that particular connection is either going to be hard-wired or ported. is that right?

MS. SWAROOP: Well again, I think that there's also -- it's
contemplated a wireless as well. There's a disclosure I think it's
column 4, lines 27 to 29 of a wireless configuration.

20

JUDGE KINDER: But as we --

21 MS. SWAROOP: So I think that's another option.

JUDGE KINDER: Yes, I agree with you. But in figure 2 it
actually shows a wire so I don't think that would be wireless
showing a wire.

1 MS. SWAROOP: That's correct, Your Honor, and --

JUDGE KINDER: Okay. Thank you. 2

3 MS. SWAROOP: -- so it would be, and I think if I, and as I think our expert explained, it would be hard wired or ported in 4 5 that particular sensor, but again I think it's important to 6 remember that all of the claims here require multiple sensor 7 ports and that Sotera has explicitly relied upon the blood 8 pressure cuff sensor 104B to be the second sensor port 9 configuration and there is no port in that 104B and our expert 10 explained that we would not be motivated to include a port there.

11

JUDGE KINDER: Understood.

12 MS. SWAROOP: So I think that's an important part --13 thank you, Your Honor. So we're at Sotera's slide 31 and we're 14 looking at Kiani and as we explained, again I think we heard 15 Sotera tried to combine the Money reference on the port on the 16 left and somehow with Kiani and indicate well, Kiani shows, you 17 know, three ports. So again I think it's important to remember 18 Kiani only shows a single sensor in per port and Kiani is not a 19 wearable, Kiani is a handheld universal pulse oximeter and Kiani 20 is replete with references to the fact that it's handheld throughout 21 that disclosure.

22 Then we turn to Akai which is the third figure here on slide 23 31 and this reference is primarily being used for the '108 patent IPR which is the 912 proceeding and here Sotera has excerpted 24

1 just a single figure from Akai but is relying upon multiple 2 embodiments for its obviousness challenge and I think what's 3 important to remember about Akai is that the structure that's 4 shown between the finger sensor 111 and the wrist portion 113 is actually an optical fiber here, not an electrical wire and Sotera 5 6 has to combine this embodiment with other embodiments that 7 have internal sensors, take the internal sensors and make them 8 external sensors, add a strap and then somehow make an 9 argument that there is some sort of electrical receiving the 10 signal. So we certainly think the Akai grounds are deficient for 11 missing elements and for deficient motivations to combine.

And then finally we get to the Money reference which is 12 13 the fourth figure here and as we argued in our Patent Owner 14 response and with our expert, Money is a very large device. The 15 dimension I think we mentioned three inches by six inches by 16 one inch which, if Your Honors have your smart phones with 17 you, if you can imagine three of those on your arm and you can 18 imagine why that would not be wrist worn. I think some of 19 Petitioner's slides suggest that it would be wrist worn but I 20 believe we heard from Petitioner's counsel expressly that Money 21 is not mounted to the wrist and we certainly agree with that.

JUDGE KINDER: This is Judge Kinder. Really quick. Do
all the claims actually require wrist-worn? I think some of the
claims were body-worn.

1 MS. SWAROOP: They're either wrist-worn or mounted to 2 the lower arm of the patient but I can confirm that. I believe 3 that's correct.

4

JUDGE KINDER: Okay.

5 MS. SWAROOP: I don't think it's body-worn, but I can 6 check that, Your Honor, yes.

JUDGE KINDER: So obviously we're going to give weight
to every limitation in the claim, but I guess I'm kind of
struggling with this. I look at the dimensions and I kind of
mapped it out on a piece of paper how long it would be, six
inches is pretty big, but it does say in the abstract of Money it's
wearable, right, on the body? So that's where I'm kind of hung
up is --

14

MS. SWAROOP: I think it --

JUDGE KINDER: -- is there anything, you know, as of
2002 that says a big bulky device couldn't be worn on the body
or is it just pragmatics that somebody wouldn't do it because the
cost benefit kind of analysis that it just doesn't make sense?

MS. SWAROOP: Yes. I'm not sure if there's anything specific saying a product of that size couldn't be worn. I think our expert, Mr. Oslan, explained that those dimensions would be very difficult for patients particularly in a clinical setting to bear the weight of something like that up to a pound and again, if Your Honors have a smart phone imagine three of those, you

know, being strapped to your wrist or lower arm and kind of the
 difficulties associated with that. But I think we also again just
 heard from Petitioner's counsel that Money is not mounted on the
 wrist.

5

JUDGE KINDER: So to clarify --

6

MS. SWAROOP: There's no disclosure.

JUDGE KINDER: This is Judge Kinder again. So the
abstract of Money where it talks about being wearable, is it your
position that that only refers to a belt-type of wearing?

MS. SWAROOP: It says it's wearable but it doesn't specify where. So it could be a belt and I think in fact Petitioner introduced a new exhibit on Reply. I believe it's the Hutcheson reference, Exhibit 1043, showing a blood pressure monitor that's worn using a belt by a patient. So certainly the use of belts or patient monitors was disclosed and is part of the record based on the new exhibits Petitioner submitted in reply.

JUDGE KINDER: And I think Petitioner also argued that it
also wouldn't make a lot of sense for patients that wear hospital
gowns to wear a belt wearable device in most circumstances. So
what's your response to that?

