

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VALVE CORPORATION,
Petitioner

v.

IMMERSION CORPORATION,
Patent Owner.

IPR2024-00477 (Patent 7,336,260 B1)
IPR2024-00478 (Patent 9,430,042 B1)

Record of Oral Hearing
Held: April 30, 2025

Before CHRISTOPHER L. OGDEN, MATTHEW J. McNEILL, and
SCOTT RAEVSKY, *Administrative Patent Judges*.

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The above-entitled matter came on for hearing Wednesday, April 30, 2025, commencing at 1:00 p.m. EDT, via Video-conference.

P-R-O-C-E-E-D-I-N-G-S

1:00 p.m.

JUDGE RAEVSKY: Thank you. And good afternoon, everyone. Welcome to Patent Trial Appeal Board. My name is Judge Raevsky, and joining me on the panel today are Judges McNeill and Ogden.

We're here today for oral argument in two proceedings, IPR 2024-00477 and 00478, in which Valve Corporation is petitioner and Immersion Corporation is the patent owner.

At issue in the 00477 proceeding is U.S. Patent Number 7,336,260. And at issue in the 00478 proceeding is U.S. Patent Number 9,430,042.

Who do we have appearing for petitioner today?

MR. SPEED: Good afternoon, Your Honor. It's Nathan Speed on behalf of Petitioner, Valve Corporation. I'm joined by lead counsel, Rich Giunta as well.

JUDGE RAEVSKY: Thank you, Mr. Speed. And who do we have for patent owner?

MR. WIN: Good morning, Your Honor. My name is Cliff Win. I'm here on behalf of the patent owner, Immersion Corporation. And with me, I have my lead counsel, David Schumann, and also my colleague, Sam Kim.

JUDGE RAEVSKY: Thank you, Mr. Win. All right, before we begin, just a few housekeeping items. You all know this, but I'll just go ahead and remind everyone.

Please, when you're referring to a slide today, tell us the slide number so that the court reporter can follow along.

Remember, there may be members of the public listening on the public line today.

1 And also, when you begin the presentation, please identify yourself
2 again for the benefit of the court reporter.

3 Each party will have 45 minutes to argue the first case, the 00477
4 case. And then after perhaps a short break, if we all take our full time, then
5 each party will again have 45 minutes to argue the 00478 case.

6 We'll first hear in each case from petitioner and then from patent
7 owner, followed by any rebuttal from petitioner and any surrebuttal by
8 patent owner.

9 Mr. Speed, would you like to reserve any rebuttal time today for the
10 00477 case?

11 MR. SPEED: If I could reserve 8 minutes, that would be great, Your
12 Honor.

13 JUDGE RAEVSKY: Eight minutes, okay. And so you'll have 37
14 minutes to start. And for Mr. Win, would you like to reserve any rebuttal
15 time?

16 MR. WIN: Yes, Your Honor, I would like to reserve 15 minutes for
17 surrebuttal.

18 JUDGE RAEVSKY: Great. And Mr. Speed, when you're ready, you
19 may begin.

20 MR. SPEED: Excellent, Your Honor, and is it okay if I share my
21 screen with the demonstratives?

22 JUDGE RAEVSKY: Let's go ahead and try it. It's only the second
23 time I've been in the hearing room recently since we've made this change,
24 so if I can't see you, I may say let's just go back to seeing you, because I
25 have the slides.

1 MR. SPEED: Okay, I can do either way. If you want to do it with
2 just the slides, that's fine with me, too.

3 JUDGE RAEVSKY: Let's do it your way first and see how that
4 looks.

5 MR. SPEED: Okay. How does it look?

6 JUDGE RAEVSKY: I can't see your slides.

7 MR. SPEED: Okay, then I will just do it the old school way.

8 JUDGE RAEVSKY: Okay, thanks for your patience.

9 MR. SPEED: No problem. Thank you, Your Honor. This is Nathan
10 Speed, again, on behalf of petitioner, Valve Corporation. If we could start
11 with Slide 2 of our demonstrative deck.

12 The patent at issue in this trial is Immersion's 260 patent. The patent
13 was filed way back in 2002. The patent discloses a method for providing
14 tactile sensations to input devices like a button a cellphone.

15 As the summary of invention explains, the purported novelty is that
16 the tactile sensation that is provided to the input device can be based on one
17 or more events or situations.

18 These events or situations include, for example, the level of pressure
19 placed on the input device. Based on the pressure detected, an actuate is
20 instructed to output a particular tactile sensation.

21 For example, the table in Figure 9 seen here on Slide 2 can be used
22 such that when an input device number 3 detects the level of pressure
23 corresponding to Pressure 1, then the actuator outputs a tactile sensation 5,
24 and when that same input device detects a level of pressure, say pressure 3,
25 it outputs tactile sensation number 7.

1 And if we turn to Slide 3, we see Challenge Claim 1 on this slide.
2 And this claim embodies the basic idea that I just described. Claim 1 is
3 directed to a computer readable medium with instructions that cause a
4 process to perform certain steps.

5 The first set of steps require detecting a first pressure on an input
6 device and providing a first tactile sensation on the input device based at
7 least in part on the first pressure.

8 The next set of steps require detecting a second pressure, and
9 providing a second tactile sensation, and the third set required detecting a
10 third pressure and providing a third tactile sensation.

