

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ALIVECOR, INC.,
Petitioner,

v.

APPLE, INC.,
Patent Owner.

IPR2023-00950
Patent 10,076,257 B2

Record of Oral Hearing
Held: November 5, 2024

Before KEN B. BARRETT, JOSIAH C. COCKS, and
ROBERT L. KINDER, *Administrative Patent Judges*.

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IPR2023-00950
Patent 10,076,257 B2

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P R O C E E D I N G S

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JUDGE KINDER: All right, thank you, sir. In today's proceeding, the Petitioner will have a total of 70 minutes to present its argument. And Patent Owner will also have 70 minutes. Petitioner will open the hearing by presenting its case regarding the challenge claims for which the Board instituted trial, as well as the Patent Owner's proposed substitute claims and the motions to amend, in the motion to amend, revised motion to amend.

Patent Owner will be able to respond to Petitioner's arguments. Petitioner, you may reserve rebuttal time out of that 70 minutes to respond to arguments presented by Patent Owner. How much time would you like for your rebuttal time, Mr. Douglas?

MR. DOUGLAS: Your Honor, we'd like to receive -- reserve 10 minutes for rebuttal time.

JUDGE KINDER: Ten minutes, all right. And, Patent Owner, you may also request to reserve time for a brief surrebuttal. And how much time, Mr. Renner, would you all like to reserve?

MR. RENNER: Twenty minutes, please.

JUDGE KINDER: All right. Give me one minute to set the timer, please. All right, I think we're about ready to go because everyone is live and in person today. There's no issues with remote connectivity or dropping off, so it's nice to have everyone in person once in a while.

Before we get going, are there any questions? All right. And I ask, as a courtesy, please refer to demonstratives by the demonstrative page number. And if you're referring to an exhibit, let us know which exhibit you're on and give the panel just a brief few seconds to find it. All right. All

1 right, that's all I have, thanks. Petitioner, Mr. Douglas, whenever your
2 team's ready.

3 ORAL ARGUMENT

4 MR. FERNANDO: Good afternoon, Your Honors. May it
5 please the Court, my name is Ravi Fernando, and I'm here on behalf of
6 AliveCor. I apologize in advance if my voice is breaking up a bit. I had two
7 toddlers who are insisting on making me sick. I will do my best to carry on.
8 This -- today we'll be addressing several issues related to the '257 Patent. If
9 we could turn to Slide 2, please. I will be covering the claim construction
10 issues as well as Ground 1 under Markel, and my colleague, Chris Douglas,
11 will be covering Grounds 2, 3, and Apple's revised a motion to amend.

12 So if we can turn to Slide 8, please. We'll start with claim
13 construction. We turn to Slide 9. In this proceeding, both parties are
14 advancing plain and ordinary meaning for the terms embedded and in, but
15 there's a dispute over what that plain meaning is. On the right we see that
16 Apple says that embedded in means at least partially set in or partially
17 surrounded by a material. But Apple doesn't even seem to believe in its own
18 interpretation.

19 In footnote 3 of the Patent Owner's response, Apple caveats
20 what it presents as plain ordinary meaning and says that being partially
21 surrounded by a material does not require direct contact with the material.
22 According to Apple, therefore, one component can be embedded in another
23 without the two ever actually even touching.

24 On the left here we can see that AliveCor says that embedded in
25 simply requires inclusion within a larger entity. AliveCor has also said that
26 this plain meaning should be adopted because it's consistent with Apple's

1 own dictionary definition, Exhibit 2005, in the intrinsic record.

2 And so we'll start by turning to that intrinsic record. We can
3 turn to Slide 14, please. This is the '257 Patent, Figure 4B, Column 9, Lines
4 45 to 51, which illustrate an embedded heart sensor. After that, the
5 specification provides two examples of what it means to be embedded in a
6 portion of the enclosure.

7 In the first example, which is in the bottom highlight here, lead
8 472 is positioned against the back surface of bezel 460. That example is
9 what is shown in Figure 4B, and we'll call it the positioned against example.
10 In the second example, lead 473 is placed within the thickness of bezel 460,
11 e.g, in a pocket within the bezel wall, and we'll call that the within the
12 thickness example. Now, neither of these two examples actually use the
13 phrase embedded in, but AliveCor contends that both examples show a first
14 lead that's embedded in the enclosure.

15 Now, that said, we understand that the Board has taken a
16 different view in the Masimo IPR proceeding. There the Board decided that
17 this passage distinguishes a lead that is embedded in a portion of the
18 enclosure from a lead that is merely positioned against or in parallel contact
19 with a portion of the enclosure. Respectfully, however, we believe that the
20 Board should reach a different conclusion here.

21 First, the Board's previous findings were based in large part on
22 the testimony of Masimo's expert in that proceeding who suggested that
23 positioned against, that example, would not be embedded in. That testimony
24 is not part of the record in this proceeding.

25 Second, based on that different testimony, the Board found in
26 the Masimo proceeding that the within the thickness example is embedded in

1 but the position against example is not. But this would mean that Figure 4B
2 shown here, which illustrates the position against example, would not be a
3 first lead embedded in the enclosure.

4 But even Apple's expert in this proceeding has agreed that
5 Figure 4B's positioned against example is embedded in. If we look at
6 Exhibit 2004, Paragraph 30, Dr. Kenny stated that the lead 472 is embedded
7 in the bezel 460 because it is positioned inside the curved surface of the
8 bezel.

9 Third, if the embedded in claim language covers the within the
10 thickness example, then it's unclear how Claim 8 would narrow Claim 1.
11 Claim 8 covers a pad inside of a pocket, which is part of the within the
12 thickness example, as we see here with the e.g., language.

13 Fourth, in this proceeding there is evidence from the
14 prosecution history demonstrating that Figure 4B is positioned against
15 example must be within the scope of the first lead. And we'll look at that
16 prosecution history next if we turn to Slide 15. Here we see Exhibit 1002,
17 Pages 208 to 209. And these are excerpts from the pros. history and during
18 prosecution, the applicant referred to Figure 4B as a specific example of
19 Claim 29, now the issued Claim 1, and the applicant also explicitly relied on
20 both the positioned against example and the within the thickness example, as
21 we can see in the bottom highlight on this page.

22 If we turn to Slide 16, we can see here another reason that
23 Apple's interpretation of embedded in should not be adopted in this
24 proceeding. Here we have Exhibit 1022, Pages 127 to 28. This is testimony
25 from Apple's own expert, Dr. Kenny. And Dr. Kenny says here that he
26 assumed that in is an adverb that modifies embedded, but it isn't. The word

1 in is a preposition, and it modifies the object portion, which comes later in
2 the claim language. Apple's interpretation is therefore premised on
3 grammatical error, and indeed, after AliveCor raised this wrong assumption
4 in its reply, Apple's surreply failed to address it.

5 If we turn to Slide 20, we now can discuss the bezel claim term.
6 Again, both parties are advancing plain ordinary meaning here, but there's a
7 dispute over what that plain meaning is. As we can see on the left, AliveCor
8 has said that the bezel is simply a rim that encircles an electronic device.

9 On the right, however, Apple has advanced a plain meaning
10 which says that the rim secures a transparent covering for an indicating
11 device such as a meter, oscilloscope, or watch. Now just at a quick glance,
12 we can see the -- Apple's interpretation here is much, much narrower. It
13 adds at least three limitations: a rim that secures a transparent covering and
14 that this is an indicating device. But none of those words are ever used in
15 the '257 Patent. And even the three examples here of a meter, oscilloscope,
16 or watch are never illustrated in any of the figures of the '257 Patent.

17 We turn to Slide 21. Here we see testimony from the
18 AliveCor's expert, Dr. Berger, Paragraph 249. And here Dr. Berger
19 analyzed the intrinsic record and concluded that a bezel is a rim that
20 encircles an electronic device. And we can see that annotated here on a
21 figure of the, it's Figure 3 of the '257 Patent.

22 JUDGE KINDER: Counsel, can you answer one question?
23 What --

24 MR. FERNANDO: Yes, sir.

25 JUDGE KINDER: What's the best extrinsic evidence your
26 expert's relying upon to reach this?

1 MR. FERNANDO: So I don't believe our expert relied on
2 extrinsic evidence. Our expert relied on intrinsic evidence, including at least
3 Figure 3 that's shown here.

4 JUDGE KINDER: So there's nothing in your record at least
5 that indicates what a bezel would be to a person of ordinary skill in the art at
6 the time of the invention.

7 MR. FERNANDO: I think, Your Honor, the testimony is the
8 opinion of our expert. That is the non-intrinsic evidence that we rely on to
9 show the meaning of bezel. His view of how POSITA would understand
10 bezel.

11 JUDGE KINDER: Okay.

12 MR. FERNANDO: If we turn to Slide 22, we can see Apple's
13 construction of bezel. And here Apple relied on three dictionary definitions.
14 But in AliveCor's view, those dictionary definitions should not outweigh
15 what the intrinsic evidence would have indicated to a POSITA as the
16 meaning of bezel.

17 We turn to Slide 14. We can also see that Apple's interpretation
18 of bezel is inconsistent with the intrinsic record. As we can see here in
19 Figure 4B, the electronic device 450 has a display 452 with an arrow at the
20 top, and it also has a bezel 460 that's annotated in green here. Now, as we
21 can see from the figure, the bezel 460 is just adjacent to the display. There's
22 no hooks. There's no grooves. There's nothing suggesting that the bezel 460
23 plays any role in securing the display 452. This further confirms that
24 Apple's plain meaning should be rejected.

25 JUDGE KINDER: Mr. Fernando, can I ask a high level
26 question?

1 MR. FERNANDO: Yes, Your Honor.

2 JUDGE KINDER: Can you take us to a high level picture?

3 Why is bezel needed to be construed in this case? What hinges the outcome
4 on our interpretation of bezel? Is it more with the motion to amend?

5 MR. FERNANDO: For example, if we turn to Slide 87, I don't
6 know that the -- well, I can tell you the interpretation of bezel would not and
7 should not affect the outcome because we believe that what is a bezel, for
8 example, in the Markel reference is supporting on the edges of the screen
9 that display that is there. So in our view, the interpretation of bezel should
10 not change a conclusion that the prior art meets the bezel term.

11 JUDGE KINDER: Whereas the Patent Owner seems to be
12 taking a view that there's a functional element of securing that needs to be
13 met as well, which is not taught.

14 MR. FERNANDO: That's correct, Your Honor.

15 JUDGE KINDER: Okay.

16 MR. FERNANDO: Unless there are any other further
17 questions, Your Honors, our intent is to move to Ground 1. Okay, if we can
18 turn to Slide, sorry, Slide 24, please? Under Ground 1, which is based on
19 Markel, we're going to address Independent Claims 1 and Dependent Claims
20 12, 13, and 19, in the interest of time. And here on Slide 27, we've
21 summarized the disputes on Markel, and there's really only two. There's two
22 elements in dispute, which we'll address in turn.

23 If we turn to Slide 31, this is the first element that's disputed,
24 which is Element 1.c.i. And on this slide we get a testimony from
25 AliveCor's expert, Paragraph 116 of Exhibit 1003. And what I'd like to start
26 by doing is just taking a big step back and trying to clarify some of the

1 terminology that's been used in this proceeding.

2 Now, the '257 Patent talks about pads, talks about leads, talks
3 about connectors, but the '257 Patent never uses the word electrode. And
4 that's a real source of confusion, right? But Dr. Berger, in his opening
5 declaration, tried to address that confusion. In Paragraph 116 he said that
6 the plain meaning of lead would include an electrode that comes into contact
7 with the user and the electrical connection, e.g., wires that connects to the
8 electrode to additional electronics that implement that ECG signal
9 acquisition.

10 So, generally, what Dr. Berger is saying is that the electrode is
11 the component that a user is going to touch. We turn to Slide 32. We see
12 more of Paragraph 116 where Dr. Berger continues on to say a pad is a
13 component of the electrode. This is because the claim language requires that
14 each lead comprises a pad and connector that can detect an electrical signal.
15 Furthermore, the specification discloses that each lead can include a pad or
16 an extended area. And that's what's illustrated in the diagram below Dr.
17 Berger's testimony.

18 Generally, the electrode can either be a combination of
19 electrode and pad, or it can be just an exposed pad, but it is going to be the
20 component that a user is touching. Now, neither Apple nor its expert have
21 substantively disputed Dr. Berger's explanation of the relationship between
22 the terms: electrode, enclosure, pad, lead, and connector. They never said
23 he's wrong. In fact, Apple has agreed that the electrode and pad are not
24 coextensive in sur-reply.

25 So why does this matter? It matters because when we see the
26 word electrode used in a prior art reference, we have to look at the context of

1 that reference to decide and figure out which structure that it is referring to.

2 If we turn to Slide 45, we can see that Apple's expert also
3 agrees. This is deposition testimony from Dr. Kenny where he says that one
4 of ordinary skill in the art can look at things called electrodes in the prior art
5 references and make a judgment as to whether those are equivalent to or
6 whether those anticipate the terms of the '257 Patent. He also said at the end
7 here that an electrode might or might not meet those limitations, being those
8 limitations of Claim 1.

9 So with that in mind, we'll turn to the actual disclosure of
10 Markel. We turn to Slide 34, please. This is Paragraph 50 of Markel, and it
11 gives information about the structure of audio output portion 610, which is
12 one of the components that AliveCor relies on. Now we see in the second
13 highlighted sentence, it states that a second electrode may be disposed on the
14 audio output portion 610, e.g., molded into the audio output portion 610 or
15 positioned on the audio output portion 610.