MS. SWAROOP: Again, I think -- sure, and I think again the Hutcheson reference, again that's Exhibit 1043 I believe is in the patient context and there's a belt that's disclosed in Hutcheson for the blood pressure monitor there. So that's

certainly an example in the patient context of the belt being
 used.

JUDGE KINDER: All right. Thank you. We'll take a lookat that.

MS. SWAROOP: And then the last point I wanted to make 5 6 with regard to Money is that Money does have a different signal 7 configuration from what's recited in the claims, namely that the 8 Money pulse oximeter pump transducer has a digital signal as opposed to the analog signal that's recited in the challenged 9 10 claims and for the Money combination, Sotera engages in some very significant hindsight modification to try to justify a 11 12 modification of the Money reference and again we don't think it's 13 supported by the record.

JUDGE KINDER: This is Judge Kinder again, and I
understand that, you know, looking at your claims and they're
very specific and I believe that it's the pulse-ox has to be digital,
is that correct?

MS. SWAROOP: No. The pulse-ox has to be analog.
JUDGE KINDER: Okay. I apologize. And then Money is
the opposite though, I apologize. So Money is actually digital.
So is it just the limitation you're relying upon or is there any
other significance of this particular configuration that provides
an advantage or any kind of benefit that you have on the record?
MS. SWAROOP: The configuration of having the pulse

1 oximeter be analog and the other sensors to be digital? JUDGE KINDER: Correct. Is there anything in the record 2 3 that would show a particular advantage or, you know, Petitioner's 4 position? Is this is just a random-pick kind of a generic or 5 claimed basically to cover their product? And I'm just wondering 6 if there's anything you have besides that to support that particular configuration? But it's not necessarily in the patent 7 8 itself of what the advantages would be, but it does say you can use analog or digital for every sensor. So I'm just wondering is 9 10 there anything in the record from your expert that kind of opines 11 on this particular configuration and, you know, why it would have a particular advantage? 12

13 MS. SWAROOP: I'll try and track that down for you in 14 maybe during my rebuttal section but I do believe there was 15 deposition testimony as to why analog data may be appropriate 16 for certain sensors and digital data appropriate for other sensors. 17 I believe that Dr. Yanulis, Petitioner's expert, would have asked 18 about that and I can track down that specific cite for you. But I 19 believe that was at his deposition testimony talked about maybe 20 some considerations as to when analog data might be appropriate 21 and when digital data may be more desirable.

JUDGE KINDER: Okay. And this is Judge Kinder again.
If my question is off base, I mean if you legally think it's an
irrelevant question I mean feel free to tell me that as well

because it is claimed as it's claimed and, you know, if your
position is that well, that's just how it's claimed and they have
the burden I understand that as well. But, you know, I think if
there was a particular configuration and it showed some
particular advantage, I think that might help you, but maybe not
legally.

7 MS. SWAROOP: Certainly, Your Honor, and we can track 8 that down. But as I mentioned when I started, you know, we are looking at the claims here as issued. The deficiency of the 9 10 disclosure is not at issue. What Sotera needs to show here is that 11 prior art would render our claims obvious so, you know, the fact that they think it's a "this or that" limitation or, you know, or 12 13 criticizing how we have chosen to claim these is somewhat 14 irrelevant to the issues that we are expecting today.

15 JUDGE KINDER: This is Judge Kinder again. I guess in 16 line with that last question I just want to clarify I guess for the 17 record that there were no -- there was no evidence of objective 18 indicia for nonobviousness in the record from Patent Owner?

MS. SWAROOP: That's correct, Your Honor. We did notpresent any objective indicia.

21

JUDGE KINDER: Okay. Thank you.

MS. SWAROOP: All right. And I know we have (indiscernible) clarified quite a bit. I'd like to switch to our slides and if we could start with slide 4, and on slide 4 really

1 what we have here is an explanation of the conventional patient 2 monitoring that was in place at the time of the priority date here 3 of these challenged patents and with conventional patient monitoring you have a large bedside monitor. The patient had to 4 5 be tethered to that monitor and there were again wires for the 6 separate physiological parameters that were being monitored. So 7 SP02 blood oxygen saturation, blood pressure, EKG, and so 8 when a patient needed to get up to move to use the restroom, to 9 walk around, that required again connection and disconnection of 10 cables and was very awkward and difficult for the patient.

And so as you can see on slide 5, the claim solution which I 11 12 talked about at the beginning was to really address the challenge 13 of providing hospital grade portable patient monitoring and the 14 claim solution is what we have set forth here at slide 5 which 15 again is the arm or wrist wearable portable patient monitor, 16 multiple sensor port strap and then again a wireless transmitter 17 and some of our slides kind of recite these key features across 18 the independent claims and then at slide 8 we have some of the 19 additional claim features here.

20 So one of them again is that the sensor port must 21 electrically receive or electrically convey a signal from a pulse 22 oximetry sensor and you can see at slide 8 where that limitation 23 is recited in across the four IPRs. We do have the analog digital 24 signal configuration limitations that Petitioner's counsel talked

about and then there are some of the claims that specify
 particular signals from particular sensors. So the first sensor
 being the pulse ox sensor, for example, or that one sensor
 expressly being a blood pressure sensor.

5 JUDGE KINDER: This is Judge Kinder. I just want to 6 thank your team for these slides. They're very helpful in 7 showing how all the issues overlap so we appreciate that.