11 So that –

12 JUDGE RAEVSKY: Mr. Speed, while we're on the claim, I have a
13 quick question about this. Do you read the claim to require detecting that
14 the second pressure is greater than the first pressure?

15 Or does the fact that it simply says detect a second pressure and then
16 the second pressure greater than the first pressure mean that there's no
17 detection of the difference?

18 MR. SPEED: I would interpret it the latter, where there's no detection
19 of the difference, but what the claim is covering a system in which you have
20 a detection of a pressure, that could be a pre-defined pressure, and then
21 detection of a second pressure that could also be a pre-defined pressure, and
22 detection of a third pressure, which could also be pre-defined.

23 There's no comparison between the three pressures that's recited in
24 the claim language itself. I think this gets into the temporal order claim
25 construction issue that is the key, really, the key issue for the first two
26 grounds that I'll be addressing shortly with my patent.

1 JUDGE RAEVSKY: Thank you.

2 JUDGE OGDEN: Mr. Speed, if it's a pre-defined pressure, say if
3 they're all pre-defined, what's the point of detecting them other than to
4 detect that they exist? But what's the point of detecting the amount of
5 pressure if it's pre-defined?

6 MR. SPEED: Because each of the pressures have a corresponding
7 tactile sensation. So if we think again about the Figure 9 table that we saw,
8 you need to be able to detect a pressure of a particular magnitude so that you
9 know what particular tactile sensation to output.

10 Now, the tactile sensations recited in the claim, they can be all the
11 same frequency and magnitude, but they also could be different. And so by
12 detecting the different pressures, you're able to, the system's able to output
13 different tactile sensations.

14 The idea of certain of the embodiments is that when you press the
15 button a certain amount of pressure, you're going to get a stronger vibration
16 than you might get if you press it with a lighter amount of pressure.

17 JUDGE OGDEN: So you're still saying that the detection is a
18 detection of a pressure at a particular magnitude, even if that magnitude is
19 pre-defined?

20 MR. SPEED: Correct. So a simple example would be you could have
21 a first pressure that the computer readable medium has been instructed, or
22 it's defined in the computer readable medium to be 1 PSI, a second pressure
23 that's defined to be 5 PSI, which is greater than 1, and a third pressure that's
24 been programmed to be detected at 15 PSI, if you will.

25 And each of those pressures, when they're detected, the same or a
26 different tactile sensation would be output. And so you're detecting each

1 one of those pressures and the computer readable medium could have within
2 in some instructions that say pressure 1 equals 1 PSI and pressure 2 equals 5
3 PSI and pressure 3 equals 15 PSI.

4 And that would align directly with the claim language, which requires
5 that the second pressure be greater than the first, 5 PSI is greater than 1, and
6 that the third be greater than the second, because 15 is greater than 5, in my
7 example. Does that answer your –

8 JUDGE OGDEN: Thank you.

9 MR. SPEED: Perfect. So if we turn to Slide 4 quickly, this slide just
10 shows you the three grounds that I'm sure you're already familiar with.

11 It's the Komata ground, Tsuji, and Rosenberg. And if we turn to Slide
12 5, the disputes in this case are fairly narrow at this point. For the first two
13 grounds, the main dispute is whether the claim language that we've just been
14 discussing requires that the pressures be detected in sequential and
15 progressive order.

16 On that point, if the board were to agree with us, that there is no
17 requirement that there's a temporal – no temporal requirement on the claims,
18 then Immersion has no response to the Petition showing of anticipation
19 and/or obviousness for Komata and Tsuji.

20 So that claim construction issue is basically dispositive for grounds 1
21 and 2.

22 And for ground 3, there's two different issues. One is whether a
23 tactile sensation should be limited to vibrotactile sensation. It shouldn't for
24 reasons I'll discuss. And then the second issue is whether Rosenberg detects
25 three different pressures and provides three tactile sensations.

1 Unless the board has a different preference, I'd like to start with the
2 claim construction issue. And if we could jump to Slide 7.

3 As the Federal Circuit has made clear, we should start with the claim
4 language. Here, we can see the claim language we've already been
5 discussing.

6 There is nothing in the plain language of this claim that imposes any
7 temporal limitation on when or in what order the pressures are detected.

8 The claim simply says that the second pressure is greater than the first
9 pressure. It's reciting a quantitative relationship. One pressure needs to be
10 greater than the other, and the third pressure needs to be greater than the
11 second pressure.

12 And going back to my example, that would encompass a scenario in
13 which the computer readable medium has pre-defined pressures for three
14 different pressures, say 1 PSI, 5 PSI, and 15 PSI, and those pressures can be
15 detected in different order.

16 You can have a pressure 15 PSI detected and the system outputs a
17 tactile sensation in response to that, and that would be the third pressure
18 because it's been detected and it is greater than the computer readable
19 medium has identified or knows it will identify as the second pressure if it
20 occurs.

21 So the claim language –

22 JUDGE RAEVSKY: Mr. Speed, let me just jump in. So I think Mr.
23 Win's going to argue that antecedent basis in this claim is going to dictate an
24 order of steps here.

1 And I think we'd all agree that there have been cases where
2 antecedent basis has been at least part of the reason for finding an ordering
3 of steps.