16 I'd like to pause here and really emphasize this e.g.,
17 parenthetical statement. This is talking about two different structures. As
18 AliveCor's expert explained, it talks about an electrode being a pad that is
19 positioned on the audio output portion 610, but alternatively it also talks
20 about an electrode that's molded into the audio output portion 610. And, in
21 fact, this e.g., phrase is important, but we might see later on that in Apple's
22 demonstratives, it's not highlighted.

23 Now what Dr. Berger explained in Paragraph 119 of his
24 declaration, a POSITA would have understood this disclosure to make
25 obvious that Markel's second electrode comprises an electrode pad that is
26 embedded in or molded into the audio output portion 610. He also explained

1 that when molded into the audio output portion 610, the electrode pad would
2 be within the thickness of the enclosure. And that's for example, on Pages
3 19 to 20 of Exhibit 2013, Dr. Berger's transcript.

4 If we turn to Slide 35, please? Here we have The Institution
5 Decision at Page 12. And here we can see that the Board also recognized
6 that the molded into language is what AliveCor relied on to show that
7 Element 1.c.i is met. AliveCor credited that disclosure and the analysis and
8 there's nothing that's come into the record that should change that
9 conclusion.

10 If we turn to Slide 37, we can briefly discuss Apple's rejoinders.
11 Now Apple says that Markel's electrodes are exposed. And it also says that
12 Markel doesn't meet the claim language under its proposed construction for
13 the embedded in claim language because they say that AliveCor's theory
14 requires a pad that's parallel to and underneath the enclosure. But Apple's
15 wrong on both those counts.

16 As discussed earlier, Dr. Berger said that the molded into
17 language means that the electrode pad would be within the thickness of the
18 enclosure of Markel. And he explained that both in his declaration and in
19 his deposition. So the net-net is that even if the Board adopts Apple's
20 interpretation of embedded in, Ground 1 would still meet Element 1.c.i. I
21 apologize, Your, Honor.

22 JUDGE KINDER: Now, Mr. Fernando, I'm just thinking high
23 level again. Can you take one step back and talk about, we're talking about
24 being embedded in within its thickness 610. What's the modification that
25 your expert, Dr. Berger's recommending here? Is it essentially to cover that
26 area with the composite material that's surrounding it? That's something

1 that, at least, I'm kind of having trouble picturing is what -- because you're
2 not under 102. You're under 103.

3 MR. FERNANDO: Yes, Your Honor.

4 JUDGE KINDER: You're saying there's a slight modification
5 that one of skill in the art would make. Can you describe that modification,
6 and why he thinks that's supported?

7 MR. FERNANDO: Certainly, Your Honor. So if we can
8 return to Slide 34. What Dr. Berger said is that Markel discloses that the
9 electrode will be molded into the audio out proportion 610. And so what he
10 is saying is that a POSITA would understand that means that a conductive
11 component would be within the thickness of that enclosure. The
12 modification he's suggesting is that that component would be a pad. Apple's
13 expert has acknowledged that electrodes can be made of any variety of
14 shapes and structures. And so the modification that Dr. Berger explained
15 was that specifically it would be a pad that's within the thickness of Markel's
16 enclosure.

17 JUDGE KINDER: Okay, thank you for clarifying.

18 MR. FERNANDO: Certainly. Unless there's any other
19 questions on Element 1.c.i, we plan to move to Slide 40, which is the next
20 disputed element, and that element is 1.c.iii. Now, in its petition, AliveCor
21 provided lots of disclosure and analysis from its expert demonstrating that a
22 POSITA would have placed an electrode pad within the thickness of Markel
23 as I just explained. In the Institution Decision then, the Board asked for
24 more evidence regarding Markel and why POSITA would have put a
25 conductive pad underneath the conductive plastic of Markel. And so that is
26 what the Board asked for here.

1 The Board asked whether an electrode may be considered
2 underneath the conductive material when the electrode itself is made of that
3 same conductive material is an issue we will discuss decide upon the final
4 record. Well, now the record is fully developed, and testimony from both
5 experts demonstrates why a POSITA would have been motivated to do that.

6 If we turn to Slide 48, please, here we have Exhibit 1022, Pages
7 45 to 48, which is depo testimony from Apple's expert, Dr. Kenny. Dr.
8 Kenny testified that for systems like Markel's, where you're trying to extract
9 medical information, a POSITA would have been motivated to implement a
10 pad with superior conductivity. This would have ensured that Markel's
11 electrode structure could accurately and reliably extract the user's heart
12 signal.

13 Now, Dr. Kenny was referring to part of figure, sorry, Column
14 6 of the 2007 patent here. But as we can see from the top of the testimony,
15 he was also speaking, generally, about the design space. And at the middle
16 of the testimony, we can see he was speaking generally about what an
17 engineer would have known and been motivated to do in this field.

18 If we turn to Slide 49, here we have Dr. Kenny's testimony
19 again, Pages 67 to 69. During his deposition, Dr. Kenny gave an example of
20 a stainless steel enclosure and a silver based pad. He explained that even
21 though the enclosure is conductive, the pad is going to be the element that's
22 configured to capture and detect the electrical signal. As a result, POSITA
23 would have known to implement a pad with superior electrical conductivity
24 to the enclosure. In order to capture this detailed heart rate information.

25 If we also turn to Slide 50, AliveCor's expert, Dr. Berger,
26 provided yet another reason why POSITA would have placed a conductive

1 pad under the already conductive plastic of Markel's enclosure. Here we
2 have Apple 2013, Page 101. And Dr. Berger explained that a POSITA
3 would not have attached the connector directly to the enclosure's conductive
4 plastic. Instead, a POSITA would have been motivated to use an electrode
5 pad, which would provide an appropriate location for a solder joint that the
6 connector would attach to.

7 Now, Your Honors, before I move on, I just want to urge you to
8 please return to this discussion of Slides 48 to 50 when you're writing your
9 final written decision. Our view is that this record is fully developed now,
10 and it amply provides reason why POSITA would have put a conductive pad
11 underneath the already conductive closure of Markel.

12 If we turn to Slide 44, here we see Apple's responses briefly.
13 Apple generally alleges again that Markel simply discloses an exposed
14 external electrode. But the Board should reject those arguments for the
15 reasons we explained earlier with respect to Element 1.c.i. This concludes
16 our discussion on Claim 1. Unless there's any questions that I'm happy to
17 address, we intend to move to Claims 12.

18 JUDGE COCKS: Mr. Fernando, real quick with Claim 15 --

19 MR. FERNANDO: Yes, Your Honor.

20 JUDGE COCKS: Is Claim 15 really in dispute? Has there
21 been specific argument? It's the other independent claim.

22 MR. FERNANDO: Yes, Your Honor. Our view is AliveCor
23 certainly presented a prima facie case. It was not, Claim 15 was not
24 addressed in the Patent Owner response whatsoever. And so our
25 understanding is that Apple has abandoned any argument that Claim 15 is
26 not invalid. Our view is that Claim 15 has different claim language from

1 Claim 1, certainly. Claim 1 requires, for lack of a better term, one lead that's
2 an indirect contact lead, and a second lead that is either direct or indirect.

3 JUDGE COCKS: Okay, thank you.

4 MR. FERNANDO: Claim 15 is different. Briefly, Your
5 Honors, on Claims 12, 13, and 19, I'd like to turn to Slide 97. Here we see
6 Exhibit 1003, Paragraph 251. This is Dr. Berger's declaration. Now what
7 Apple has said is that Markel does not disclose a bezel because Markel only
8 discloses an electrode 420 on the back side. And that electrode 420 is what
9 a AliveCor has pointed to as meeting the bezel limitation. But that's Simply
10 incorrect.

11 What AliveCor has said is that the side portion 420 is visible
12 from both the front and the back. And we can see here that's highlighted in
13 Dr. Berger's testimony. We see from the front it's visible as 420A. And
14 from the back it's visible as 420B. From this, AliveCor's expert concluded
15 that the side portion, this electrode 420, extends from the back and through
16 the side of Markel's device. And that is how it was annotated on this left
17 side figure of Slide Number 97.

18 JUDGE COCKS: Counsel, one question just to be clear.

19 MR. FERNANDO: Yes, Your Honor.

20 JUDGE COCKS: So what we're seeing on Slide -- what slide
21 number is that?

22 MR. FERNANDO: Slide 97, Your Honor.

23 JUDGE COCKS: Slide 97. The bezel, or what you're saying is
24 a bezel 420, that encircles an electronic device?

25 MR. FERNANDO: It is. So, Your Honor, we are saying that
26 the bezel is on part of the -- I'm sorry, that electrode 420 is on part of the

1 bezel. So the bezel would be the entire area encircling the device. And that
2 420A is certainly placed on part of that bezel.

3 JUDGE COCKS: Thank you.

4 MR. FERNANDO: If we turn to Slide 98, please, we can see
5 that the Board has already reached a similar conclusion in a different
6 proceeding. This is Page 43 of the Institution Decision in the Masimo
7 proceeding. And here the Board appeared to say that Figure 4 illustrates the
8 electrodes molded into the side portions. And so our belief is that nothing in
9 the record of this proceeding should change that conclusion here.

10 We turn to Slide 89. Here we see Exhibit 1003, Paragraph 252.
11 This is, again, Dr. Berger's declaration. Now, Dr. Berger also presented an
12 alternative argument with respect to the bezel claims. He explained that a
13 POSITA would have been motivated to modify Markel's Figure 4 to extend
14 the edges of Markel's second electrode 420 so that they reached the border
15 of the display 140.

16 As Dr. Berger explained, this would have created additional
17 contact area and improved the ability of the device to detect a signal from a
18 user's hand. Now Apple's rejoinder here is that Markel provides no basis or
19 suggestion for this modification. But Apple fails to substantively dispute
20 Dr. Berger's stated reasons for performing this modification, which involves
21 using a known solution to solve a known problem. With that, Your Honors,
22 unless there are any questions, I'm happy to turn the presentation over to my
23 colleague.

24 JUDGE KINDER: Thank you, Mr. Fernando.

25 MR. FERNANDO: Thank you, Your Honors.

26 MR. DOUGLAS: Good afternoon, Your Honors. I'd like to

1 start with Slide 104, please. As my colleague told you, I'm going to address
2 Ground 2, Ground 3, and we'll touch on the revised motion to amend this
3 afternoon. So diving into the Markel and Nissilä combination, I'd like to
4 start with Slide 107.

5 In Slide 107, we start by showing you excerpts from the Markel
6 reference and the Nissilä reference just to orient us to the combination and
7 the similarity between these references before we turn to our rationale to
8 combine.

9 So the first thing I want to point out here on Slide 107 is that
10 both references are directed to monitoring cardiovascular activity and
11 specifically heart rates and ECGs. Turning now to Slide 108, we see that
12 both references, Markel and Nissilä, state that their goal is having
13 inconspicuous or hidden electrode structures. Indeed, Nissilä makes clear
14 that the electrode structure should also be comfortable and suitable for long
15 term use. We also see this in the declaration of Dr. Berger at Paragraphs 352
16 through 353.

17 At Slide 109, we see that Nissilä's membrane, which we'll talk
18 about in a lot of detail today, can be made of metals and conducted plastics,
19 which is consistent with the materials of Markel's enclosure and would
20 enable the user to accomplish Markel's goal of a concealed electrode.

21 Turning now to Slide 110, we see Dr. Berger's testimony at
22 Paragraph 355 of his opening declaration, and Dr. Berger provides our
23 motivation to combine, first to substantially conceal or hide the electrode
24 from the user to increase aesthetics. We see another motivation is to protect
25 the electrode from bumps or other damage.

26 And we also see in Paragraph 357 of Dr. Berger's declaration

1 that he tells us that to the extent that a person of ordinary skill in the art
2 sought additional detail on how to implement Markel's hidden electrode.
3 That the person of ordinary skill in the art would have turned to Nissilä,
4 which expressly teaches a cross sectional view of an improved electrode
5 structure having a pad that is positioned underneath the exterior surface of
6 an enclosure.

7 Turning now to Slide 111, we see your institution decisions,
8 Your Honors. Here, when you looked at the evidence on institution, notably
9 the arguments from the parties regarding motivation to combine, you saw
10 that incorporating Nissilä's electrode into Markel to accomplish Markel's
11 goal of a concealed electrode is a reasonably sufficient basis or reason to
12 combine. Indeed, in particular, you saw a person of ordinary skill in the art
13 would have reason to apply Nissilä's electrode structure having a distinct
14 exterior surface, the membrane, to the teachings of Markel because of the
15 similarities in electrode structure and to achieve the stated goal of the
16 Markel reference.

17 You also saw that Petitioner has shown that this structure could
18 be adopted by Markel's hidden electrode structure. And that was the
19 testimony that I just read to you from Dr. Berger at Paragraph 357. Having a
20 main body portion formed from conductive plastic, and a person having
21 ordinary skill in the art would be motivated to do so to achieve Markel's
22 stated goal of an electrode that is substantially concealed or hidden from the
23 user. Now the institution -- one of the arguments that Apple made was that
24 the Nissilä reference used the term inconspicuous in a different way from
25 what Markel meant. So Markel was talking about a hidden electrode, and
26 Apple's argument that Nissilä was talking about inconspicuous because it's a

1 heart rate band that goes across your chest.

2 And so inconspicuous may not be, you know, have the same
3 concealment objective, if that makes sense, hiding an electrode versus
4 concealing this band that's on your body. But even at that point when you
5 considered those arguments, you said Petitioner shows that Markel's
6 concealment objective could be suitably achieved by use of Nissilä's
7 structure, even if Nissilä does not share a similar concealment objective.