8 MS. SWAROOP: Thanks. Your Honor, if we could go to 9 slide 11 I wanted to also address claim construction and the term 10 sensor port or sensor communication port and at slide 11 you can 11 see what the two competing proposals are. So we have more of a 12 connector based construction so it's a connector that mates with a 13 compatible connector from a sensor. Sotera differs from ours, 14 most significantly on including the concept of permanency, a 15 permanent floor movable input-output interface for a sensor.

16 JUDGE KINDER: This is Judge Kinder again. Under your
17 proposed construction, does Kiani have at least one sensor port?

MS. SWAROOP: Kiani would have a single sensor input
port under our construction, yes, Your Honor.

20

JUDGE KINDER: Okay. Thank you.

MS. SWAROOP: And, you know, we do believe that our construction, our connector based construction, is consistent with how the patents describe a sensor port. So if you look at slide 12, we have figure 3 here, and we have highlighted in yellow

what the specification is calling out as item 362. Again, I'm
 showing a connector that's mating with a compatible connector
 from a sensor.

At slide 13 we have figure 4A which again is showing the wrist worn module showing the finger sensor and then it's showing the auxiliary cable with its own connector at the end near the wrist worn part and that connector from the sensor is then mating with the module connector on the wrist worn portion. So again, another example of the sort of connector based construction and the mating of the two parts.

11 JUDGE KINDER: This is Judge Kinder. I believe 12 Petitioner had one counter argument about claim differentiation 13 and I think it was in the '912 IPR claim 6 of that proceeding had 14 a claim limitation that actually said the sensor port was 15 removable or similar type of limitation and their point was well, 16 you have to infer then that the independent claim would be 17 broader than that and cover both removable and hard wired. 18 What was your response on that?

MS. SWAROOP: Yes, Your Honor, and I said that we have slide 27. I think looking at both slide 27 and perhaps also slide 13, I think would help address that point. And so at slide 27, we have dependent claims 5 and 6 that Sotera is relying on for their claim differentiation argument. And we don't think that that's quite the right way to look at this and that's because claims 5 and

1 6 don't simply add the concept of removability. They have an 2 additional feature of the cable. So, in claim 1 you have the idea 3 that sensor port and then a connection to the housing on the wrist worn portion. But what claim 5 additionally adds is that there is 4 5 a cable that's providing that wired connection and then claim 6 is 6 explaining that that cable is removably coupled to the housing 7 via the sensor port. And I think this goes back to the tail 8 discussion that we had earlier. So Your Honors might be 9 wondering well, if it's not a cable what else could it be and the 10 spec actually contemplates an alternative structure to the cable, which is the tail concept. And again that's at, I believe it's 11 12 column 5, lines 43 to 45, which explains that the sensor could 13 have a tail that connects directly to the wrist-worn module 14 instead of the auxiliary cable. And I think maybe that that's the 15 way to understand that is if you go back to our slide 13 where we 16 have that figure from the patent.

17 So here in slide 13 you can see the sensor on the finger and 18 then you can see the cable 420 that's going up and it's got it's own little connector that's plugging into the wrist worn module. 19 20 But that's the auxiliary cable configuration, but the alternative is 21 that the sensor itself, the portion down by the finger could just 22 have its own tail that's connecting directly to the wrist worn 23 module. So that's the distinction that claims 5 and 6 are drawing 24 is that they are claiming the cable and then later step that the

cable is removable as opposed to a different sort of removable
 connection.

JUDGE KINDER: This is Judge Kinder. Then would a tail
be hard-wired into the module essentially connector?

5 MS. SWAROOP: I don't think the tail would still connect 6 to the wrist worn module. It may be hard-wired at the sensor-7 end potentially.

8 JUDGE KINDER: I guess I'm just trying to figure out what 9 the difference is of a tail then as far as the connections?

10 MS. SWAROOP: That it doesn't have a separate connector, 11 but you see the connector piece on figure 4A, the kind of 12 hourglass shaped piece there that's we called it out connector 13 from sensor?

14

JUDGE KINDER: Yes, I do. Thank you.

MS. SWAROOP: And that's plugging into the wrist-worn
module. So in the alternative, the tail configuration, you
wouldn't have that connector piece, the tail would just be
directly -- connected directly to the wrist worn module instead of
having the auxiliary cable 420 (audio interference) connector.

JUDGE KINDER: So the tail embodiment would be hard-wired?

MS. SWAROOP: I'm not sure the spec says that it would
be hard wired on that point. So no, it would not be hard wired.
It would also -- it would connect into the module connector. It

just wouldn't have the sensor connector piece there, the piece
 that we've called out as connector from sensor.

JUDGE KINDER: Yes, I understand. I guess I'm having a
hard time envisioning how it would actually connect it.

5 MS. SWAROOP: Well, it would have its own connector 6 that would attach.

7

JUDGE KINDER: Okay. Thank you.

MS. SWAROOP: And I think maybe we're focusing on the wrong end here in that the -- in what we're seeing in figure 4A is that you've got a connector on your finger area and then with the cable; right? And with the tail configuration, the tail would come directly from the sensor and then be plugged into the wrist worn module. Does that make sense?

14

JUDGE KINDER: Yes. Thank you.