4 How do we decide here whether the antecedent basis linking these
5 steps would require us to find an order or not?

6 MR. SPEED: Thank you, Your Honor. The antecedent basis cases,
7 they still go back to the claim language. And so the antecedent basis can
8 inform how you read the claim to determine whether or not this is sequential
9 order.

10 I think Your Honors at institution recognized, and we agree, that the
11 first limitation 1a, which is detect the first pressure on the first input device,
12 and then the second step says provide a first tactile sensation to the first
13 input device, the first tactile sensation based at least in part on the first
14 pressure.

15 So the first pressure that was detected in 1a is also referenced in 1b.
16 And we agree with what Your Honors determination at the institution stated,
17 which is logically, it makes sense that you would have to detect the pressure
18 before you can output a tactile sensation in response to it.

19 But that's because there's claim language here in addition to the use
20 of the word "the." There's claim language that says based at least in part on
21 the first pressure.

22 So there's additional language in the claim that provides that hook
23 that says the tactile sensation, because it's based in part on the first pressure,
24 that first pressure necessarily needs to be detected before you can output the
25 tactile sensation.

1 But then when you transition from 1b to 1c, 1c simply says detect a
2 second pressure on the first input device, the second pressure greater than
3 the first pressure.

4 That's reciting a quantitative relationship. All that is doing is limiting
5 what the second pressure is. It has to be greater than the first pressure.

6 So the claim certainly covers an embodiment in which you detect
7 these pressures in order, but it also covers an embodiment in which, again,
8 you could have pre-defined values and the second pressure has been pre-
9 defined to be of a greater magnitude than the first pressure.

10 And so the use of the word "the" here does not by itself, is insufficient
11 to compel a reading of the claim that would require everything to be detected
12 in order.

13 JUDGE RAEVSKY: Are you aware of any Federal Circuit decisions
14 where the use of the word "the," as you put it, for antecedent basis, alone,
15 was insufficient to find an ordering of claim steps?

16 MR. SPEED: Was insufficient alone to find an ordering of claims? I
17 don't think I'm aware of a case, that kind of ground, the negative that you're
18 looking for there.

19 We can jump to Slide, say, 16, which are the cases that Immersion has
20 identified on this issue. And I think what those will highlight is what's
21 missing in this case.

22 So if we start with 16, we have the Wi-Lan case, which is one of the
23 decisions that Immersion cites in its papers. And you can see the relevant
24 claim language here on the lefthand side.

1 The claim recites a transceiver comprising certain components,
2 including a computing means that produces modulated data symbols, and a
3 means to combine the modulated data symbols for transmission.

4 The issue in Wi-Lan was whether the symbols needed to be
5 modulated before transmission. And the Federal Circuit agreed that it did,
6 citing in part the fact that it used the phrase “the modulated data symbols
7 found in the earlier limitation.”

8 But in that case, as you can see with the claim language, it makes
9 complete sense that you need to produce the modulated data before you can
10 combine them for transmission.

11 Until they’re produced, they don’t exist in this system, and so they
12 have to be produced before they can be combined and set.

13 In our claim, however, it’s equally plausible that you can have a
14 scenario again with pre-defined values in which the second pressure is 10
15 PSI, the first pressure is 1 PSI, and that would allow for the pressures to be
16 detected without being detected in order.

17 And so where this claim on its face compelled a finding that one thing
18 happens then the other, our claim on its face is broad enough to cover both
19 scenarios.

20 And absent anything in the specification requiring the ordered step, it
21 would be improper to construe as limited to that ordered step. And importantly,
22 in this, as we see in the Wi-Lan case, I have highlighted on the righthand side,
23 the Wi-Lan case, the court went on to note that every embodiment in the
24 specification envisioned producing the modulated data before you combined it
25 for transmission.

1 So this is the type of case I think where the antecedent basis exists and it
2 wasn't alone, wasn't sufficient by itself. It looked toward the claim language,
3 the remainder of the claim language, to make sure that imposing that temporal
4 requirement made sense in light of the claim language, and then they went to
5 the specification.

6 And in our case, we have, if we go to Slide 10, Your Honors, there's an
7 embodiment specification in which it's discussing the Figure 9 table that we
8 saw earlier, and that embodiment simply talks about a processor performing
9 monitoring passes.

10 So in a first monitoring pass, it's monitoring the input device and it
11 detects the first pressure. In a later monitoring pass, it detects a pressure
12 number 3.

13 And so it's detected one pressure, and then later it's detected another
14 pressure. And this embodiment would align perfectly well with the idea of
15 having pre-defined pressures.

16 You could have what's been highlighted on the slide as four pressures,
17 but if we just look at the first three, pressure 1 again could be 1 PSI, pressure 2
18 could be 5, and pressure 3 could be 15, and on each monitoring pass, the
19 processor is detecting whether or not any of those pressures have been applied
20 to the input device.

21 And if it has, then it sends out a particular function or a particular tactile
22 sensation. In all those cases, you have pressures of varying magnitude.

23 You have a first pressure of 1 PSI, and you have a second pressure which
24 is greater than the first pressure, because it's been reprogrammed at 10 PSI.

1 At no point does the specification describe the controller or the processor
2 here as having to detect intermediate pressures or somehow ensure that it only
3 detected three after having first detected one.