8 And you pointed to Paragraph 355 in your parenthetical. You
9 said Markel's hidden electrode is desirable because it increases aesthetics of
10 the device while protecting the electrode from bumps or other damage.
11 Your Honors, you won't see any evidence or argument that the hidden
12 electrode doesn't protect the electrode from bumps or other damage, or that
13 there is an increased aesthetic here. The argument is still the same that
14 inconspicuous is, you know, should not be relied on because it's talking
15 about inconspicuousness of the band.

16 So let's look at Slide 117, and we can see Apple's argument
17 here. And Apple argues that Markel's already achieved its stated goal of
18 making the electrodes substantially concealed from the user. But again, as I
19 just walked through, that was not the sole motivation to combine. Of course,
20 in Slide 118, we know that even if a device has been improved to a certain
21 extent, it could still be further improved.

22 But in addition to that, I just remind you that I've walked
23 through a number of motivations to combine here that include substantially
24 concealing, that include protecting that electrode from bumps and other
25 damage, and that serve the purpose of Markel's hidden electrode by using
26 the structure of Nissilä. All items that you noted in your Institution Decision

1 were sufficient rationale for the combination.

2 Turning now from the motivation to combine, I'd like to turn to
3 Slide 121 of our demonstratives. And I want to pause here because Slide
4 121 has element 1.c.i of Claim 1 presented. And this, Your Honors, is the
5 element that has the embedded in language. We've talked a lot about the
6 proper construction of embedded in. You've wrestled with that construction
7 in a prior case, but in this ground, embedded in is undisputed. There's no
8 dispute. And so you don't have to reach a construction of embedded in to
9 reach this ground.

10 But moving on from there, I want to start with Markel, Column
11 5, Lines 32 through 43. And I want to introduce you again to the Markel
12 reference. Here we see highlighted that electrodes 118, 122 of the electrode
13 structure 100 consist of a membrane 119 that is located at both ends of the
14 electrode structure 100 at the electrode 118, 122 and is made of metal,
15 electrically conductive plastic, or similarly conductive material.

16 And so what I want you to take away from this, Your Honors, is
17 that we see separate items. We see electrodes 118 and 122. And just to be
18 clear, 118 and 122 are pointing to different sides of the device, so a left
19 electrode and a right electrode. And this is described separately from a
20 membrane 119, different numbers, different names.

21 But what's interesting is that this quote also tells us that the
22 membrane is at the electrode 118, 122. You see that about the fourth line
23 down. It gives us a location of where that membrane is. Again, this
24 suggests this is a separate piece, a membrane. And where do I put it? I put
25 it right at the electrodes 118 and 122. And, finally, we see that the
26 membrane is made of metal or electrically conductive plastics.

1 JUDGE KINDER: Mr. Douglas, you may get into this a little
2 bit --

3 MR. DOUGLAS: Yes.

4 JUDGE KINDER: -- more, but while Patent Owners,
5 obviously, relying on the consist of language pretty heavily, is there
6 anything that either party has cited about interpreting the term consist of
7 formal specification for prior art purposes?

8 MR. DOUGLAS: There is nothing that has been cited that says
9 that consists of in the specification should have a specific meaning. If the
10 case is cited, and we see in the briefing, and that's our position, we see in the
11 briefing that Apple's taking the position that there is broad language in some
12 of their cited cases that could be extrapolated to the specification. But I
13 don't think that's right.

14 When you look at the cases, the question before the court in
15 each of the cases stating, starting with the case in 1914, all the way to the
16 recent cases that were cited, all root from a position where the court is
17 wrestling with what the claim, with the words in a claim.

18 And I'll tell you, Your Honors, that Apple wants you to look at
19 this consistent language and wants you just to stare at that language and
20 think that you're looking at the claims. But if you like to look at the claims,
21 we look at Slide 129, and we see Claim 6 of the Nissilä patent. Claim 6 of
22 the Nissilä patent says an electrode structure is claimed in Claim 1, wherein
23 the first electrode and the second electrode of the electrode structure
24 comprise a conductive membrane located at both ends of the electrode
25 structure.

26 So if we want to go to claim language, and we want to talk

1 about what consist of or comprise means, you don't have to look further than
2 the claims where the claims actually use the term comprised. But I don't
3 think you need to go there, Your Honors. I think when you read the text of
4 Nissilä, when you read the separate numbers, when you, and I'm going to
5 walk through a little bit more, but you see the separate numbers, you see the
6 fact that the membrane has to be placed at the location of those electrodes.
7 You don't even need to get into looking to this claim or deciding comprised
8 versus consist of.

9 Can we turn back to Slide 122, please? And so now I want to
10 look at element 1.c.ii and, Your Honors, this is also not disputed. There's no
11 dispute that Nissilä tells us there's an exterior surface of the enclosure, and
12 it's the exterior surface of the first portion. There's no dispute here.

13 Looking at what I have highlighted here, this is again Column
14 5, Lines 32 through 43. But I think this is important because this is where
15 Nissilä says the membrane can thus come into contact with the person's skin,
16 surface 102. So we know the membrane is now in contact with the skin or
17 an inner surface 116 of the membrane, which is against the person's skin,
18 there can be an electrically conductive adhesive.

19 And so remember, we're talking about this band, you know, a
20 heart rate band that is going across your chest. It's sticky. So the intention is
21 that it sticks to your body. And what we could have on the membrane is an
22 electrically conductive adhesive which helps it stick to your body.

23 But turning now to Slide 123, we see Nissilä also tells us that if
24 the electrodes 118 and 122 is narrower than the band-like component, it's
25 possible to use a nonconductive adhesive¹²⁷ on the outer edges of the band.
26 So imagine now you have this sticky band, you have an electrode that is

1 narrower than the width of the band. On top of it we have a membrane. The
2 membrane has sticky electrically conductive adhesive. Why? Because the
3 signal has to get from the skin to the electrode. But guess what? We don't
4 need that fancy the electrically conductive adhesive, and they call a Sol-Gel.
5 You could have nonconductive adhesive around the outsides.

6 So, of course, we don't have membrane or electrode out there
7 because we don't need it. But we still need that sticky material to hold it
8 onto your chest as you're, I assume going for a run or maybe just wearing it
9 throughout the day.

10 So turning not to Slide 124, we know that the sole disputed
11 limitation here is whether there is an electrode underneath the exterior
12 portion. So is there an electrode underneath the membrane? And so Slide
13 125, let's walk through Apple's arguments here. Of course their argument is
14 there's no disclosure of a pad or electrode positioned underneath.

15 And in Slide 127, we see that Apple's position relies on you
16 finding, Your Honors, that each of Nissilä's electrodes 118, 122 is a
17 membrane 119. So just to be clear, to find in favor of Apple requires you to
18 find that the electrodes are solely constructed of the membrane, simply is not
19 the case. We've walked through this disclosure.

20 And as you raised, Judge Kinder, on Slide 128, Apple is urging
21 you to look at just two portions of the specification that use the terms consist
22 of. I submit to you, and if you look at the POR, they tell you there's
23 nowhere else, but I've already showed you that there's at least another place.
24 Claim 6, which has the unfortunate, I think for Apple, comprising language
25 that wasn't addressed in the POR.

26 But I want to take a step back, and I just want us to continue to

1 remember that I walked through Demonstratives 121 through 123, Column
2 5, Lines 32 through 43 of Nissilä, clear disclosure in our view, that talks
3 about different components, the membrane positioned at the location of the
4 electrode and tells us where the adhesive needs to be.

5 JUDGE COCKS: Counsel, I have one question.

6 MR. DOUGLAS: Yes, Your Honor.

7 JUDGE COCKS: I think you've probably already answered
8 this, but I just want to nail it down. Can you go back to any of Slides 121 to
9 127, I guess Slide 121?

10 MR. DOUGLAS: 121, please. Yes, Your Honor.

11 JUDGE COCKS: So the portions of, that are shown in green
12 labeled membrane, which looks like it's in circles 118, 122, and extends the
13 entirety of 116, you're deriving or, in your view, that emerges from Column
14 5, Lines 32 to 43?

15 MR. DOUGLAS: Yes, Your Honor. Yes, Your Honor. It's our
16 view that this text provides clear disclosure of that line. And it's true. It's
17 true. We're going to hear today, I'm sure, that the 119 lead line points to the
18 top of the electrode, and I agree with that. There's just not a way, you know,
19 so we don't dispute that 119 points to the top, but we believe the -- it doesn't
20 limit it to just the top. And so when you look at this at 5, 32 through 43, it
21 tells you where else the membrane is positioned.

22 So if we could go to Slide 133, I think we're going to hear today
23 about the priority application of Nissilä. This is a Finnish application. And
24 turning now to Slide 134, and the first thing I'd like to say is in this
25 proceeding we have a US patent. It's an issued patent to Nissilä. It's
26 presumed enabled. I think that US patent has everything you need, Your

1 Honors, so you don't need to go outside the four corners of that, of that US
2 patent.

3 But if you did, you're going to see today, I think, in Apple's
4 Demonstrative Slide 50, the text from the Finnish application. And what
5 you'll see is that the text states that the electrodes 118, 122 of the electrode
6 structure 100 are formed of in electrically conductive film 119 at the
7 position of the electrodes 118, 122, and at both ends of the electrode
8 structure.

9 Again, there's nothing here, Your Honors, that's limiting about
10 this formative language. But what's more, the text is telling in that the
11 priority application tells us that the membrane, it's called the conductive
12 film, is positioned at the electrodes 118. How can the membrane be the
13 electrode if it's positioned at the electrode? Again, this is telling us where do
14 I take this membrane? Where do I put it, at the electrode?

15 Turning now to Slide 137 --

16 JUDGE KINDER: Excuse me. What slide was that you were just
17 referring to?

18 MR. DOUGLAS: I was referring to Apple's Demonstrative
19 Slide 50 --

20 JUDGE KINDER: Okay.

21 MR. DOUGLAS: -- which, Your Honor, has just the text of
22 that Finnish application. Turning now to Slide 137, Apple has a second
23 argument that you may hear about today. And the second argument, Apple
24 says we'll take AliveCor's view and say there is a separate membrane. But
25 once we do that, it's not in the place where AliveCor says it is.

26 So we see in Slide 138, a depiction of Apple's green line. And

1 so Apple's green line is everywhere but at the bottom of the electrode or
2 inner disposed between the electrode and the skin. So it is everywhere but
3 those locations. This can't be the correct reading of Nissilä. We've walked
4 through it. We know that membrane is at the position of the electrode. We
5 know that that membrane is conductive and is conductive signals back to
6 that electrode.

7 So we turn to Slide 139. We've touched on this, Your Honor.
8 One of Apple's arguments is that that lead line 119 is pointing to the top and,
9 therefore, the membrane must only be in the top. We don't believe that's
10 true. And Columns 5, Column 5, Lines 32 through 43 make clear that that
11 membrane must be in contact with the skin.

12 And again in that same area, if we go back to 138, please. I
13 think Apple might argue that while the contact with the skin is actually in
14 those wings on the sides, it's not at the location of the electrode. Again, I
15 think that the text is very clear there. But, again, I would point out, Your
16 Honors, I read to you from 532 through 46 that on those wings that are
17 outside of the electrode, you would have nonconductive adhesive.

18 And so we know, and if you remember the quote -- if we go
19 back to 123, please, Slide 123. When the electrode is narrower than the
20 band-like component, it's possible to use nonconductive adhesive on the
21 outer edges of the band. So we know that it wouldn't make sense to have the
22 membrane just on the outside because that's where the nonconductive glue
23 would go. It would only make sense to have it right on top of the electrode
24 where there is that conductive glue.

25 Turning now to Slide 142. You may also hear that Figure 4 of
26 the Nissilä reference doesn't show membrane 119. It's true. It doesn't show

1 it. But I submit to you that that doesn't tell us anything about membrane
2 119. Again we're looking to Column 4, Lines 32 through 43. I'd like to turn
3 now to the Markel, Nissilä, Righter Ground unless there's any questions,
4 Your Honors.

5 Turning now to Slide 149, we transition to the Markel and
6 Righter grounds. Slide 154, Markel -- well, first I'll start off, there has been
7 no dispute that there's a motivation to combine the Markel, Nissilä, and
8 Righter. Now, looking at Slide 154, we see Claim 12A, where in the first
9 portion of the enclosure is a bezel. My colleagues already addressed the
10 bezel construction. I will point out to Your Honors that there is no display
11 in Claim 1, so I'm not sure what we're securing. And so we're trying to read
12 into the display. And when we talk about the motion to amend, there is a
13 claim with the display, but we'll get there.

14 Here, what we see is Righter, the Righter reference has
15 electrodes along the side. They're annotated in 11, or they're annotated in
16 yellow here on Slide 154. In Slide 155, we see the declaration of Dr. Berger
17 at Paragraph 405, where he tells us that the bezel includes a rim that
18 encircles an electronic device. Again, if you look at the claim language of
19 Claim 1, if you go back one, which is where in the first portion of the
20 enclosure is a bezel.

21 Remember, the first portion of the enclosure is just that part of
22 the enclosure that we've been talking about, no display. So there's no, there's
23 nothing else to say other than this is a rim that encircles an electronic device.
24 My colleagues touched on that. And Dr. Berger testifies that because the
25 side surfaces of the casing 11 encircle the top surface of the casing,
26 including LCD display. So we do have a display in the Righter reference.

1 The side surfaces are indeed a bezel here.

2 Turning now to Slide 160, we see that Apple's counter
3 argument requires adoption of their construction. But even under Apple's
4 construction, the Righter bezel does, in fact, secure the screen of Righter.
5 How could it not? It is a single piece housing. These are the side portions
6 that are holding the top in place that has the display.