15 MS. SWAROOP: Great. Unless Your Honors have any 16 other questions on claim construction I was going to move to the 17 Goldberg ground. Right. Okay. So the Goldberg grounds start 18 at slide 47 of our presentation and if we go actually to slide 49 19 we kind of have our overview of our challenges to Goldberg. So 20 as we've discussed many times now, you know, it is our position 21 I think we're now maybe all in agreement that Goldberg did not 22 disclose any sensor port. We also believe that a person of skill 23 would not have been motivated to modify Goldberg in view of 24 Kiani to add three sensor ports and then specifically with regard

to the blood pressure cuff and housing which is the second
 sensor port limitation, we don't think that Sotera has
 demonstrated either a motivation to add a port there or any kind
 of reasonable expectation of success.

And if we go to slide 52, this is where we have our 5 6 arguments with regard to the lack of motivation to combine 7 Goldberg and Kiani and again the petition really focused on 8 clinician's demands and expectations to have an adaptable patient 9 monitor and the problem with that motivation is that it's the 10 wrong context. The motivation in Sotera's petition was that 11 clinicians were demanding something but we think it's clear from 12 the record that Goldberg's device is really intended for personal 13 use by the patient or maybe the monitor person and also we had 14 pointed in our Patent Owner response to an express opinion from 15 Sotera's original expert, Dr. Yanulis, who explained that the best 16 way to improve patient comfort would be minimize the size of 17 the wearable device and the number of sensors attached to the 18 patient and that was at his declaration, Exhibit 1003, paragraph 19 29.

And so on slide 53, we've included some figures from Goldberg, which we believe really show the context for Goldberg and that it's meant for personal use, not for monitoring or use by a clinician as the end user and that's based on the displays, the reassurances to the end user everything is just fine followed by

explanation points. The spec explains that it's carried by the
 monitor person. The spec talks about the display having news,
 sports or entertainment, again suggesting that this is for personal
 use, not for a clinician.

5 We also heard from Sotera, and they have briefed that well, 6 even if the context for Goldberg is somehow an end user rather 7 than a clinician that, you know, the individual users would be 8 very familiar with ports and that wouldn't have been an issue for 9 them to navigate multiple ports with multiple parameters back in 10 the 2002 time frame and we don't think that that opinion is really supported by any evidence. I think their new expert, Dr. 11 12 Bergeron, didn't cite any evidence for that and we put for the 13 evidence and in particular Exhibit 2024 is one of the opinions 14 from our expert, Mr. Oslan, and we included that in our slide 54 15 here where we had specific evidence of the difficulties that 16 nurses and the ICU have with navigating and numerous cables on 17 a monitor of a patient and so we think the record then has 18 specific evidence claiming the complexity of monitoring multiple 19 parameters of cables over a patient's body and so we do think 20 that also goes against the motivations here.

And then I also wanted to address at slide 55 we have a diagram, and really slide 56 is our -- we set forth our arguments, and we think this is really important for the Goldberg grounds in the failure to show any kind of sensor port in the blood pressure

1 cuff or any motivation to add a port there and and again, the 2 generic arguments about ports are known, you can add a port 3 here you can add a port there, we need to look at the specific 4 arguments in the petition and what did Sotera argue here? And 5 what they argued here was the blood pressure cuff sensor of 6 Goldberg and that is either somehow implicitly add a port or it 7 would be obvious to add a port and our expert gave a lot of detail 8 as to why that simply is not the case.

9 First of all, there again no port shown in the blood pressure 10 cuff sensor 104B of Goldberg. Our expert explained in great 11 detail that the pressure sensor is normally located in the housing 12 of Goldberg, not in the cuff around the side and so that would 13 mean there wouldn't even need to be a port.

14JUDGE KINDER: This is Judge Kinder. Real quick. I15mean the patent itself, and I think Petitioner cited this, says that16104B is the sensor itself. So I understand the box diagram that17your expert was relying upon shows it internal, but the18configuration of figure 2 shows it essentially as part of the wrap19around. Did your expert present anything that counters that20particular position that it couldn't be in the cuff that's external?

MS. SWAROOP: So our expert looked for and tried to find situations with a sensor, a sensor port being in the cuff and was not able to locate any such sensor port and again I think the important thing to remember is not, "where is the sensor?", but

1 "is there a sensor port here?" and so again the port, sensor port is 2 the claim limitation and as we pointed out there is no port 3 shown. Sotera's expert was unable to really identify any, our 4 expert couldn't find any and explained that if there were to be a 5 sensor port there would have to be a number of kind of particular 6 structural requirements for that sensor port and he said that at, I 7 believe it was paragraph 89 of his declaration Exhibit 2010. 8 That was Mr. Oslan's declaration discussing that issue. So and that's in the '735 proceeding the 954 IPR and I believe at our 9 10 slide 56. And we have a citation from his paragraph 88 where 11 Mr. Oslan again confirmed that the combination that Sotera's 12 proposing would require a person of skill to design and develop 13 and new sensor port not shown anywhere in Petitioner's 14 references to address these issues.

15 If we go to slide 57. Dr. Yanulis had indicated well, and I 16 don't see a sensor port there but, you know, I think it would 17 make sense to add one that would allow for removal and 18 replacement of the sensor and provide a secure connection. So 19 again, that's removable replacement, the general generic sort of 20 motivation but there's again our expert looked for this and there's 21 no evidence of any wrist worn blood pressure monitors either 22 before or after the 2002 priority date that are designed to be user removable from the housing. So this idea that it would be 23 24 obvious to add a port to allow for easy removal is not something

that exists or was part of the record here, and we set forth those
arguments and our expert's response to that at our slide 57. I
have just a few minutes left here of my 45 so if Your Honors
have no further questions on the Goldberg grounds, I was going
to move to the Money reference.