4 JUDGE RAEVSKY: I think in your example, Mr. Speed, you assume
5 that pressure 2 is greater than 1 and 3 is greater than 2. It wasn't clear to me, at
6 least on a quick read of the specification, that that's described in detail. I'm
7 just wondering if I overlooked that.

8 MR. SPEED: No, I think that the specification on this point is agnostic
9 as to what the values of the pressures are. There's no explicit description of
10 using pre-defined values in the table, but there's also no description of using
11 values that somehow are dependent on earlier detections.

12 It's agnostic in saying use this truth table out here. And if we look at
13 Slide 11, even – or sorry, Slide 12, even Immersion agrees that this is talking
14 about detecting pressures and that it could include pre-defined pressures.

15 What they try to argue is that we should just exclude this embodiment
16 from the claim because the claim, the specification doesn't talk about greater
17 than, or the claim talks about greater than.

18 But as I was just saying to Your Honor, there's also nothing in the
19 specification that would preclude the pre-defined values being stored in the
20 truth table that we see in Figure 9.

21 And at the end of the day, the Federal Circuit in the Google versus
22 Ecofactor and other cases has made clear, when claim language is broad
23 enough on its face to encompass disclosed embodiments, we should read the
24 claims to encompass those embodiments, absent a reason not to do so.

25 And here, there's no reason not to do so. The claim language is clear on
26 its face that it's broad enough to cover not just – I will admit, it covers a

1 sequential detection of the pressures certainly, but it's broad enough to also
2 detect the pressures being detected out of order, because it's just reciting a
3 quantified relationship between the various pressures.

4 And if we turn to – I can turn to – if we turn to Slide 17, just on the
5 antecedent basis cases, again, I've provided slides for all of them. I can just
6 walk through a couple more just to show, again, these are cases where the
7 ordered nature of the claim is – and most of these are method claims.

8 And again, keep in mind ours, we're dealing with a computer readable
9 medium, just processors and instructions, for that processor. On Slide 17, we
10 have the Hytera case.

11 Again, the relevant limitations talked about preparing to transmit a
12 particular payload in a timeslot and determining whether the timeslot is a
13 current desired timeslot for the TDMA system.

14 The court read that on its face. It does have the antecedent basis. And so
15 it would naturally require that you have to prepare the payload before you could
16 determine whether the timeslot is a desired timeslot.

17 And importantly, again, in that case, every single embodiment was
18 consistent with that. Here we have at least Figure 9, which is agnostic to the
19 temporal or the ordered detection that Immersion is trying to impose on their
20 claim.

21 Fundamentally, they want to rewrite claim 1 as a method claim that
22 recites steps and they want to impose temporal limitations onto that claim so
23 that it would effectively say, detect a first pressure, then detect a second
24 pressure, then detect a third pressure.

1 But the time for them to get a claim to that more narrow invention would
2 have been 20 years ago when they were prosecuting the patent. They shouldn't
3 be doing it now to the guise of claim construction to try to rewrite the claims.

4 If we turn to Slide 18, again, where the Tuna Processors case, this one
5 again had very clear language. You have to have, as seen on the lefthand side
6 of Slide 8, your burning material to produce smoke passing, the produced
7 smoke through a filter cooling the smoke passed through the filter.

8 This is past participles that are making clear we have a method with
9 some type of order here. This is very different from the claim that we have in
10 our case.

11 Unless there's any questions on the temporal order of the claim
12 construction issue, I can briefly get into how we meet Komata, one of the
13 references in ground 1, meets the claims even under their more narrow claim
14 construction.

15 So if we turn to Slide 20, Komata at a high level, it's a Sony reference. It
16 discloses a gaming controller with vibrational feedback. So if you're nostalgic
17 like me, it's the PlayStation controller that's got a little rumble based on how
18 you're using the controller.

19 So reading the reference, I now know how all that works, which is that
20 there's this table shown in Figure 2, and Komata's software instructs its
21 processor to detect how much pressure its user is applying, and it can detect
22 pressure between 0 and 255.

23 So 256 discreet pressures can be detected. And when it detects, say,
24 pressure 1, it outputs this drive signal called P1, which causes the motor to
25 vibrate at a particular frequency. And so it does that for each one of these
26 various pressures.

1 And as we were explaining in our petition, the processor, Komata has
2 instructions that would say, if you detect pressure 10, you do tactile sensation
3 corresponding to, say, P10. If you subsequently detect pressure value 100, you
4 do a dry signal for that. And if you detect pressure value 300, or 200, you
5 output a tactile sensation based on that.

6 So it has the instructions to identify three pressures of progressively
7 increasing strength. And Komata even talks about, in Paragraph 91 here, that
8 it's monitoring changes in the level of the analog signal.

9 So it's monitoring whether or not, even in a single press, so if a user's
10 pressing a button, it's monitoring whether or not there's been a change in the
11 force that's being applied.

12 So even if we've limited the claims to require a single press and multiple
13 pressures being detected during that single press, Komata meets that.

14 But Immersion's construction is slightly broader. They just require that
15 three different discreet pressures be detected. And Komata's processor and its
16 software would detect three different pressures of increasing magnitude.

17 It's a computer readable media claim and the processor in Komata has
18 those instructions to perform that function.

19 JUDGE OGDEN: Mr. Speed, I just want to clarify, because sometimes
20 when certain words get used, it triggers questions. So when you say Komata
21 would detect, are you relying on some inherency or understanding of a skilled
22 artisan to say that this series of steps would be known?