7 Turning now to Slide 161. Interestingly, Apple's argument is --
8 the second argument is specifically, the sides and top face of Righter's watch
9 appear to be made from one piece and not from a front face supported by a
10 rim defined by the sides. I'm not sure where any of that is in the claims. I
11 don't see any requirement that says that the enclosure can't be a single piece.
12 I don't remember seeing front face in the claims. I don't see a rim. All we
13 have here, if we go back one slide, two slides I'm sorry, back to 158 is that
14 the first portion of the electronic device comprises a bezel of the enclosure.
15 And Claim 1 talks about this enclosure doesn't require it to be multiple
16 pieces. Again, I think you should find against Apple with that particular
17 argument.

18 Turning now to Slide 166, I'd like to talk about the motion to
19 amend. I'm sorry, the revised contingent motion to amend. And the first
20 thing that I'd like to talk about is Slide 171. Apple's provided five new
21 dependent claims, each of which have a number of new limitations. These
22 range from three new limitations in some claims. And these limitations
23 include elements that are certainly new and different from what we've seen
24 before, especially in the claims that preceded them.

25 In your preliminary guidance, you seem to have concerns about
26 this, Your Honors. You had two concerns. Your concerns were that Patent

1 Owner had not sufficiently explained what seven proposed new claims -- I
2 give you there's five now, whose features and dependencies were not
3 traceable to features and dependencies from the claims they're intended to be
4 substitutes for.

5 It's true. Apple has solved the dependency problem that I think
6 you were pointing to. You were concerned, I think, that they were switching
7 the dependencies of claims, and they fixed that. That is no longer a concern.
8 I give you that. But they haven't told us, or you, how any of these new
9 features are traceable to the original claims. There's nothing. It's not a
10 section. This is not me saying that there's a paragraph, and I don't think it's
11 sufficient. They just didn't do it.

12 Your rules allow you to stop or to deny the motion to amend on
13 that basis alone. You don't need to decide in this case whether adding three
14 additional limitations is too much for a motion to amend. You don't have to
15 decide that that should be -- is proper here or in one of their continuations.
16 You don't have to reach that.

17 All you have to decide is whether the electronics case, and your
18 rules tell you, that Patent Owner has to tell you where these new elements
19 are traceable to in the original claims and look to the opening motion and a
20 reply. Of course, the reply would be too late too, but it's not there either, and
21 find where they told you that these elements were traceable. You won't find
22 it.

23 JUDGE KINDER: Mr. Douglas, I see that time is getting a
24 little short on the revised motion to amend. I'd really like to talk about your
25 position with respect to the embedded inner surface of the electrically
26 conductive metal bezel.

1 MR. DOUGLAS: Yes.

2 JUDGE KINDER: And if you could explain your position
3 about how the pocket comes into play in this form.

4 MR. DOUGLAS: Absolutely. Thank you, Your Honor.

5 JUDGE KINDER: Okay.

6 MR. DOUGLAS: Moving now to Slide 208, this is just Claim
7 24, but we also have Claim 25 that have that bezel limitation, and so what I'd
8 like to point out first, Your Honor, is that Claim 25 has this bezel limitation.
9 And my colleague and I have been critical that the claims don't have a
10 display. And so we ask you not to read in the concept of display when we're
11 talking about the bezel limitation and Claim 25 and absolutely has a display.
12 It further comprises a touch screen display. That's the first thing that's
13 introduced. Again, nothing that's traceable to anything in the original
14 claims.

15 But I will point out, Your Honor suggested earlier about, you
16 know, does the bezel construction impact the motion to amend? And I'll just
17 note that here in this proceeding Apple had every opportunity to write their
18 claims as they say they should be construed, but here in Claim 25 they say
19 wherein the bezel extends around the touchscreen display. So, that's what
20 they want you to define bezel to be.

21 And so as you're analyzing this, I would ask you to use what
22 they actually say the bezel is and not the plain and ordinary meaning they'd
23 ask you to apply.

24 But to answer your question, Your Honor, about the bezel, I'd
25 like to turn now to Slide 215. And so, Your Honor, your question was about
26 the pocket in particular, and when we look at the briefing, and specifically,

1 you know, Paper 29 at 8, we see that Apple is relying on a very particular
2 section of their original application for support of the bezel limitation.

3 And we saw it before my colleague's slides. This is the same
4 paragraph that we talked about with regard to Figure 4B. We just have the
5 different language here, so we're pointing to 2016, Paragraph 47. So that's
6 the original application.

7 But what we see in Apple's paper is that they say the priority
8 documents describe leads 322 and 324 could be integrated in bezel 310
9 using any suitable approach, such as placed within the thickness of the bezel
10 for 460 ellipse, but underneath the outer surface of the bezel.

11 And so their support for adding this bezel in the embedded in
12 language is that same placed within the thickness language that we talked
13 about earlier today.

14 And so what we're showing you here in this slide is that the
15 actual language does have a nice e.g. there that says when we're talking
16 about placed within the thickness of a bezel, we see e.g. in a pocket of the
17 bezel wall so that's just an example.

18 And AliveCor is not saying that a pocket is the only structure
19 that meets the claim language, certainly not. We're just saying that this is an
20 example of a structure that would, in fact, meet the embedded in language.
21 And so based on that, Your Honor, our position is that, and Dr. Berger's
22 testimony shows, that the Nissilä reference renders obvious a pocket
23 structure. And we see that at Exhibit 1021, 49 through 50.

24 And we're relying on that teaching from Nissilä to show
25 pockets embedded in that bezel structure as combined with the Markel
26 reference, which we rely on to show the bezel.

1 So, that's, Your Honor, where -- how we get to the pocket.

2 JUDGE KINDER: Okay, thank you.

3 MR. DOUGLAS: And it's our position that if a pocket does not
4 mean this bezel language, then Apple has a written description problem
5 because they're relying on that exact same sentence for their written
6 description support.

7 Turning briefly to Slide 243, I want to touch briefly on just
8 Claim 27. I think you might hear today that -- you might hear about Claim
9 27 and you might hear some disclosure about Markel individually or
10 Engstrom individually. I just want to point out the testimony of Dr. Berger
11 in 1023, Paragraph 59, and note that we're relying on the combination.

12 So, we have the Markel reference that just discusses using
13 identification and authentication and ECGs, and we have the Engstrom
14 reference that is talking about actually using a heartbeat profile for
15 authentication purposes and we're saying those two would be combined to
16 use ECG for authentication.

17 Lastly, I would like to touch on Slide 249, and we see here new
18 substitute Claim 24. And this is in our briefing, Your Honor, but I know that
19 Claim 24 introduces a limitation wherein the first pad is embedded in an
20 inner surface of an electrically conductive metal bezel that forms a portion
21 of an exterior surface of the electronic device.

22 And it's our position that Claim 1 already tells you that a first
23 pad is embedded in a first portion of the enclosure and that enclosure you
24 want an exterior surface, and the enclosure comprises an exterior surface in
25 the first portion and then the first pad is positioned underneath the exterior
26 surface.

1 And it's our position that Apple has now put the pad or
2 embedded the pad in two different places rendering the claim indefinite.
3 And I will note that Apple did not rebut this argument in their papers.

4 Pending any questions, Your Honors, I would like to reserve
5 the remainder of our time for rebuttal.

6 JUDGE KINDER: All right. We'll add on an additional minute
7 so I think you'll have 11 minutes on rebuttal.

8 MR. DOUGLAS: Thank you, Your Honor.

9 JUDGE KINDER: All right. Thank you.

10 Mr. Renner?

11 MR. RENNER: Just a moment. We're going to connect the
12 machine up here.

13 JUDGE KINDER: Mr. Renner, whenever you're ready. I've
14 got 20 minutes reserved?

15 MR. RENNER: Correct, Your Honor.

16 JUDGE KINDER: Okay. So out of 70 you'll have 50 first.
17 Whenever you're ready.

18 ORAL ARGUMENT

19 MR. RENNER: Okay. Good afternoon, Your Honors, Karl
20 Renner on behalf of Patent Owner Apple, may please the Board. With our
21 limited time together I plan to focus on a few key issues that we outlined in
22 our briefing and developed through record evidence to you.

23 I'll then ask my colleague Rick Bisenius to walk us through the
24 slides and specifically look at the relied upon disclosures in Markel and
25 obviously the Nissilä reference, as well as the testimony that was given by
26 both experts, both in their direct as it relates to the declarations and the cross

1 because we believe this helps to support the positions we've taken and
2 undermine, of course, those that support the position.

3 I wanted to begin --

4 JUDGE KINDER: Mr. Renner, could I ask real quick about
5 Claim 15?

6 MR. RENNER: Yes.

7 JUDGE KINDER: Do you have any specific arguments for
8 that claim that will -- in your briefing?

9 MR. RENNER: Thank you, Your Honor. We're going to rest
10 on the papers on Claim 15.

11 JUDGE KIDNER: Is there any arguments in your papers that
12 are directed to Claim 15?

13 MR. RENNER: I'd have to go back to look. We haven't been
14 looking at Claim 15 of late, so I can get back to you, if you wouldn't mind,
15 on the next stanza? Is that --

16 JUDGE KINDER: Yeah. I didn't see any. I just -- don't want
17 to make sure -- I want to make sure I'm not missing anything.

18 MR. RENNER: I do want to commit to there not being any is
19 all, but --

20 JUDGE KINDER: And I wanted to make sure I wasn't missing
21 anything. Okay, thank you.

22 MR. RENNER: Certainly. I was going to begin with an
23 observation, Your Honors on the positions that have been advanced by
24 Petitioner and the fact that they don't address the very limitations that were
25 added to your amendment during prosecution of the claims that led to
26 allowance of Claim 1. And in particular, they're relying on prior references

1 in Nissilä and Markel that failed to deal with the language that was added
2 during these amendments.

3 And I'll remind, if I may, that during prosecution Claim 1 was
4 amended and in the amendments it was amended to recite that the first pad it
5 was not only embedded in a first portion of the enclosure, but it was also
6 said to be positioned underneath an exterior surface of that first portion of
7 the closure.

8 And again, that was the limitation that was added to get to
9 allowance of Claim 1 among other claims. And despite this, AliveCor has
10 asked you to look at references that fare no better and we'll talk a little about
11 that. And we'll show you a disclosure in large part that helps us to
12 understand that when looking on it.

13 In fact, our position, as you may have noticed, is that that
14 reference material not only is silent as to this particular limitation, it shows
15 an alternative to it. It shows an electrode that is at the surface not
16 underneath the surface.

17 Do when we look to each of Markel and Nissilä, we think we'll
18 find this here as to the first ground along those lines with Markel being
19 advanced alone for obviousness, we find it probative that within Markel you
20 can't find disclosure of actually an embedded electrode that is anything but
21 at the surface.

22 Instead, we'll find that when we investigate the language within
23 it we'll see it exactly at that surface. And my colleague Rick will highlight
24 that Markel, it effectively acknowledged this. It talks about concealment, a
25 visual concealment and similar between that electrode and other components
26 at the surface of that structure by virtue of using a similar and viewable

1 format plastic, conductive plastic, that's similar to the other structures at the
2 surface. Why would you camouflage something unless it's at the surface of
3 usable, not under the surface.

4 Ground 2 doesn't fare better. It's Markel with Nissilä the
5 reference to modify it, and here we have Nissilä likewise showing us a
6 structure that has its electrodes at the surface not under the surface. And
7 again, we'll look at the disclosure of Nissilä to demonstrate this.

8 More, what we have is the Petitioner embracing what it believes
9 to be in these references a disclosure and the electrode under the surface. It
10 thinks that it's got an electrode under the surface being disclosed. So, when
11 it looks at Markel alone it's coming from a stance of the electrode is exactly
12 where it should be, exactly where the claim requires it to be. It's not giving
13 you motivations or even suggestions on why or how you would change it
14 because it thinks it's already there.

15 The same is true when you have the Nissilä combination with
16 Markel. It thinks Nissilä in the alternative discloses exactly what's claimed.
17 That's its position that there's disclosure in Nissilä.

18 So it's a combination of saying pull Nissilä in because it's
19 already got what you need, not we need to move, whereas motivation of a
20 person of skill looking at it would move what it has to the position that's
21 claimed. And we think this has failed for them.

22 Obviously at the point of the spear here is the claim limitation
23 that says the electrodes that are both embedded in and underneath that
24 exterior surface in the record reveals an absence of disclosure, we believe, in
25 each of the references of that, which is quite important.

26 Dr. Kenny explains, and we'll show you testimony from him,

1 that a complete read of the references, not just excerpts from here and there,
2 but a complete read of them provides you the understanding you need of
3 what they're disclosing, which is that this electrode is not positioned
4 underneath but instead at the surface. And again, you don't have to take our
5 word for it.

6 You can look at the testimony and we will look at testimony
7 that we were able to secure through deposition of the expert Dr. Berger for
8 Petitioner because there again, we saw him acknowledge the lack of support
9 for the positions originally taken and we didn't see any supplemental expert
10 declaration. We didn't see a redirect during the deposition. We didn't see
11 any further evidence coming in.

12 What we saw was we put in evidence on this point. We asked
13 questions in advance of that to make sure we understood what's going on,
14 and we saw in -- no further reference it.

15 So without further ado, I would welcome my colleague up and
16 he'll take us through some of the excerpts that we're talking about in that
17 expert testimony that we think substantiates the position. Thank you, Your
18 Honors.

19 JUDGE KINDER: Okay.

20 MR. BISENIUS: Good afternoon, Your Honors. I'd like to
21 start off by talking about Ground 2, specifically in the disclosures of Nissilä,
22 and so I'm going to advance to Slide 41 of the Patent Owner's slides.