JUDGE KINDER: That'd be great. Thank you. And I
think you're right, I think you have about five minutes left of
your opening time.

9 MS. SWAROOP: Okay. Great. So if we can go to slide 10 65. This is where we have set forth all of the different grounds 11 with Money as the primary reference across all of the different IPRs and we have done this for the Goldberg grounds and the 12 13 Akai grounds as well so Your Honors have a reference here to 14 consult. But what's important to understand here is that all of 15 the Money grounds require a combination with Akai and we 16 think that combination is fundamentally flawed and based on 17 hindsight reconstruction, and really what Petitioner is saying to 18 justify to motivate the combination of Money with Akai is that Money supposedly had a pulse oximetry cuff transducer that was 19 20 bulky and uncomfortable and that needed to be replaced with 21 something that was not invasive and light based and that was the 22 fundamental premise motivating the motivation to combine Money with Akai. 23

24

But there's some serious problems with that and if we go to

slide 68 we asked Dr. Yanulis, their first expert, can you tell us
 what does the pulse oximetry cuff transducer look like? And
 we've got his deposition excerpts here at slide 68 and we said,
 "Q. What is your understanding of what a pulse oximetry

5 cuff looks like?"

6 And he said,

7 "A. I'll be honest with you, counsel, I've not seen any and I
8 can't recall when I've seen one."

9 And he goes on to say,

10 "So I'll be honest with you, I haven't seen any."

So he hasn't seen them, that's okay. Then we asked him at
least tell us some features, can you describe for us the features
so we can understand why is it bulky and uncomfortable. So we
asked him,

15 "Q. Can you describe for me any features of the pulse16 oximetry cuff transducer?"

17 And we've highlighted there at the bottom there,

18 "A. So the answer -- simple answer, no, I don't know any19 specifics."

So how can the expert opine and opine that one would be motivated to substitute out the pulse oximetry cuff transducer of Money as bulky and uncomfortable but he's never seen it and doesn't know any features of it. So it really calls into question Petitioner's motivation to modify Money and really what it

appears to be is like a hindsight driven combination because 1 Akai has a light based sensor, Akai has an analog sensor and to 2 3 try to match the claims Petitioner created a combination of 4 Money with Akai and we think it's undisputed that, you know, 5 pulse oximetry is performed non-invasively using light. There's 6 no dispute about that. So again, this idea that Money would have 7 to be modified to have a pulse oximeter that was non-invasive 8 and light based again we don't think is really supported here.

9 We also pointed out again, the Money device is too large 10 and too heavy to be wrist worn. We had gone through that 11 earlier during our session and we do have some slides on that as 12 well and then if we go to slide 73 we think this really illustrates 13 how extensive the hindsight modification is here and at slide 73 14 we explain, we have the diagram of Money with this, again, it's 15 got the digital-based pulse oximeter sensor and then everything 16 else is analog and those were working fine, working SP02 sensor, 17 working temperature sensor, so what Sotera has to do is swap in 18 Akai's analog-based sensor for Money's digital sensor. Now 19 Money's SP02 sensor, that digital port, is now open but then 20 Sotera says okay, well then we have to swap in a temperature 21 sensor and switch that and, you know, make all of these 22 adjustments again to try to match the claims but no real reason 23 that would motivate that modification. So again, we think that 24 the way Sotera is trying to change the references without really

any motivation again demonstrates hindsight and is just simply
 an effort to try to match the claims in an attempt to support
 obviousness.

And the last point I wanted to make very briefly is with 4 regard to the electrically received limitation and I think that 5 6 affects all of the claims of the '108 patent which is in the 912 7 IPR and the Akai based grounds is the electrically received 8 limitation and we pointed out that Akai has an optical fiber and so therefore it does not teach the electrically received limitation 9 10 that's a missing element from all of the Akai based grounds in 11 the '108 patent, that's the 912 IPR and Sotera again attempts to 12 shift on reply to suggest that Akai can have an electrical wire but 13 it's a light-based system and simply would not work if the optical 14 fiber was swapped out electrical wire, and unless Your Honors 15 have any questions I will stop here and reserve my remaining 16 time for rebuttal.

JUDGE KINDER: It looks like the panel does not have any
other questions and I think you have about your full 15 minutes
left I think, so again we'll be pretty liberal with time if folks go
over a couple of minutes, that's fine. There's a lot to unpack in
these cases. Thank you.

22

MS. SWAROOP: Thank you, Your Honor.

JUDGE KINDER: All right. We'll transition back to the
Petitioner's reply. Mr. Telscher, whenever you're ready. I think

you had about ten or so minutes but again if you go over a
 couple we're not going to scream at you, okay.

MR. TELSCHER: Thank you, Your Honor. So I think as you said a couple of times in your comments throughout this case really the Supreme Court law governs and KSR is the decision that really governs here. Whenever you have only one of a few ways that you can do something and all you're doing is substituting one known way for another that produces predictable results it's just not patentable.