23 MR. SPEED: So Komata's instruction, computer instructions, that its
24 processor is executing, have the ability to detect those three pressures if they
25 were used that scenario, which means that they have the instructions to do so.

1 And so the claim again is a computer readable media processor with
2 instructions to do X, Y, and Z. Komata has those instructions. If this was a
3 method claim where it said a method in which a processor does X, Y, and Z,
4 then yes, we would need to show Your Honors prior art that has a processor
5 that actually is performing steps X, Y, and Z.

6 But because it's a computer readable medium, we need to show that
7 there's software instructions out there that would allow for this multi-detection
8 to occur in this scenario where multiple steps were applied.

9 So it's not inherency and it's not an obviousness argument. It's the
10 explicit disclosure of Komata. It has instructions that its processor executes,
11 and those instructions would include detecting a first pressure, take pressure 1,
12 detecting a second pressure that's greater than the first pressure, say pressure 2,
13 and detecting a third pressure, say pressure 10.

14 That aligns directly up with the claim that they have in this case.

15 JUDGE OGDEN: Mr. Speed, I don't really understand patent owner to
16 be arguing in their claim construction that there's a difference between – that
17 there's any effective difference between this being a computer readable
18 medium claim versus a method claim.

19 And in a lot of – in a lot of situations, it really doesn't matter, because
20 the computer readable medium has instructions to perform a method. And so
21 effectively, maybe it's not. There's no difference there.

22 Is your argument here for Komata, does that require there being a
23 difference between how we interpret these steps, whether it's a method claim or
24 a computer readable medium claim?

25 In other words, my question is, is that critical to your argument?

1 MR. SPEED: I don't think it's critical to our argument, but it's relevant
2 because the claim is to a computer readable medium, which means the question
3 is, did someone prior to this inventor design software that has instructions that
4 would cause a processor to do the steps recited in the claim?

5 And Komata is describing its processor and the instructions that it does.
6 It says, you detect a pressure and then you generate a corresponding tactile
7 sensation or vibration based off of that.

8 And so a person of skill reading that would know that it has instructions
9 to detect pressures between 0 and 255. So that's 256 different pressures, each
10 of which has a greater pressure value than the other.

11 And so, the distinction between a method claimed in CRM is simply the
12 fact that the method claim arguably you would have to – we would have to say,
13 oh, an POSA would have understood – or it would have been obvious for a
14 POSA to execute this software in a scenario where the pressures are detected
15 and progressively – or the pressures that are applied are of progressively
16 increasing forces.

17 Because it's a CRM and we just need it to show that the instructions
18 were there, we didn't need to take that extra step. But in Komata, you can, and
19 again, we put this all in our – it was in our petition, if it detects a pressure 10,
20 and it detects pressure 100, and it detects pressure 200, it does everything that
21 the claim requires, and it has the instructions to do that.

22 Therefore, it has the computer readable medium that has been recited in
23 the claim.

24 JUDGE OGDEN: If we were to side with patent owner on the claim
25 construction issue and decide that there does need to be an order in the
26 detection of the pressures, would you need to rely on an inherency argument in

1 Komata to meet that? Or are you – is that a different – because your slide says
2 even under Immersion’s construction, Komata anticipates.

3 Are you really basing it on Immersion’s construction, including the
4 requirement that there is a time order here? Or is that a little bit different from
5 what you’re arguing?

6 MR. SPEED: No, I think even under their construction, Komata
7 anticipates. So their construction would be that the first pressure has to be
8 detected, then the second, and then the third.

9 JUDGE OGDEN: But to get there, do you need to rely on inherency for
10 that in Komata?

11 MR. SPEED: I don’t think it’s inherency. Because Komata is explicitly
12 disclosing a system with software instructions that would detect the pressures in
13 sequential order when used in a scenario that involved sequentially increasing
14 pressures being applied to the button.

15 So it’s not inherency.

16 JUDGE OGDEN: That sounds like inherency to me. You seem to be
17 arguing that it necessarily would be that way based on the disclosure.

18 MR. SPEED: I mean, I would say, this is probably one of those
19 scenarios where the disclosure is explicit, and so therefore the daylight between
20 the disclosure and inherency, there’s not much daylight there.

21 Komata, it gives you a table and says, processor, if you detect any value
22 in here, you output a corresponding tactile sensation. So that processor, if it
23 detects three different pressures, if you picked up the PlayStation controller,
24 you pressed it once, you put it down, you picked it up, you pressed it harder,
25 you put it down, you picked it up and you pressed it again, even harder, it’s

1 going to do everything that claim one recites and it's going to have done them
2 in order.

3 And that's based on the explicit disclosure of Komata and the table that
4 its processor executes. Because it's explicit and it's part of the software, it
5 would necessarily occur, too. So it is inherent in some sense, but that's because
6 any exposure that's explicit is also inherent given the disclosure.

7 So our position is that Komata discloses software instructions for
8 detecting the three pressures out of order, and it can also detect them in order.
9 And therefore, it anticipates.