23 So on the left here, we have the disclosure from Nissilä in
24 Column 5 that AliveCor relies upon in this proceeding. I want to talk about
25 the actual language of Nissilä before we get into how AliveCor characterized
26 that in their petition.

1 So here in the first sentence, you can see it states according to a
2 second embodiment, as in Figures 3 to 6, the electrodes 118 and 122 of the
3 electrode structure 100 consist of a membrane 119 that is located at both
4 ends of the electrode structure 100 at the electrode 118 and 122 and is made
5 of metal, electrically conductive plastic, or a similar conductive material.

6 So this is quite a long sentence, so I want to go back and just
7 parse through these disclosures. The underlying part states the electrodes
8 118 and 122 of the electrode structure 100 consist of a membrane 119.

9 Now, Your Honors were correct that we are leaning on the consist of
10 language in the sentence. That's not the only evidence of record and not the
11 only indication of what Nissilä actually indicates.

12 Notably here, the only structure identified were the electrodes at
13 118 and 122, is the membrane 119. There's no other structures listed for it.
14 There's no inner core. There's no discussion of a membrane circling the
15 electrodes. There's no discussion of a membrane enclosing the electrodes.

16 It says the electrodes 118 and 122 consist of a membrane 119
17 with no discussion of any other structure. It just tells you what material that
18 membrane, which is the electrodes, is made from at the end of the sentence.
19 So, electrically conductive plastic or a similar conductive material.

20 Now, Petitioner made a big deal of this phrase in the middle
21 that says at the electrode 118 and 122. We'll agree that this is worded semi
22 awkwardly, and we believe it's probably because it's a translation from
23 Finnish.

24 Well, what's happening here is it's describing the membrane
25 being the electrodes 118 and 122 in this embodiment but saying at the
26 electrode 118 and 122 the electrode 118 and 122 take a different form in

1 different embodiments. And I'm going to get into that a little bit.

2 But as you can see here, this is described as a second
3 embodiment. So, there's another embodiment in which there's a conductive
4 adhesive that forms the electrode 118 and 122 at the position of the
5 electrodes 118 and 122.

6 If you look over to the right side here, Figure 5 is an agreement
7 with the correct interpretation of the sentence that the membrane 119 is the
8 electrodes 118 and 122. We can see that the lines coming from reference
9 numeral 119 and the lines coming from reference numeral 118 and 122 are
10 pointing to the same object. They are pointing to that rectangular electrode.

11 And there's, unlike the modified version shown in the petition,
12 there isn't an additional layer on it. This is not a thicker line. There's no
13 additional membrane surrounding this electrode because the electrodes are
14 the membrane.

15 Now during their presentation, Petitioner stated that there's no
16 evidence of record that the term consist of outside of a claim should be
17 interpreted to mean consisting of and only of, but that's simply not true.
18 When we look at the case law that was cited in the Patent Owner's response
19 many of the cases were indeed addressing claim language specifically but
20 what they found was not limited to only claim language.

21 One example is that in the Reverse case cited in the Patent
22 Owner's response in which the Court stated now formed of and composed of
23 are the same. They both mean consisting of. They were looking back to
24 earlier cases to come to that conclusion. They weren't saying only in this
25 claim does consisting of mean formed of or composed of.

26 They're saying that this is generally what the term consisting of

1 means. This is even more clear in Multilayer Stretch Clean Film Holdings,
2 Inc v. Berry Plastics Corp. In that case in the dissent, the Judge reframing,
3 rephrasing what the Court's opinion says, stated, as the Court's opinion
4 explains, in patent law and probably in the dominant strand of formal
5 English, consisting of means including only, containing only, composed of
6 only, made of only.

7 But once again, even if the term consists of maybe has a
8 slightly broader interpretation in the specification rather than the claims, it
9 doesn't mean made only of. There is no other structure listed for the
10 electrodes 118 and 122 in this embodiment. It says the electrodes 118 and
11 122 consist of a membrane 119 with no other structure identified.

12 JUDGE COCKS: Counsel, one question. That same paragraph
13 refers to inner surface 116 of the membrane 119, which appears to extend
14 beyond the contours of 118 and 122. Is there any inconsistency there?

15 MR. BISENIUS: So, when taken in context of the rest of
16 Nissilä, which I can get into right now, what that sentence is saying is that
17 the membrane 119, which is the electrodes 118 and 122, defines a portion of
18 the inner surface 116. And I can point to several places in Nissilä that
19 discuss that.

20 Unfortunately, I don't have a slide for this so I'm going to direct
21 you to Exhibit 1006, please, in Column 5. And this paragraph is discussed
22 throughout the Patent Owner's response at Page 51, 56, and 77 of the Patent
23 Owner's response. But at Nissilä, this is Exhibit 1006, Column 5, Paragraph
24 50, which is the next paragraph after the paragraph shown in Slide 41.

25 And here we find that Nissilä is using the term 116 simply to
26 refer to that entire inner surface of the electrode structure. And so it says

1 because the inner surface 116 of the electrode structure 100 is the portion
2 which is against the person's skin, the electrodes 119 and 122 are perfectly
3 located on the inner surface 116 of the band 101.

4 So, note that it's saying the electrodes are positioned on that
5 inner surface, not that the electrodes are covered with an additional
6 membrane between the electrodes and the inner surface. It's saying that the
7 electrodes are on that inner surface that comes in contact with a person's
8 skin. That's against the person's skin.

9 The next few sentences in the same paragraph give a couple of
10 alternative configurations that are not depicted. The next sentence says the
11 electrode structure 100 can also be designed such that the electrodes 118 and
12 122 are partly or completely above the inner surface 116 and the other
13 surface 120 of the band. Further, the electrode structure 100 can be designed
14 such that the electrodes 118 and 122 are located on the inner surface 116 of
15 the band, but they have interfaces also on the top surface 120 of the band
16 101.

17 So, it's describing two alternatives here, but in every one of
18 these alternatives the electrodes 118 and 122 are defining that inner surface.

19 Now, here's another example of why we know that the
20 reference numeral 116 is simply referring to the entire inner surface of the
21 device is the other embodiment.

22 So, I'm going to move forward to Slide 42 of Patent Owner's
23 slides, and here we have the other embodiment described with the red line
24 here. It states that the electrodes located at the ends of the band-like
25 component of the electrode structure are made of electrically conductive
26 adhesive. And it contrasts this two sentences later to a second embodiment

1 where the first electrode and the second electrode of the electrode structure
2 consists of an electrically conductive membrane at both ends of the electrode
3 structure at the electrode.

4 So, here we have the two different embodiments. The
5 electrodes are made of electrically conductive adhesive, and in the second
6 embodiment the electrodes consist of, are made of, formed of the conductive
7 membrane.

8 Now, I'm going to go back to Exhibit 1006, the Nissilä
9 reference, to talk about how this is shown in the figures.

10 JUDGE KINDER: Counsel, can I ask a question about this
11 second embodiment that you're proposing? Could the electrical conductive
12 adhesive also be a membrane?

13 MR. BISENIUS: There's no disclosure in Nissilä of the
14 electrically conductive adhesive being a membrane. And actually, it says
15 that you could use electrically conductive adhesive with the membrane
16 embodiment. I'll get to that in a bit.

17 Petitioner has not alleged that the electrically conductive
18 adhesive satisfies a membrane, and we believe that it's using this different
19 terminology because in Nissilä's understanding a membrane is something
20 different than that electrically conductive adhesive.

21 And we presented evidence on this point. We pointed to a
22 couple of dictionary definitions. So, one example is in Exhibit 1015. I
23 won't make you open it up, but I can read to you the part that we cited. A
24 membrane is defined as any thin, pliable sheet of material.

25 And so, what Nissilä is doing here is it's differentiating an
26 electrode that's a thin, pliable sheet of material, which it describes as being

1 made from a conductive metal or conductive plastic, from the other
2 embodiment in which the electrodes are the conductive adhesive.

3 Now, if you -- I would like to return to Exhibit 1006 and
4 specifically looking at Figure 7, Your Honors. Figure 7 is showing this
5 other embodiment that the electrically conductive adhesive forms the
6 electrodes, and we see this is consistent with how this inner surface 116 is
7 described in Nissilä. It shows reference numeral 127 and 118 pointing to the
8 same structure in this embodiment. The electrode 118 is the electrically
9 conductive adhesive 127, and we see that the reference numeral 116 also
10 pointing to that structure. It's pointing to the entire inner surface of the bend.
11 Same on the right side.

12 Reference numeral 127, the conductive adhesive, is pointing to
13 the same material as electrode 122 because electrode 122 is the conductive
14 adhesive 127. And once again, reference numeral 116 is pointing to that
15 entire inner surface.

16 And we think this becomes clear from the language in Column
17 5 that I just discussed at Line 50 of Column 5 where it states that because the
18 inner surface 160 and the electrode structure 100 is the portion which is
19 against the person's skin, the electrodes 118 and 122 are preferably located
20 on the inner surface 116 in the band.

21 So, when Nissilä talks about 116, it's talking about the inner
22 surface and it tells you that the electrodes are on that inner surface. There's
23 no discussion of an intervening membrane.

24 So, we're turning to Slide 41 and the paragraph that comes right
25 before that. With that context, we look at this disclosure that says the
26 membrane 119 can thus come into contact with the person's skin surface 102

1 or on the inner surface 116. It's saying that the membrane is the inner
2 surface 116.

3 But here's what's really important about this disclosure here.
4 It's talking about an undepicted embodiment. Let's go back and look at the
5 sentences before this. It states the electrodes 118 and 122 at both ends of the
6 electrode structure can be equal or narrower in which the band-like
7 component. That's two different configurations.

8 The configuration on the right we're seeing the narrower than
9 the band-like component. If we go back to Slide 40, we see Figure 4 on the
10 left from the same embodiment. This shows that the electrodes 118 and 122
11 are narrower than the band-like component. It's talking about that
12 embodiment.

13 We're turning to Slide 41. When we get to the next sentence it
14 states the membrane 119 does come into contact with the person's skin
15 surface 102 were on the inner surface 116 of the membrane 119. It's our
16 interpretation here that Nissilä is talking about the embodiment in which the
17 membrane, which is the electrodes 118 to 122, extends all the way to the
18 ends of the band and is not narrower than the band. And that's why in this
19 embodiment it says that it would be covered with the electrically conductive
20 adhesive.

21 The next sentence is not really important. It talks about what
22 the electrically conductive adhesive could be, but then in the last sentence it
23 switches to the depicted embodiment in which it states if the electrode 118
24 and 122 is narrower than the band-like component 101, it is possible to use a
25 nonconductive adhesive 127 on outer edges of the band 101 on the inner
26 surfaces thereof outside of the electrodes 118 and 122.

1 So, going back to this sentence that Petitioner focused on,
2 where it states the membrane 119 can thus come into contact with a person's
3 skin surface 102 or on the inner surface 116 of the membrane 119, that's
4 because it's discussing an undepicted embodiment in which the membrane
5 119, which is the electrodes 118 and 122, those electrodes consist of that
6 membrane.

7 The membrane, the electrodes, are extending all the way to the
8 edges and so therefore the electrodes, which are the membrane are defining
9 the entire inner surface 116. It is only the last sentence here where Nissilä is
10 addressing the actual depicted embodiment where it discusses that there
11 would be adhesive surrounding it and it doesn't actually mention the inner
12 surface 116.

13 But it does discuss the inner surface 116 in the next paragraph
14 where it's expressed. The electrodes are positioned on the inner surface 116.
15 No mention of an intervening layer. And as we see here, there's no
16 discussion of any additional structure for the electrodes other than the
17 electrodes -- other than the membrane 119.

18 So, I'd like to go back to Slide 39. So here on the right we see
19 Figure 5. On the left we see the annotated version of Figure 5 from the
20 petition. And here, the Petitioner has drawn a green line covering the entire
21 bottom surface, hence encircling the electrodes.

22 Now, we believe that this is unsupported for the reason that we
23 just stated. And as you can see, it's curious that they put the label for
24 membrane covering the line from the reference numeral 119 which is
25 indicating that it's the electrodes 118 and 122 that actually is the membrane
26 119.

1 Now, looking on the left side again, if we were to imagine that
2 you're looking at the device from the bottom up at the inner surface, all
3 you'd see is that membrane across the entire bottom, one solid, undisturbed
4 membrane. Well, that's simply not the case.

5 If we look at Slide 40, the actual Figure 4 from Nissilä on the
6 left, which is described as being from the same embodiment as in Figure 5,
7 and is described as, quote, in inner surface of the electrode structure Figure 3
8 we see that the electrodes 118 and 122 are visually distinct. We don't see a
9 membrane covering the entire bottom portion.

10 And the reason that the membrane 119 is not labeled in Figure
11 4 is because the electrodes 118 and 122 are the membrane 119. And just so
12 there's no confusion here, this is not a cross-section on the left side and
13 Nissilä knows how to use the term cross-section because when describing
14 Figure 5 on the right it describes it as a cross-section of the electrode
15 structure of Figure 3, which clearly it is.

16 But on the left, it's saying that this is the inner surface of the
17 electrode structure of Figure 3. So, this is what you see when you look at
18 the bottom of the device and that's what Nissilä shows you in Figure 4.

19 Turning back to Slide 39, it is not possible for that membrane to
20 be covering the entire bottom surface of the device and that's because the
21 only correct reading of Nissilä is that the membrane in this second
22 embodiment is the electrodes 118 and 122.

23 We're turning again to Slide 41. I just wanted to briefly address
24 that the Petitioners argue that since a different reference numeral is being
25 used, 119 for the membrane, that has to be a different structure.