10 In this case, you know, the two primary issues especially 11 under Goldberg are, the first one is going to be analog and 12 digital, you know, so there's only two ways of doing it. So if 13 you have sensors there's only analog and digital. It's undisputed 14 on this record that they were all conventional. The '735 patent 15 simply says that you could use an analog or digital. Goldberg 16 just says any signal. So you only have one or two ways of doing 17 it and what they're really asking for is in the area of medical 18 monitoring that they can own specific analog and digital 19 configurations where anybody of skill in the art would know that 20 they can use analog or digital for SP02. They could use analog 21 or digital for a thermometer and those skilled in the art can pick 22 between them. We cite specifically the evidence from their own 23 expert Oslan at paragraphs 110 to 115 where he said experts 24 would know all the pros and cons of digital versus analog. So

KSR in our view governs the analog versus digital dispute and
certainly on the ports there's only hard wired for ports, so those
are the two big issues before you and according to them in the
medical field they can own the concept of ports.

5 Now if you're in a hospital setting and, for example, 6 Goldberg teaches up to seven ports or, excuse me, up to seven 7 sensors. So Goldberg teaches up to seven sensors. So imagine, 8 if you will, you have a piece of equipment can you image seven 9 hard wired sensors? So I hook up to the patient or even if it's at 10 home, they say it's at home, whether it's at home or hospital doesn't change it. There's a patient being hooked up to be 11 12 monitored. So if Goldberg had seven sensors that were hard 13 wired, you would have say two sensors being used and five just 14 dangling around, moving around, it wouldn't work. So we know 15 there are disposable sensors that would need to be ported. We 16 know that for adaptability reasons they would need to be unplugged and a new one put in. We know for a sensor breaking 17 18 down it would need to be ported. So the experts all agree ports 19 were known. The '735 patent admits there's ports.

So, what is the petition grounds? How do we carry our
burden? The Goldberg patent talks about one, all or a
combination of seven sensors. So that's more than three ports.
Kiani shows ports. One skilled in the art is going to know to use
the ports of Kiani or Goldberg and that would get you to more

than three ports and again, under KSR there's only one of two 1 2 ways of doing it, either hard wired or ports. So Goldberg in 3 combination, and I don't even know that you should need to 4 reach Kiani. I mean ports were so well known that you shouldn't even need a reference for it. We do not agree that Goldberg does 5 6 not disclose ports which is what Masimo suggests in their 7 argument. What we have admitted is the word ports is not used 8 in there. Specifically we have cited the Court to the area in 9 column 4 of Goldberg that says,"My sensors connect to the 10 monitor by wire by known means."

11 And these are exactly the types of details that you would 12 not expect someone to have to explain, and when you go look at 13 their own Kiani reference we've -- in our brief we've shown you 14 the figure where they show a wire going in to their device and 15 yet it was ported. So what they're trying to do is take a simple 16 block figure and turn that into the teachings when Goldberg 17 expressly says that my sensors are connected to the monitor by --18 you know the words. I've cited it in there -- but it's by no means 19 or means well known to those in the art and do we really think 20 that one skilled in the art as of 2002 in a hospital environment 21 wouldn't think to connect sensors via ports by Goldberg itself but 22 certainly in view of Kiani and I would note that even Amano, the 23 reference that the Patent Office rejected under was showing 24 ports. Ports are ubiquitous and the experts, nobody's disagreeing

1 that ports were ubiquitous and there's only one of two ways. 2 You know, there was some mention about the sufficiency 3 and as I made clear, we're not arguing Section 112. The reason the lack of disclosure in the '735 patent is important is because 4 5 it's exactly like Goldberg in that you don't disclose detail for the 6 basics. They didn't try to claim analog and digital and ports for 7 15 years because those are basic electronics. We've shown them 8 our combination holds it. As far as Goldberg being household, the Patent Office already rejected that. They made the same 9 10 argument with Amano. They said it's an exercise watch. The Patent Office said it doesn't matter. You're monitoring vital 11 signs. So whether Goldberg is in a household or not, and I'll tell 12 13 you column 2 specifically states at the top that the device of 14 Goldberg is intended to be used with medical care professionals, 15 and think about it. We're not talking about sitting in your house 16 measuring your blood pressure. We're talking about measuring 17 seven vital signs. There's no consumer that's going to know how 18 to measure three or four vital signs on their own, it would be their doctor telling them what to do. 19

As for A and D, as I said there's only two options. Oslan at paragraphs 110 to 115 makes clear that skilled artisans know the pros and cons of analog versus digital. Page 74 of our petition we talk about, you asked her about the motivation for using analog or digital, no. Their expert never explains how it could

be inventive to have an analog versus digital and you'd say well,
 Mr. Telscher, it's your burden and I agree. But analog and
 digital are so ubiquitous under KSR that our burden is carried
 right there.

5 But I would go further that we explained at page 74 that 6 those skilled in the art -- just by way of example if you have a continuous wave form, so say on your pulse oximeter you want 7 8 to look at the wave form, analog's better. You can do it digital but analog's better. If you have something discreet like a 9 10 temperature reading, digital's just fine. None of that matters 11 because whether it's the blood pressure cuff that they're making a 12 lot of, there are a lots of different sensors that measure blood 13 pressure. It could be a cuff, it could be other ones. If one 14 skilled in the art wants to measure blood pressure, they could use 15 the cuff of Goldberg or they could use any other blood pressure 16 sensor and monitor it in.