10 JUDGE RAEVSKY: Mr. Speed, did Mr. Ward's reply declaration
11 testify as to inherency?

12 MR. SPEED: We did not do a reply declaration with Mr. Ward on the
13 260 patent.

14 JUDGE RAEVSKY: Oh, I must be thinking of the other case. My
15 apologies.

16 MR. SPEED: No problem. If we could briefly turn to Slide 21, I just,
17 Tsuji has the same, similar disclosure. Tsuji is for an ATM in which you press
18 buttons on the ATM, including like the deposit function, and Tsuji's system
19 determines the type of pressure that's been applied and it outputs a tactile
20 sensation based off of that pressure detection.

21 And it can detect up to five different what it calls operating forces.
22 Those are pressures. So it can detect up to five different pressures. And as we
23 see on Slide 21, Tsuji is explicit that a stronger vibration is applied as the
24 operating force gets larger.

1 That is written in the present tense. It is saying that if you're putting
2 your finger on the screen and you keep pushing down harder and harder, you're
3 going to get a larger and larger vibration.

4 So it is determining that there is an increase in pressure. So say from the
5 first pressure to a second pressure to a third, it's determining that's occurring in
6 a sequential nature and it's outputting a vibration based on that detection.

7 That's all. Unless there's any more questions about the ordered step in
8 Tsuji and Komata, I can move to Rosenberg.

9 JUDGE MCNEILL: Mr. Speed, I have one more question. Does the
10 claim require that the instructions recognize that the force is increasing? Or
11 only detect a pressure that is higher than the previous pressure?

12 That is, does it only detect a second pressure when that pressure is more
13 than the first pressure?

14 MR. SPEED: The claims certainly don't have any language that would
15 require that. The claims just say that the second pressure has to be larger than
16 the first pressure.

17 And so there's no limitation requiring that the processor then say, I
18 detected this pressure, it is larger than the first pressure, but let me double
19 check that I already detected a first pressure earlier.

20 On its face, the claim just requires that there be three pressure detections,
21 and each of the pressures has to be of a different magnitude.

22 JUDGE MCNEILL: Thank you.

23 MR. SPEED: If we could turn to Rosenberg in ground 3 on Slide 22, the
24 first issue is whether a tactile sensation is limited to vibrotactile sensation, and
25 the second is whether or not Rosenberg detects three pressures and provides
26 three sensations.

1 I'll start with the tactile sensation argument in Slide 23. The term as we
2 see here on Slide 23 is simply tactile sensation. Our position is it should be
3 given its plain meaning, while Immersion wants to limit it to a particular type
4 of tactile sensation, which is a vibrotactile sensation.

5 If we turn to Slide 24, the reason Immersion wants to do this is clear. It's
6 because the Rosenberg reference discloses a mouse that outputs a resist of force
7 feedback. That is not a vibrotactile sensation, but it nonetheless is a sensation
8 that a user would perceive with his or her sense of touch, so tactile sensation.

9 If we turn to Slide 25, I think one remarkable thing here is everyone in
10 this trial agrees that tactile sensation, the plain meaning of it, is not limited to
11 vibrotactile sensation.

12 In their patent owner response, at Page 33, Immersion says that tactile
13 sensation is simply a sensation that is perceptible by touch, and it concedes a
14 resist of force feedback is a form of tactile sensation.

15 We agree. Tactile sensation is just a sensation that you perceive by
16 touch, and we agree that force feedback would be a form of tactile sensation.

17 And the panel at institution agreed that the ordinary and plain meaning of
18 tactile sensation is not limited to vibrotactile sensations. So the plain meaning
19 is essentially undisputed in this case.

20 And so under the Federal Circuit case law, the only way we can construe
21 the claim more narrowly than its plain meaning is if there's a clear and
22 unambiguous disclaimer, disavow, or redefinition in the specification.

23 And there simply is not one of those. If you turn to Slide 26, the primary
24 support that they rely on is here, Column 3, Lines 44-52. And that support says
25 suitable tactile sensations include vibrations, for example, a jolt.

1 But the use of the word include demonstrates that this is an open-ended
2 definition. It's identified vibrations as a type of tactile sensation, which we all
3 agree with, but it's not limiting tactile sensation to vibrations.

4 If we turn to Slide 27, we can see some of their other support for
5 Immersion at Column 3, Lines 51-60. They're pointing to the actuator 6 as
6 described in Figure 1.

7 And they highlight the fact that it says that this actuator can provide
8 vibrations. But what they don't focus on is the next four words, which says "or
9 other haptic sensations."

10 So the specification can't be clearer that what's being output are
11 vibrations or other haptic sensations, and that's consistent with the claim
12 language that they chose, the elected to use, which is tactile sensations, the
13 broader term.

14 Even if this actuator in Figure 1 was just limited to vibrations, that's not
15 enough to narrowly construe the claims, because it's just one embodiment. The
16 specification is clear that this is just an embodiment and at the end of the
17 specification, they're clear that the claims limit their invention, not the
18 exemplary embodiments that they provide.

19 And also, if we turn to Slide 28, we noted in our reply, and there was no
20 response to this in the sur-reply, that the actuators for Figure 1, they also
21 include a friction break.

22 And a friction break could be a resist of force. And so the actuators are
23 not just being – they are not just vibrating, they are applying resistive forces
24 like a force feedback.