26 But Nissilä is not without reason in using a separate reference

1 numeral for the membrane 119, and that's because the electrodes 118 and
2 122 are up here in both embodiments, but only in one embodiment are they a
3 membrane 119.

4 In the other embodiment of Figures 7 and 8 that we discussed
5 earlier, they are a conductive adhesive 127. So the reason there is a separate
6 reference numeral is because it's identifying a different material that's used
7 to make the electrodes. And as it states here, the electrodes 118 and 122
8 consists of a membrane 119.

9 Moving ahead to Slide 43, Petitioner showed this language so
10 I'm not going to go into it too much. This is just from the summary. This is
11 in agreement with what we just saw.

12 It says the first electrode and second electrode of the electrode
13 structure consists of an electrically conductive membrane at both ends of the
14 electrode structure at the electrode. Once again, it's identifying only one
15 structure, one material for the electrodes, the electrically conductive
16 membrane.

17 So Petitioner did raise the language in Claim 6 and deceptively
18 they said we didn't address it in our Patent Owner's response. We did
19 address it fully in our Patent Owner's surreply, but looking at the language of
20 26 it states wherein the first electrode and the second electrode of the
21 electrode structure comprise a conductive membrane located at both ends of
22 the electrode structure.

23 So Petitioner would have you believe that because it uses that
24 open-ended language comprised, now we have to read in multiple structures
25 into the electrode, but Figure 6 doesn't identify a membrane and an inner
26 core.

1 Figure 6 doesn't identify a membrane encircling the electrode.
2 It simply states that it comprises that the first electrode and the second
3 electrode comprise a conductive membrane. None of the other dependent
4 claims given any additional structures for the electrodes that they had to in
5 order identify that.

6 All of the disclosure of Nissilä is consisting with the correct
7 interpretation that the first electrode and the second electrode are the
8 conductive membrane.

9 So, I'd like to briefly turn to the petition itself and see how the
10 Patent Owner -- or sorry, the Petitioner characterized Nissilä. So, if you
11 could please open the petition? It's Paper 2 and I'm turning to Page 71.

12 Starting out at the last three lines of Page 71 in Petitioner's own
13 words, Nissilä discloses a second electrode 122. Nissilä further discloses an
14 electrode comprising a membrane 119. You notice they're using the broader
15 language here, not citing to Claim 6. They're only citing to Column 5.

16 But comprising a membrane 119 that is made of metal,
17 electrically conductive plastic, or a similar conductive material. This is all
18 in quotes. That's what's described in Nissilä, the membrane 119 is made of
19 the electrically conductive plastic or conductive material. We agree.

20 Now, the next sentence they state, thus, the electrode pad is
21 underneath the membrane 119. Notice that the term underneath is not in
22 quotes because this term doesn't exist in Nissilä.

23 They then state that the membrane 119, which includes an
24 exterior surface of the enclosure, and exterior surface of the first portion, and
25 both of those terms are in quotes. Those quotations are of the claim
26 language from the '257 patent itself. Those terms do not appear in Nissilä.

1 And now in the next sentence, Petitioner asserts, Nissilä
2 discloses a second electrode embedded in and enclosed by membrane 119.
3 In those terms, embedded in, enclosed by, appear nowhere in Nissilä and
4 there's no description in Nissilä to support such an assertion.

5 The only correct reading of Nissilä is that in that second
6 embodiment on which particular relies, the first electrode and the second
7 electrode are the membrane 119.

8 So, sorry I've gotten a little out of order answering your
9 questions. I'd like to go back to Patent Owner's slides, and I'm going to skip
10 ahead to Slide 46.

11 So, here we have Dr. Kenny's clear testimony once again
12 testifying that the electrodes 118 and 122, the membrane 119. And then
13 looking ahead to Slide 48, we have Dr. Berger, AliveCor's expert's
14 deposition testimony. We asked him about this, and he said I don't find the
15 word enclosed in Nissilä.

16 So then we asked does Nissilä ever use the term embed or
17 embedded to describe the relationship between the components 119 and
18 122 -- I believe I actually said 118 here, and the membrane 119? And he
19 said I don't find that term.

20 And after this line of questioning, he did not identify any other
21 portions of Nissilä that would present similar disclosure to support those
22 terms or would be similar to those terms. He could identify nothing in
23 Nissilä that describes a separate membrane enclosing and encircling an
24 electrode or electrode pad or electrode core because there is none.

25 Now, let's contrast this to his initial declaration, going back to
26 Slide 45. Here before he was questioned, he said in the second sentence, the

1 electrode pad is embedded in and enclosed by a membrane 119. Well, once
2 again, there is no quotations around those terms because they don't appear in
3 Nissilä and there's no support in Nissilä for such an interpretation.

4 Now, I'm going to skip ahead to Slide 49. Here we see Figure 5
5 of the Finnish priority documents, which Nissilä claims priority. Now, it's
6 Apple's position that Nissilä can only be read in one correct way. The
7 electrodes 118 and 122 are the membrane 119.

8 But Dr. Kenny testified that to the extent there is some sort of
9 dispute or, you know, different interpretations to decide between the
10 interpretation of the Petitioner and the Patent Owner, a person of ordinary
11 skill would have looked to the source documents to confirm the
12 interpretation.

13 And here we see even more clearly the reference numeral 119
14 includes a line that goes into the bulk of that rectangle that is the electrodes
15 118 and 122, even more clearly identifying that reference numeral 119 is not
16 identifying some additional membrane encircling the electrodes and
17 certainly not identifying a membrane that spans across the entire bottom of
18 the device. It's identifying the electrodes themselves because in this
19 embodiment the membrane 119 is the electrodes.

20 Now, if we turn to Slide 50, we have disclosure from the
21 priority document and I'd just like to point out that all discussion by
22 Petitioner about the Finnish priority document is new argument today.

23 They did not address this in their Petitioner's reply. All they
24 said about this is that it's irrelevant because they did not base their petition
25 upon this document. That was in a footnote in the Petitioner's reply. They
26 did not actually address any disclosure of the Finnish priority document.

1 All right. I'm still on Slide 50. And so we see the language
2 here. It confirms the correct interpretation of Nissilä. The electrode 118 and
3 122 of the electrode structure 100 are formed of an electrically conductive
4 film 119. So it's confirming. It's describing what the electrodes are formed
5 of, what they're made of, what they consist of.

6 It's not saying it has a membrane that encircles. It's saying it's
7 what it is formed out of, and it's formed out of an electrically conductive
8 field 119. And it says at the position of the electrodes 118 and 122 and it
9 goes then to the electrode structure 100.

10 As I discussed earlier, this is Nissilä's way of saying in this
11 embodiment it's the electrically conductive membrane or film that is located
12 at the location of the electrodes 118 and 122 to form those electrodes. It
13 includes similar language with respect to the other embodiment in which the
14 electrodes are the conductive pieces.

15 Finally, I'd just like to skip ahead on this subject. I would like
16 to skip ahead to Slide 52 and just reiterate if AliveCor's interpretation of
17 Nissilä were correct, as they depicted on the left, if you look at the bottom of
18 that device, the inner surface 116, and looked up you would see one
19 consistent membrane across the entire bottom. And that is not what's
20 depicted in Figure 4.

21 Figure 4 is not a cross-section. It's showing you the inner
22 surface 116. It's labeled right in the figure and it shows you that the
23 electrodes 118 and 122, which are the membrane 119, are visually distinct
24 from the surrounding portions of the band. So therefore, the configuration
25 that AliveCor insists must be read in Nissilä on the left side simply could not
26 be true.

1 JUDGE KINDER: Are there embodiments without the
2 membrane 119 that they talk about?

3 MR. BISENIUS: So, there -- well, the older alternate
4 embodiment in which the electrodes are the conductive adhesive 127, there
5 is no memory present because the electrodes are the conductive adhesive in
6 those embodiments. There's no description of a embodiment in which the
7 electrodes are metal or conductive plastic and there's no membrane. There's
8 no discussion in that because all of, you know, the one embodiment that
9 describes in its various configurations in which the electrodes 118 and 122
10 are conductive plastic or conductive metal, it's because they are a membrane
11 that is conductive plastic or conductive metal.

12 If there are no further questions on the disclosures of Nissilä,
13 I'm going to move ahead to motivation to combine very briefly. So, turning
14 to Slide 54, we see the Petitioner showed you this language earlier.

15 They've asserted their motivation to combine is to have the
16 benefits of having ECG capability without a visible indication of the
17 electrode presence that takes away from the device's appearance. And they
18 also assert that it would protect it from bumps or other damage.

19 So looking to Slide 55, we know that Nissilä does not teach to
20 visually conceal the electrodes because, as we discussed, on the inner
21 surface you can plainly see the electrodes 118 and 122 and they're distinct
22 from the surrounding material. So, even giving AliveCor the benefit of the
23 doubt, even though we think this is wrong, let's assume that we read
24 something into Claim 6's language of the electrodes comprise a membrane,
25 there's no discussion of the specific configuration of the membrane that
26 would force the membrane to be positioned between the electrodes and the

1 user's skin.

2 And as we see here, the electrodes are visually distinct from the
3 user's skin, or sorry, the electrodes are visually distinct from the surrounding
4 portions of the band that contact the user's skin. And additionally, if the
5 membrane is not positioned between the electrodes and the user's skin there
6 would be no protection bumps.

7 I just wanted to turn to the testimony of AliveCor's expert. We
8 asked about this. This was during the discussion of Figure 4 of Nissilä that
9 we asked, and this is showing those electrodes as being visually distinct
10 from the surrounding portions of the band; is that correct?

11 And he said I believe that's correct. So, he was admitting that
12 they are visually distinct from the surrounding portions of the band. And
13 here's why this is even more important. Not only would it not achieve
14 Markel's goal, but because the electrodes in Nissilä are visually distinct from
15 the surrounding portions of the device, Nissilä did not provide any solution
16 to Markel's problem of trying to conceal the purpose of the electrodes.

17 And, in fact, application of Nissilä's teaching of visually distinct
18 electrodes to Markel would disrupt the entire goal of Markel of visually
19 concealing the presence of the electrodes. So, not only is there no reason to
20 apply Nissilä to Markel, there's actually a motivation against applying
21 Nissilä to Markel because Nissilä would destroy the goal of Markel to
22 visually conceal the electrodes.

23 And we see that in the testimony from Dr. Berger, AliveCor's
24 expert, in Slide 57. We asked him why would a POSITA need to add
25 Nissilä's membrane to its electrodes, to the electrodes of Markel, if Markel's
26 electrodes are already concealed? And he said honestly, I don't think one

1 needs to.

2 If there are no questions on this, I'd like to discuss Ground 1
3 briefly. So I'm going to go all the way back to Slide 16 here. So, the
4 Petitioner in their Petitioner's reply and here today, they've made a lot of
5 confusing statements about what an electrode might have or could have or
6 that it could have a pad and insisted that testimony from Dr. Kenny, in
7 which he was discussing the express disclosures of the '257 patent itself
8 would somehow be broadly applicable to all devices.

9 But when you look at the disclosures of Markel it's clear that all
10 Markel is describing is regular, old-fashioned external electrodes for direct
11 contact by the user. They're not multicomponent electrodes. They don't
12 have a pad and other additional structures. They're just regular electrodes on
13 the outside of the device.

14 And as my colleague Mr. Renner testified -- stated earlier, the
15 reason these claims were allowed is because the prior art did not show a
16 separate conductive pad positioned underneath a conductive portion of the
17 enclosure and embedded in that portion of the enclosure. The prior art only
18 showed external electrodes.

19 Petitioner cannot be allowed to read in this feature for which
20 the claims were allowed into a device such as Markel which includes no
21 disclosure or suggestion to make such a modification.

22 So, turning to Slide 17 briefly, I'm not going to read all the
23 claim language to you, but basically Claim 1 requires a first pad that is
24 embedded in the first portion of the enclosure, has the position underneath
25 the surface of that first portion of the enclosure.

26 And the first portion of the enclosure needs to be conductive so

1 that when the user contacts the first portion the electrical signal reaches the
2 underlying pad. And this is what's disclosed in the two '257 patent itself.

3 Now, I want to turn to Slide 18, and here we have Dr. Berger
4 giving his mapping of Markel to Claim 1, and he states at the bottom here,
5 Markel's second electrode comprises a first pad that is molded into the audio
6 output portion 610. Now, it's curious that he uses the term comprises here.
7 He seems to be implying that it has a pad and it has additional other
8 structures, even though he doesn't state that expressly.

9 But the term pad does not appear anywhere in Markel with
10 respect to the electrodes. Markel uses the term pad but only in reference to a
11 touch pad or mouse pad for controlling a cursor, a keypad for providing user
12 inputs or a notepad text application. There's no discussion of electrodes
13 having pads.

14 There could be an interpretation of Markel in which some of the
15 electrodes themselves are pads, but here Dr. Berger is trying to frame it as if
16 the electrodes have a pad and maybe some other structures.

17 And I'd actually like to turn to the petition to show how
18 AliveCor characterizes this. Turn to Pages 12 to 14 of the petition?

19 Looking at the bottom paragraph on Page 12, the second
20 sentence, AliveCor similarly said a POSITA would have understood that
21 Markel's second electrode comprises a first pad that is molded into the audio
22 output portion 610. So once again, they're using this comprising language
23 even though there's no discussion about multi-component electrode.

24 Now, the discussion in the next paragraph strays even further
25 away from the actual text of Markel. In the second sentence here, they state
26 a POSITA would thus have understood that that Figure 4 second electrode

1 would include a first pad, once again implying that the electrode has
2 multiple components and one of those components is a pad.