They talk about Kiani showing fiber optics and it wouldn't 17 be obvious to combine. They didn't cite you to 4-1019 of Akai 18 19 where Akai specifically says such as fiber optics and then it goes 20 on to say that all you need to connect the sensors of flexible 21 material which is a wire. So our grounds with Akai make 22 absolute sense. Akai shows multiple sensors that are set into a 23 display on the wrist, displays those on the wrist and then 24 wirelessly transmits them to a remote sensor.

1 We talk about the Kiani single sensor port. The only use of Kiani is to show that the use of ports in medical monitoring was 2 3 well know. As I have mentioned Goldberg in combination with Kiani, Goldberg says seven sensors. That means there are at 4 least seven ports. Their claims only require three ports. So 5 6 Goldberg in combination with Kiani meets our burden and I 7 think, I mean come on, we're a medical device technology. How 8 could people in the medical world not have a monitor that allows 9 you to connect and disconnect your sensors. They're suggesting 10 that the rest of the world should hard wire their sensors and that 11 they're the ones that invented ports when they clearly did not 12 invent ports. Amano had them. Kiani had them. Lots of 13 references had them. Our experts all agree ports were very 14 common.

15 They criticized our expert for saying that people would 16 know how to use ports at home. But our expert at paragraph 80, 17 Exhibit 1048, explains if you're a person sitting at home you 18 plug your cable box into a port. You have ethernet ports. You have phone jacks that plug into ports. The notion that people 19 20 sitting at home don't know how to use ports, if they're right that 21 Goldberg was somehow limited to the house, is just wrong. 22 There's abundant evidence from our expert that people are 23 inundated with ports around their home. As for claim 24 construction, there's nothing I want to address there. I mean

1 again I don't think it matters.

2 JUDGE KINDER: This is Judge --

3 MR. TELSCHER: The only thing I would say -- yes.

JUDGE KINDER: This is Judge Kinder. If I could -Patent Owner, they hit the combination arguments and
motivation to combine Money and Akai pretty good. If you
could address that for a couple of minutes. I know you only
have a couple of minutes left so if you go over we'll add a few.

9 MR. TELSCHER: Absolutely, Your Honor. Thank you. 10 So Money, again, is a device from 1994, size was in 1994. 11 We've already in my argument told you that by 2002 electronics 12 had been miniaturized and I've cited you our expert testimony, 13 I've said it to you in the petition where we argued it. But by 14 2002 whatever the size of Money was was irrelevant. One 15 skilled in the art could do it.

16 So let's talk about Money. What does Money show? At 17 least five vital signs with ports on a display remoted into a 18 remote monitor. So the only thing we're talking about Money, 19 and if you turn to slide 31 of ours just so it's visual for you, so if 20 you turn to slide 31. So on slide 31 Money is on the right and 21 you can see right on Money it's a device that's worn on the body 22 as you've already noted, and the figure displaying five monitored 23 vital signs which are ported and from there you display them and 24 you wirelessly transmit them. So Money shows everything that

the patent is about except what does it not show? The particular
 housing of the '735 patent. So Money shows everything except
 for the housing of the '735 patent. We've combined that with
 Akai which by '97 already was small enough to be on a wrist
 monitor as you can see on slide 31.

So the combination, and it shows the SP02 sensor with the 6 7 wire management, the wire going perpendicular up to the end. 8 Akai shows that. So Money in combination with Akai would certainly show that Money shows -- well, Money and Kiani 9 10 (phonetic) show the ports. So the only combination necessary 11 for Money is take all of the vital sign monitoring, the display, 12 the wireless transmission and repackage it in the Akai wrist 13 monitor. If there's any debate about whether it was a wrist 14 monitor, and by the way we submitted evidence to show that 15 even the size by '94 was the same as there were watches that 16 weigh a pound. There were devices worn by people on their arms that were the size of Money. So by 2002 that would have 17 18 been even smaller. So the notion that when you think about it, Money shows all of the features of this device including analog 19 20 and digital, not the specific analog and digital. You can say 21 well, Money's reversed. Our simple point on reversal is that one 22 skilled in the art under KSR only has two options for each of 23 these sensors and as you've already noted, their expert hasn't 24 even explained why does it matter if you monitor SP02 and

analog that the temperature would be digital. Those two are 1 2 completely unrelated. You're going to monitor SP02 as you 3 want. You're going to monitor temperature as you want. Where 4 did they come up with that combination? Our client's product. It's not in their patents and so that's not a novel combination. 5 6 KSR, one of two ways. Analog versus digital. Those skilled in 7 the art should be able to pick all day long and none of these 8 sensors operate any differently because they are analog versus 9 digital. Under KSR it's substitution of a component to get 10 predictable results all day long.

And so I don't know if that answers your question but I think the combination of Money and Akai could not be any more basic when you take all of the (audio interference) transmission and display of Money and you combine it with the housing of Akai, you get what you need including a sensor that goes up the finger. Does that answer the question?

JUDGE KINDER: Yes. I appreciate it. I think your time
is a couple of minutes over so if you want to conclude in the next
minute or so, then we'll transition.