25 And there was no response for this in their sur-reply. If you turn to Slide
26 29, again, we see they are identifying additional embodiments. All of these

1 embodiments they've gone through and tried to find the word vibrating or
2 vibrotactile in the specification, they all relate to Figure 1, which again is just
3 an embodiment specification.

4 The Federal Circuit is clear that even if every embodiment in
5 specification requires a limitation that's not enough to limit the claims if the
6 claim language is broader, such as what we have here.

7 And Slide 30, in their sur-reply, they've identified some additional new
8 citations that weren't in the patent owner response. These ones again,
9 consistent with everything else we've seen, which is that they've identified
10 vibrations as an example.

11 It's for example, the vibrations are output, as another example of, there
12 could be a vibration.

13 If you turn to Slide 31, what the board found at Institution was 100
14 percent correct. Immersion's attempt here to narrow tactile sensation to a
15 vibrotactile sensation, it's an improper attempt to read limitations from certain
16 embodiments in this specification.

17 Tactile sensation has an ordinary meaning, and there is nothing in the
18 specification that would disavow or disclaim that ordinary meaning.

19 Unless there's any questions, I'll turn to the next issue on Rosenberg,
20 which is whether it detects three different pressures.

21 JUDGE RAEVSKY: Mr. Speed, you have about a minute and a half
22 remaining.

23 MR. SPEED: I'm sorry, how long?

24 JUDGE RAEVSKY: You have about a minute and a half remaining.

1 MR. SPEED: Thank you. So on Rosenberg, the main issue with
2 Rosenberg is that, as we see on Slide 32, Rosenberg is a mouse. And it has a
3 particular sensation that it provides, which is a spring force sensation.

4 And the way it works is rather than using a mechanical spring, there's an
5 actuator that mimics the mechanical spring. And so we relied on that using Dr.
6 Ward, who explained that the way the spring would work with this actuator is it
7 would detect progress the movement of the button from its rest position or from
8 its origin down to the stop position, and it would output it progressively
9 increasing pressures as it did so.

10 And in the interest of time, Immersion's response is effectively, it's
11 shown on Slide 36. So what Immersion did in its patent owner response is it
12 said that we were focusing on a simple click of a button, which we're all
13 accustomed to feeling when you click the mouse.

14 You feel a click. But that's not what we were pointing at. The petition is
15 clear, it was pointing at the spring force embodiment, in which you're going to
16 have progressively increasing pressure as the position of the button goes down.

17 And if you look at Slide 37, just to be clear, this is from Column 25-33,
18 Lines 26-4, this is the real, the main paragraph where there's I think some
19 confusion between Immersion and what our petition was setting forth.

20 Immersion focuses on this top part, where it says, in one embodiment,
21 electrical lead can be made to contact a sensing lead as with any mechanical
22 switch, determine simple on or off state of the button.

23 So they focus on it and say Rosenberg is all about determining and on
24 and off state, but in blue we've highlighted here, Rosenberg is explicit that in a
25 different continuous range button embodiment, a sensor can be used to detect a
26 precise position.

1 It then says at the end of this paragraph that this allows the computer to
2 control a force output based on that position as described in greater detail with
3 Figure 11.

4 And Figure 11 is the spring force that we talked about. And so this
5 whole – all their arguments in the patent owner response in the sur-reply about
6 on/off state, that's not attacking a strawman.

7 What we are focused on is a spring force embodiment in which there is a
8 sophisticated continuous range sensor that's determining the position of the
9 button as it progressively moves down and it outputs a correspondingly
10 increasing spring force resisting the user's movement of the mouse button
11 down.

12 Unless there are any questions, I'll save the remainder of my time for
13 rebuttal.

14 JUDGE RAEVSKY: Thank you, Counsel. You went about a minute
15 into your planned rebuttal time, so you have seven minutes remaining.

16 MR. SPEED: Thank you.

17 JUDGE RAEVSKY: Mr. Win, you've planned to do 30 minutes. You
18 may begin when you are ready.

19 MR. WIN: Sure. Actually, can I take one moment? I accidentally
20 closed the window I need to open back up. I'm sorry about that.

21 JUDGE RAEVSKY: That's fine. No problem. Let me know when
22 you're ready.

23 MR. WIN: Okay, I'm ready. Hi, my name is Cliff Win, and I'm here on
24 behalf of the patent owner, Immersion Corporation. I'll be arguing for the 477
25 case.

1 Your Honor, I'd like to just jump right into this order of steps issue. I
2 just want to direct everyone's attention to Slide Number 11, Slide Number 11,
3 and I want to address some of the arguments that Mr. Speed had made.

4 Basically, what we have here is petitioner is trying to read out the
5 detected term in the claim, which is literally claimed in the express claim
6 language, a plain and ordinary meaning of detected first pressure.

7 The logical reading of this is, well, you know, it's already been detected,
8 so detected second pressure greater than the detected first pressure, right?

9 We've kind of gone through that already. Now, what petitioner is doing
10 is they are trying to read out the detected terms, and then instead they're trying
11 to read in extraneous claim limitation for predefined magnitude.

12 There's nothing in the claim's terms that says pre-defined at all. Right?
13 This claim is about sort of this multi-press functionality where if you're on a
14 cell phone and you're touching on the number 2, you can uncover or unlock
15 new functionality as you cycle through and you progressively touch.