3 There's simply no discussion of a multicomponent electrode in
4 Markel. All Markel discloses is regular external electrodes. We see that on
5 the right on Page 14 here on the highlighted left side. This is a regular
6 electrode for direct contact with the user.

7 Returning to Patent Owner's slides just briefly, Slide 19,
8 Paragraph 43, this last sentence here tells you that all of the electrodes
9 around the exterior of the device require direct contact with the use. So such
10 places may, for example, provide for electrical contact with a user's hand
11 during the use of the MDC 100.

12 Turning to the next slide, Paragraph 44 on the lower left here, it
13 states that the positioning of the electrodes on the outside of the device
14 provide for electrode contact with an ear or cheek of a user. And we asked
15 Dr. Berger about this. We said what does Markel mean by placed on an
16 audio output portion 142?

17 He says I think placed on I would take to mean that it's on the
18 outside of the audio output portion. Every disclosure in Markel is talking
19 about external electrodes. There's no discussion of multicomponent
20 electrodes. There's certainly no disclosure of pad positioned under a
21 conductive portion of the enclosure and embedded in that conductive
22 portion.

23 I'm going to skip through a few slides. Slide 22, once again, we
24 see electrodes 1020, 1022, and 1024 all on the external portion of the
25 enclosure.

26 Turning to Slide 23, we see a sentence that Petitioners readily

1 lock into, and this just says that -- that's such electrodes may, for example,
2 be adapted to detect cardiac activity of a user that is conductively coupled to
3 the electrodes, e.g., by touching the electrodes.

4 Petitioner has read a lot into this and insists that, well, it gives
5 you one example, touching the electrodes, and leaves open the possibility of
6 other examples and yet somehow insists that the other examples could exist.
7 It means it would have the exact configuration claimed in Claim 1 of the
8 '257 patent when other examples are entirely possible, such as conductive
9 gloves used to contact the electrode, other conductive clothing, wires
10 attached to pads attached to the person's skin.

11 This simply does not provide any suggestion for the
12 modification that's AliveCor has proposed.

13 I'm going to skip ahead to Slide 27 briefly. Markel tells you
14 how it discloses the presence of the electrode. It does it by using electrically
15 conductive plastic with little or no visible indication of the electronic
16 presence. So, I talked about concealment or hiding, and it's talking about
17 camouflage.

18 It's hiding the visual presence. No disclosure in Markel and no
19 suggestion that you would hide an electrode by positioning it underneath
20 another conductive portion of the enclosure.

21 And we asked Dr. Berger about this, and he said, you know, the
22 presence of the electrodes is concealed because they are visually similar or
23 possibly even visually identical to the surrounding nonconductive plastic of
24 the enclosure; is that correct? And he agreed, yes.

25 Going ahead two more slides to Slide 29, we asked him later on
26 the same deposition just to confirm. Would you agree that the electrode is

1 concealed because the electrically conductive plastic is visually similar to
2 other portions of the enclosure? Yes, I believe so.

3 Turning forward to Slide 31 during his deposition, even though
4 this is not actually addressed in the petition he gave another justification. He
5 said I think it would be necessary to have something more conductive that
6 makes contact with that molded plastic. And they use this to argue that
7 you'd have to have a second metal pad under the conductive plastic, even
8 though the only teaching of such a configuration is in the '257 patent itself.
9 Nowhere in the prior art record is there any evidence of such a
10 configuration.

11 And actually, Markel's clear disclosure contradicts this
12 assertion by Dr. Berger, as we see on Slide 32. Paragraph 37 describes that
13 also, for example, an electrode may be formed from conductive plastic. And
14 it states various conductive plastics, e.g., graphite-impregnated plastic or the
15 like, may provide sufficient conductivity for an electrode to perform
16 adequately.

17 Markel tells you these plastic -- conductive plastic electrodes by
18 themselves no additional layers are completely adequate and satisfactory for
19 performing the task required by Markel. No suggestion of an additional
20 layer or an additional path.

21 If there are no questions on Ground 1, I'd like to talk about a
22 few of Petitioner's slides and some statements that they've made. So, I'm
23 turning to Petitioner slides, Slide 32, Petitioner spent a bit of time on this
24 today. And this slide just seems too much.

25 They're showing you these figures on the bottom, and they say
26 well, it would be possible to configure an electrode so that it has a pad

1 underneath it, but there's no disclosure of this in Markel. They've just
2 invented this out of whole cloth.

3 And they've asserted that a pad is a component of an electrode
4 and taken that as a universal truth when sure, some electrodes could be
5 configured as pads but they're trying to -- they're asking you to read into this
6 attorney argument that every electrode is going to be a multicomponent
7 electrode. It's going to have a pad and somehow that pad is going to be
8 positioned underneath other conductive components of the electrode.

9 There's simply no disclosure in Markel to support such a
10 position.

11 JUDGE KINDER: Is there anything revealed by your expert
12 that it couldn't be this configuration or are you just saying there's no
13 disclosure?

14 MR. BISENIUS: So, our expert testified that in Markel even if
15 you were to assume there was an additional electrode position in the outer
16 electric surface that it still wouldn't be invented in because there could be
17 other configurations. But yeah, we're saying there's no disclosure in Markel
18 and our expert didn't say that it would be impossible to make such a
19 configuration. Clearly, it's not as described in the '257 patent.

20 What we're saying is there's no disclosure of it anywhere in the
21 record. There's no suggestion that you create this out of whole cloth.

22 AliveCor's wishing into Markel the exact claim elements that were added to
23 Claim 1 to get to allowance and saying they must be present, or it would be
24 obvious to a POSITA. But if it was so obvious to a POSITA, why had it
25 never been done before, the two parts of the patent?

26 Why could they find no prior art to even suggest such a

1 configuration. They couldn't and so now they're insisting that it must be the
2 case.

3 I just want to talk about a couple more of Patent Owner's slides.
4 I'm going ahead -- I'm sorry, Petitioner slides. I'm going ahead to Slide 48
5 of Petitioner's slides, and here we very clearly see he's talking about Column
6 6 of the '257 patent itself, and yet AliveCor is asserting that this testimony of
7 our expert talking about what the '257 patent discloses and how a POSITA
8 would understand that, somehow is a universal truth about all devices for
9 measuring for heart monitoring and that you would -- that a POSITA would
10 just apply this to Markel.

11 Similar with Slide 49 here. Dr. Kenny is discussing the
12 disclosures of the '257 patent itself and how a particular arrangement with a
13 stainless-steel enclosure and another pad underneath wouldn't satisfy the
14 claims of the '257 patent. He wasn't saying that this would be a universal
15 truth, and it would be obvious to a POSITA to configure every electrode this
16 way.

17 This is the epitome of hindsight. AliveCor is attempting to use
18 Dr. Kenny's discussion of the disclosures of the '257 patent to say it would
19 be obvious to implement that in any device.

20 I'd like to just briefly talk about claim construction. So first off,
21 I'd point out that there's no testimony cited in the Petitioner's reply to any
22 rebuttal testimony from Dr. Berger addressing the Patent Owner's
23 construction form embedded in and finding any fault with the testimony of
24 Dr. Kenny.

25 And I'd also like to point out that Petitioner asserts that, quote,
26 this is in the Petitioner's reply, quote, embedded in simply requires inclusion

1 within a larger entity, end of quote.

2 So, going back to the Patent Owner slides, I'm going to go to
3 Slide 4 just the highlight the claim language. Even if we adopt Petitioner's
4 position that embedded in simply requires inclusion within a larger entity,
5 Claim 1 tells you what that larger entity is.

6 It's not any larger entity. It's a first portion of the enclosure and
7 that the first portion of the enclosure needs to be a conductive first portion of
8 the enclosure so that when the user contacts that first portion their electrical
9 signal is conveyed to the underlying pad. That's what Claim 1 recites.

10 So even if we adopt Petitioner's construction here, Patent
11 Owner is still correct on this position because Petitioner has offered no
12 argument regarding what the configuration of that additional invented out of
13 whole cloth pad in Markel would be.

14 And additionally, the only arguments that the Petitioner
15 provided with Petitioner's reply with respect to our arguments that Markel
16 did not teach the embedded in limitations is that our construction is wrong.
17 Therefore, if the Board adopts the construction proposed by Apple, which
18 was also the construction adopted in the previous proceeding involving the
19 '257 patent, Petitioner has no arguments regarding those arguments.

20 If there are no further questions, we're going to rest on the
21 papers for Ground 3 and the motion to amend.

22 JUDGE KINDER: I don't believe we have any other questions.
23 And I think you're at about 20 minutes left for rebuttal.

24 MR. BISENIUS: We'll reserve the rest of our time for rebuttal.

25 JUDGE KINDER: All right.

26 Mr. Fernando?

1 MR. FERNANDO: Good afternoon again, Your Honors. I'm
2 going to briefly address some of Patent Owner's arguments on Markel and
3 the claim construction points. If we could start with our Slide 32, please?

4 I think, as Your Honor observed correctly, Apple doesn't have
5 any expert testimony that rebuts Dr. Berger's testimony about the
6 relationships between pads, electrodes, leads, and conductors. Your Honor
7 asked a question about whether there's any opposing testimony and I didn't
8 hear Apple's counsel answer that affirmatively because there is no testimony
9 on that point. There's nothing to rebut Dr. Berger on this.

10 If we could turn to Apple's Slide 20, please? Here, Apple's
11 counsel pointed out this testimony from Dr. Berger about being placed on an
12 audio output portion. I'd just like to point out that the placed on an audio
13 output portion is talking about Paragraph 44, right? Paragraph 44 is where it
14 says that an electrode or other sensor may be placed on or approximate to an
15 audio output portion.

16 And so, what Dr. Berger was saying is that in the
17 configurations, the structures where it's going to be placed on, yes, there's
18 going to be an exposed electrode. But for the many reasons that we
19 explained in our presentation that's not the only structure disclosed in
20 Markel. There's also a structure where the electrode is molded into audio
21 output portion 610.

22 If we could turn, please, to Apple's Slide Number 22? Counsel
23 for Apple suggested that this figure shows that the electrodes are on the
24 outside of the device in Markel, however, what they left out was that there's
25 testimony from AliveCor's expert on this diagram. He disclosed and
26 testified that this is a block diagram. It's not intended to show what the

1 configuration or structure of those electrodes are.

2 So, for example, if Your Honors look at Dr. Berger's transcript,
3 Exhibit 2013 at Page 69, Line 2 through 72, Line 11, you will see that
4 testimony where he explains it.

5 If we could you please turn to Apple's Slide 27? And really the
6 point here applies to both Slides 27 and 29 of Apple's demonstratives. So,
7 basically, Apple is suggesting that the concealment here is between, for
8 example, the audio output portion and the rest of the main body and that
9 those are somehow two different things, but the audio output portion is still
10 exposed, but that's not correct.

11 What Dr. Berger was saying here is that the audio output
12 portion is not distinguishable from the rest of the body because they are
13 made of a single piece of plastic. It's made of one piece of plastic so the
14 audio output portion, which is an indelible circle, is the same. It's visually
15 indistinguishable from the area outside of that portion. And that's because
16 there's a conductive electrode pad that's going to be embedded within the
17 thickness of that enclosure.

18 If we turn to Apple's Slide Number 31, here Apple's counsel
19 suggested that this underlined red part of the testimony is lacking in any
20 support. As it says here, there is no support in the record for this assertion.
21 I'd just urge Your Honors to look at the sentence before what they
22 underlined or the clause right before that.

23 Dr. Berger is clearly discussing part of the disclosure of Markel
24 and using it as support for the opinions that he provides in his testimony.
25 There is absolutely support.

26 If we can turn to Apple's Slide 4, I think the final point that

1 Apple's counsel made on claim construction was that somehow their plain
2 and ordinary meaning is still justified even if you adopt the view that
3 AliveCor has that embedded just means inclusion in a larger entity. And it's
4 unclear to us how that could possibly be, right?

5 The word embedded in we say is going to mean included in a
6 larger entity and then the rest of that phrase does tell you where it's going to
7 go. It's going to go in a first portion of the enclosure.

8 But that inner first portion of the enclosure doesn't mean
9 somehow that Apple's plain and ordinary meaning should therefore be
10 adopted. To us there's a disconnect between what they're saying and what
11 they're arguing and what the language of the claim actually says.

12 With that, we'll reserve the rest of our time for the remaining
13 grounds.

14 MR. DOUGLAS: Your Honors, I would like to turn back to
15 the Nissilä ground, which is Ground 2, and Your Honors asked about the
16 embodiments of the Nissilä reference. And so I would ask you to look at
17 Column 5 of the -- of the Nissilä reference.

18 And we focused a lot on the language, of course, that we've
19 identified to you, which is Column 5, Lines 32 through 43. We believe this
20 language clearly shows you different elements, different reference numbers.
21 We see that the membrane is placed at the electrodes and we know that those
22 membranes are either touching the skin directly or touching the skin via an
23 adhesive.

24 But if we take a big step back and we look starting at the top
25 Column 5, starting at Line 3 we see the disclosure or the base disclosure of
26 the Nissilä reference and it tells us, and you asked, Your Honors, about the

1 different embodiments, that the presented electrode structure comprises a
2 band-like component 101 and preferably a continuous band 101 having an
3 inner surface 116 against the skin of a person's chest and an outer surface
4 120 opposite thereto.

5 And at the first end of the electrode structure there's a first
6 electrode 118 and at the second end of the electrode structure 100 there's a
7 second electrode 122. And it goes on, but the point is is that we have a base
8 structure in Nissilä.