MR. TELSCHER: No. I think -- my conclusion would be what we're talking about is monitoring vital signs with something that mounts on your wrist. All of that was shown. Wirelessly transmitting that to a remote station. All of that was shown. Wrist watch with a wire extending down the finger. All of that

was shown and so what this one boils down to is something these
patents never claim, not even in 2017 patents in the abstract
talked about analog and digital signals or ports. So it comes
down to whether after we've shown through Akai and Goldberg
the exact configurations and all of the things, whether they can
get patents on analog and digital signals and ports. I have
nothing further, Thank you.

JUDGE KINDER: All right. Thank you, and we'll go
ahead and transition to the Patent Owner's reply and Ms.
Swaroop, I think you have at least 15 minutes and you know
what? Petitioner went over a couple so if you need to go over a
couple we'll certainly entertain that.

13 MS. SWAROOP: Thank you, Your Honor. This is Sheila Swaroop for Patent Owner. First off, Your Honor had asked me 14 15 during the main presentation whether all the claims recite either 16 wrist worn or a device to be worn on the lower arm and all of them do other than the '300 patent which is in the 1015 17 18 proceeding and so claim 1 of the '300 patent recites that the device is on the arm and then claim 16 does not specify any 19 20 particular location. But all of the other independent claims 21 across the three IPRs do specify either wrist worn or worn on the 22 lower arm.

Petitioner's counsel talked about Goldberg having seven
sensors and how that would just be, you know, cumbersome if

there were seven wires coming out of the Goldberg device if it 1 2 in fact had seven sensors. But what he omitted is that Goldberg 3 again also discloses that the sensors can be connected wirelessly. 4 So I don't think that that argument about whether the tall box 5 sensor of Goldberg itself is hard wired or not, I don't think that 6 really answers the question because there is the option for 7 wireless if other sensors were to be incorporated and again, that 8 cite from Goldberg I believe it was at Petitioner's slides but it is Exhibit 1005 and it is column 4, lines 50 to 56 of Goldberg. 9

10 We also heard a lot from Petitioner's counsel about the 11 combination of Goldberg with Kiani and again it was very high 12 level. Ports, ports, Goldberg has ports, we think they have ports, 13 Kiani has a port, combine them, combine them. But we have to 14 look again at the petition and what I didn't hear at all in 15 Petitioner's rebuttal was our argument about the blood pressure 16 cuff sensor of Goldberg which was what the petition expressly 17 relied on for the second sensor port limitation and any argument 18 as to how there is a port there and if there's not, why would any 19 person of ordinary skill be motivated to add a port to that blood 20 pressure cuff sensor of Goldberg. They're just saying oh, go to 21 Kiani. That doesn't tell us anything about the specific modification or the specific argument that the Petitioner relied 22 23 on in their petition.

24

Petitioner's counsel talked about Akai, and if we go to our

slide 45 of Akai Petitioner mentioned that, you know, oh, it 1 doesn't have to be optical, it can just be an electrical wire 2 3 because the Akai spec talks about that. But again, and we have the configuration here from figure 2 that shows that this needs to 4 be an optical fiber in order to transmit light. So this idea that 5 oh, you can just swap it in, an electrical signal that Akai also 6 7 contemplated. Akai would not work in that situation so we just 8 don't think that that argument is correct and again, we do think that that renders deficient all of the Akai grounds in the 912 IPR 9 10 proceeding on the '108 patent due to the failure to have that, the 11 missing element there is the electrically received signal in the 12 Akai-based grounds.

13 And then we heard from Petitioner's counsel about Money, 14 the Money-Akai combination and I think we heard that all that 15 Money is missing is the housing and that's what Akai supplies. 16 But again, you know, as we've talked about Money does not have 17 an analog pulse oximetry sensor. Petitioner has to rely on Akai 18 for that, and the reasoning, the -- well, we didn't hear them 19 address at all the motivation, the reason for modifying Money. 20 The reason that was given is that this pulse oximetry cuff 21 transducer was somehow bulky and uncomfortable. We didn't 22 hear anything from Petitioner's counsel explaining how that's a 23 credible supportable reason in view of the fact that their expert 24 was unable to describe that cuff transducer and they have simply

1 given no credible reason to modify Money to replace it with Akai and I think what I heard him say was well, you could put Money 2 3 on the wrist because it hides a finger-based sensor. But that 4 assumes that you're going to do the modification to begin with. Once you've done the modification then he's saying you have a 5 6 wrist worn device. But what motivates that modification to 7 begin with? Why would a person of ordinary skill starting with 8 Money be motivated, have any reason to modify Money? And 9 that's what's missing from their petition.

10 Unless Your Honors have anything further, I think I've 11 completed my rebuttal points for today.

JUDGE COCKS: I have no further questions. Thank you. 12 13 MS. SWAROOP: Thank you, Your Honor.

14 JUDGE KINDER: This is Judge Kinder. I have no further 15 questions as well. All right. Well, we'd like to -- this is Judge 16 Kinder. We'd like to thank both parties for your time today. I 17 think I speak for the panel that your briefing and your 18 presentations were both incredible. We're definitely impressed. 19 I'm not seeing you're making our job easier because you both did 20 so well. The issues here are going to be closely looked at. We 21 thank our staff for putting on another great hearing with no 22 interruptions. A lot of people do a lot of work in the background 23 to make sure these things go smooth. Hopefully some day soon 24 we can all get back in person but until then, we appreciate the

- 1 work our staff has done. With that, the case is submitted. We
- 2 can go off the record.
- 3 (Whereupon, at 3:08 p.m., the oral hearing was
- 4 concluded.)

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