9 And in the next paragraph we start at Line 18, the inner surface
10 116 of the electrode structure is an adhesive surface by which the electrode
11 structure is attached to the skin. So, 116 is this adhesive, and that's exactly
12 what Nissilä tells us. So the base embodiment is you have the electrodes
13 with a surface 116 with adhesive.

14 We've talked a lot about the claims. We didn't point to those in
15 our petition because we didn't need to. The language of Nissilä is clear that
16 regarding the membrane and the electrodes.

17 But we point to the claim to try to dispel this consist of
18 argument that Apple's making and ask you to look back at the claims
19 because in Claim 6 we pointed you to the comprising language, again, just to
20 undercut this argument that consist of should be dispositive.

21 But let's look back at Claim 1. Claim 1 talks about an inner
22 surface to the first electrode and the second electrode comprises an
23 electrically conductive adhesive for attaching the inner surface of the first
24 electrode and the second electrode to the skin. So we took a big step back.
25 That's the base embodiment as claimed of the Nissilä reference.

26 Claim 4 is what Apple showed you. Claim 4 says there's an

1 embodiment of the electrodes where the electrode structure consists of an
2 electrically conductive adhesive. That's one way you could do it. It's not the
3 only way. Claim 1 is broader.

4 Claim 6 tells us the other way which, again, we use can
5 comprise in Claim 6 and it can comprise this outer layer, this film, this
6 membrane.

7 Apple told us or showed us Slide 42 of their demonstrative.
8 Again, this was their argument that electrodes consist of only this adhesive,
9 this glue. I'd draw your attention to, again, Column 5, 25 through 29 which
10 states according to one preferred embodiment as in Figures 7 through 9, the
11 electrodes 118 and 122 of the electrode structure 100 are provided with
12 electrically conductive adhesive 127 on the inner surface 116 and the band
13 101. So again, this is just the sticky glue that's on the surface.

14 Markel's not saying that there's in that embodiment, 7 through
15 9, that the electrodes actually consist of glue or just this glue of what you do.
16 For example, in Figure 12 as well you see this is more of, like, a processor
17 diagram. You see connections to electrodes 118 and 122.

18 The electrodes are there, Your Honor. Electrodes are known in
19 the art. What Nissilä is telling us is the different structures that it can
20 embrace and one of those structures is adding this membrane, of which the
21 electrode is underneath.

22 We heard a little bit about the multilayered case. I would just
23 point out that the majority of that case is using -- is talking about the
24 consisting of to set off a patent claim element.

25 And I want to end my time with Slide 57 of their
26 demonstratives, of Apple's demonstratives, and this is where Apple wanted

1 to say a POSITA needs to add Nissilä's membrane. Honestly, I think one
2 needs to ask you, Your Honors, to look at the actual cite here.

3 This quote continues. It does not end with honestly, I don't
4 think one needs to. It continues. I think it adds strength to the point that
5 there's another reference that makes it much clearer that the conducted, the
6 highly conductive part of the electrode, which I will call the electrode pad,
7 may be covered by a moderately conductive component. I actually I think
8 it's quite clear in Markel, but I think Nissilä shows this in cross-section as
9 well.

10 That wasn't shown to you in this quote, but the full quote that --
11 the cite is correct if you go look at that and that quote. That's not an
12 admission here that Apple wants you to think this.

13 I believe I just had that one extra minute, so my time is short,
14 but if Your Honors -- if there's no questions then we are at our time limit.

15 JUDGE KINDER: Thank you, Mr. Douglas. I see no more
16 questions.

17 MR. BISENIUS: I'm sorry. I think I'm set up.

18 MR. RENNER: I think whenever you're ready you can --

19 JUDGE KIDNER: Sorry, go ahead.

20 MR. BISENIUS: So just briefly to address the rebuttal
21 testimony from Dr. Kenny, Apple's expert, regarding whether it's inherent
22 that every electrode would have a pad positioned underneath it, he testifies
23 to this in Exhibit 2004. This was his second declaration at Paragraphs 65 to
24 66 and also briefly touches on this in Paragraphs 78, 82, and 85.

25 He's discussing it within the context of Markel's disclosure but
26 he's testifying that there's no support from Markel that's such a pad would be

1 positioned underneath the electrode because it's not necessary to do so. It's
2 not an inherent part of an electrode.

3 With regard to, and I'm turning to the Nissilä reference, with
4 regard to the comprising language in Claim 6 as I discussed before, the
5 comprising language is open-ended here, but all it's saying is that the first
6 and second electrode comprise a conductive membrane located at both ends
7 the electrode structure.

8 It's not giving you any additional structures that are being
9 enclosed by that membrane. It's not saying that there's any additional
10 structures within the membrane at all. It's really consistent with everything
11 else that's stated in the specification.

12 In this embodiment the electrodes are the membrane and that's
13 to distinguish it from Claim 4 in which the electrodes are the electrically
14 conductive adhesive. And we see that in Claim 4 where the electrodes and
15 the electrode structure consist of an electrically conductive adhesive.

16 And so it's differentiating from that other dependent claim, they
17 are unrelated dependent claims. This is fully consistent with everything in
18 the specification of Nissilä. Nissilä has two embodiments. In one of those
19 in the embodiments the electrodes are the electrically conductive adhesive.
20 In the other embodiments they consist of the membrane 119.

21 Now, I'd just like to reemphasize it's -- and I'll explain. I'm not
22 sure why it's not displaying. Let me see.

23 JUDGE KINDER: Do you need a minute?

24 MR. BISENIUS: Yeah.

25 JUDGE KINDER: I'll pause your time.

26 MR. BISENIUS: Thank you. Just disconnect that there. All

1 right. So on Slide 52 of Patent Owner's slides, we see that Figure 4 indicates
2 that Apple's interpretation of Nissilä is the only correct interpretation.

3 If Nissilä has the arrangement shown on the left side that
4 AliveCor says it does where there is a membrane that covers the entire
5 bottom of the device, that inner surface 116, if you looked up at the inner
6 surface of 116, which is what's shown in Figure 4, you would only seeing
7 that membrane 119 extending across the bottom.

8 And yet, we see that the electrodes 118 and 122 are visually
9 distinct from the surrounding portions of the band, and we also see that they
10 are on the inner surface. It's showing you the electrodes 118 and 122.
11 They're labeled in Figure 4 as being on that inner surface 116. They're not
12 covered by a membrane and this is not a cross-section.

13 The only way to read Nissilä such that Figure 4 and Figure 5
14 and the disclosure in Nissilä's specification are all consistent is the correct
15 interpretation. The membrane is the electrodes 118 and 122 in this
16 configuration. We think this is supported by Slide 51, the actual Figure 5 in
17 Nissilä, not the mocked-up figure, in which we see the line from reference
18 numeral 119 pointing to the electrodes 118 and 122, not a film or a
19 membrane surrounding the electrode.

20 Also supported by the original Finnish document which very
21 clearly shows where that reference numeral line 119 is going. It's point to
22 the body of the electrodes 118 and 122.

23 So once again, looking at Slide 52, the only way to read Nissilä
24 such that all the disclosures are consistent is that the electrodes 118 and 122,
25 which are shown as being positioned on the bottom surface 116 of the
26 device, not covered by a membrane, not separated from the user by an

1 additional film, the only correct interpretation is that those electrodes in this
2 embodiment consist of, are formed of, are the membrane 119.

3 So, are there any questions on that issue?

4 JUDGE KIDNER: If we could go back to Claim 4 and Claim 6
5 and the contrast between those? I guess it kind of bothers me that in Nissilä
6 Claim 4 when they wanted to tie a specific structure to the electrodes to
7 make it comprised of only that structure they use consist of in Claim 4 of
8 consist of an electrically conductive adhesive. In Claim 6 they chose to state
9 it as comprise.

10 How do you -- how do you reconcile that?

11 MR. BISENIUS: I haven't looked at the prosecution history of
12 Nissilä. It could be that there was a prior art reference in which there's some
13 conductive adhesive somewhere in addition to other components for the
14 electrode so in order to differentiate they might want to differentiate over
15 that part by saying the entire electrode is only a conductive adhesive.

16 And if you look at the disclosure of Nissilä, that first
17 embodiment, they believed that was part of their invention. We're going to
18 form that electrode entirely out of adhesive. Claim 6 it's possible that they
19 didn't need to differentiate over the prior art in that matter and so they
20 wanted to leave it open-ended so that they would have a broader
21 infringement in re-audit.

22 It could be that the electrodes are a membrane or it could be
23 that the electrodes are a membrane and maybe it has a couple of layers or
24 maybe there's additional components to the electrode. They wanted to leave
25 it open-ended.

26 But what they're -- what cannot be read into the switch from

1 consist of in the specification to just comprising in Claim 6 is the additional
2 structures. There's no disclosure of a multicomponent electrode. There's no
3 disclosure of an electrode core that's surrounded by a membrane.

4 What is clearly disclosed is that it states the -- going back to
5 Slide 41. It states that the electrodes 118 and 122 consist of a membrane
6 119. And looking to the next paragraph, which I unfortunately do not have a
7 slide for, but the next paragraph on Column 5 it tells you once again,
8 because the inner surface 116 of the electrode structure 100 is the portion
9 which is against the person's skin, the electrodes 118 and 122 are located on
10 the inner surface 116 of the band 101.

11 It's telling you the electrodes are located on that inner surface.
12 That's what we see in Figure 4. The electrodes 118 and 122 are located on
13 that inner surface, completely consistent with all descriptions in Nissilä.
14 There's no description of an intervening membrane.

15 JUDGE KINDER: Looking at Nissilä 140 then it states the
16 membrane 119 can thus come into contact with the person's skin surface or
17 on the inner surface 116 of the membrane 119, which is against the person's
18 skin, if I read that correctly? I might not have. So, how do you reconcile
19 that with 150?

20 MR. BISENIUS: So here it's describing -- so once again,
21 giving the correct interpretation, the membrane 119 is the electrodes 118 and
22 122. It's saying that it's defining part of that inner surface 116 and that, you
23 know, in an additional non-depicted embodiment there could be additional
24 conductive adhesive on that membrane.

25 But as I discussed earlier, this is discussing the non-depicted
26 embodiment of Nissilä. If we go back up to the sentence before that it says

1 the electrodes 118 and 122 at both ends of the electrode structure 100 can be
2 equal or narrower in width to the band-like component 101.

3 And so what we see in Figure 4 and Figure 5 that's the narrower
4 than configuration. What's not depicted is the equal in width to the band
5 configuration.

6 And so then the next sentence is talking about that first
7 configuration, same width as the band. And the way we know that is
8 because in the last sentence it says if the electrode 118 and 122 is narrower
9 than the band-like defined, now it's switching to that other configuration,
10 then they say that it is possible because of a nonconductive adhesive 127 on
11 the outer edges of the band 101.

12 So when it says that the membrane or when it states the inner
13 surface 116 of the membrane 119, in that specific sentence because the only
14 thing defining the inner surface is the membrane, which is the electrodes.
15 And I told you that in the sentence before this. It says the electrodes span
16 the width of the band.

17 And granted, it might be a little confusing that it switches
18 between referring to the electrodes and referring to the membrane, but the
19 only way to read this as being consistent with the depictions in Figure 4 and
20 Figure 5 and the rest of the disclosure, is that it's talking about the
21 embodiment in which the electrodes span the width and therefore in that
22 embodiment the membrane, which is the electrodes, provides the entire inner
23 surface 116, whereas in the depicted in Figure 4 and Figure 5 embodiment.

24 In that embodiment where they don't span the width, the inner
25 surface 116 is defined by both the inner surfaces of the surrounding band
26 101 and the inner surfaces of the electrodes 118 and 122. And we know that

1 because the next paragraph tells us the electrodes are positioned on that
2 inner surface, and in Figure 4 it shows us this. The electrodes are exposed
3 on that inner surface.

4 There's no intervening membrane and there's certainly no
5 discussion in Nissilä of an embodiment which the membrane is removed or
6 in an embodiment where the membrane is absent and that's because in this
7 embodiment the electrodes are the membrane. You cannot separate the
8 electrodes from the membrane because they are the membrane in this
9 embodiment.

10 I just want to briefly talk about the Markel reference in Ground
11 1. And I'm not going to bring up the slides, but Petitioner pointed to a few
12 different disclosures in Markel that talk about that the electrodes could be
13 positioned on or molded into. And we agree that, you know, molded into
14 could mean embedded in, but they're molded into the exterior surface of that
15 electrode, of that device. There's no disclosure of an additional pad
16 positioned underneath them and so then when Petitioner proposes to modify
17 Markel so that we're going to have an additional pad positioned underneath
18 that exterior electrode, which is molded into the device, there's no disclosure
19 or discussion of how that additional pad, which is not described in Markel,
20 would be in contact with the exterior electrodes.

21 The exterior electrodes, yeah, in some configurations it's
22 molded into the device. But this extra pad that they've invented there's no
23 disclosure that it would be embedded into that exterior electrode. And
24 there's no disclosure of the pad being inside of the device or under the
25 enclosure.

26 If there are no further questions, Patent Owner will rest.

1 JUDGE KINDER: I think that's all we have. I appreciate your
2 time today.

3 MR. BISENIUS: Thank you, Your Honors.

4 JUDGE KINDER: I thank both parties for your time today in
5 traveling to have an in-person hearing. And I know sometimes that's a
6 challenge, but we certainly do appreciate everyone coming out and working
7 hard in this case for us to understand it.

8 After we submit the case, I'd like for counsel to please stick
9 around and talk to our court reporter to find out if she has any questions
10 about spelling needs or any other things. All right. At this time, the case is
11 submitted. Thank you.

12 (Whereupon, the above-entitled matter went off the record at
13 3:20 p.m.)

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