16 And so there has to be this sort of comparison between as the magnitude
17 gets greater and greater, you're going to get a different functionality.

18 It's not so much about whether it's pre-defined or not. So you do have
19 to, as a matter of logic, and as a matter of antecedent basis, antecedent basis
20 case line to the Federal Circuit, you kind of have to respect the fact that
21 detected means what was already been detected as opposed to what's been pre-
22 defined.

23 JUDGE OGDEN: Mr. Win?

24 JUDGE RAEVSKY: Mr. Win? Citing case law, oh, I apologize, Judge
25 Ogden. I'll go quickly. Mr. Win, since you brought up a Federal Circuit case

1 law, I am curious if you can answer a similar question that I posed to Mr.
2 Speed.

3 Are you aware of any cases where simply antecedent basis alone was
4 sufficient to find an order of steps independent of specification or other logic in
5 the claim?

6 MR. WIN: I'm not aware of any that are just only the claim language
7 itself. I am aware of cases, and I think we've been talking about those cases,
8 where you sort of, you look to the claim language first before the specification,
9 and not the other way around, right?

10 That much I think is clear. And I'm not sure if petitioner is actually
11 doing that. I think they're kind of trying to look to the specification first.

12 So I will say that. But the second thing is, if you look at all of the cases
13 that have been before us, and I'll call them out, Wi-Lan, Hytera, Tuna
14 Processing, Tuna Processor, all of those cases, they did look to the claim
15 language but they also looked to the specification.

16 And I think both of those things support our reading of the claim. For
17 example, when you look at the Wi-Lan case, and I'll direct your attention to
18 petitioner's Slide Number 16, and in Slide Number 16, when you look at the
19 specification, oh, I'm sorry, this is the Hytera case, it says Hytera does not point
20 to any figure or other part of the specification that discloses an embodiment in
21 which preparing a step is performed after the determining step.

22 We are not – there hasn't been any point in the specification in this
23 patent that doesn't have the steps done out of order. I think they're making a
24 big deal about this – hang on.

1 There's an embodiment at Slide Number 10 of the petitioner's slide deck,
2 and they're making a big deal about this embodiment that we would say it does
3 not apply.

4 This embodiment clearly talks about two pressures. Our claim is talking
5 about three pressures, right? So this embodiment does not apply. If we are
6 looking at all of the embodiments in the specification that actually talk about
7 three pressures, all of those support the reading of ordered steps.

8 JUDGE RAEVSKY: Mr. Win, I just want to note that I noticed that in
9 your patent owner response, when discussing the specification, you appear only
10 to say that this Figure 9 embodiment does not apply, but you did not
11 affirmatively say that any other embodiments require us to read the claims as
12 you've indicated.

13 It appears to us that you forfeited whatever argument you made to that
14 point in the preliminary response. Am I misreading your response?

15 MR. WIN: I think so. If I understood you correctly, Your Honor, are
16 you saying that we didn't provide any affirmative embodiments that support the
17 ordered steps for three pressures?

18 JUDGE RAEVSKY: Yes, I don't recall seeing that argument in your
19 briefing.

20 MR. WIN: Okay. So we have, if you look at my Slide Number 10 of
21 the patent owner's slide deck, each claim step must occur in order. We talk
22 about this at our sur-reply, Pages 3-4.

23 And we talk about, hang on, okay, Slide Number 14 of the patent
24 owner's slide deck, we focus on this embodiment where you clearly have three
25 pressures being detected.

1 And they're being detected in order. And this is in reference to the
2 patent owner's response at Pages 9-10, where we have talked about the
3 embodiments that do support the ordered steps.

4 JUDGE RAEVSKY: I think those Pages 9-10 are not in your claim
5 constructions section, you're just citing background material on the POR. How
6 are we supposed to apply that to the claim construction?

7 MR. WIN: Your Honor, I'll have to go back and look. Maybe I can
8 bring this up on my sur-rebuttal as to specific cites to the specification in our
9 claim construction section.

10 JUDGE RAEVSKY: Yes, that's fine.

11 MR. WIN: Okay. And then, the other point that I wanted to make is I
12 think petitioner's counsel sort of framed this as a temporal issue, and it's not so
13 much that it's a temporal issue.

14 The point is that the claim steps have to be read in a logical order based
15 on a plain reading of the claim and an antecedent basis. It's not, I mean, you
16 can frame it as a temporal issue, but it's really more about the logical order.

17 And if it becomes very clear when you look at how we illustrated this
18 point in Slide Number 11 of our slide deck.

19 JUDGE OGDEN: Mr. Win? I was going to say, staying on this slide, I
20 think I understood you to be arguing that as you interpret petitioner's
21 construction of the claim that there's a requirement that there's a pre-defined
22 magnitude.

23 I don't really understand petitioner to be making that argument. I think
24 that they're arguing that the second pressure could be – the third pressure could
25 be pre-defined, and I think that in the prior art that they're using, it would be
26 pre-defined.

1 But I'm not sure that they're quite trying to construe it that way. Do you
2 agree with that?

3 MR. WIN: I guess my – well, I do think that they are trying to read in
4 pre-defined. They're trying to avoid the logical reading that you have to have a
5 pressure detected before you're going to determine whether –

6 JUDGE OGDEN: I think they're just saying that it could be pre-defined,
7 not that it has to be pre-defined.

8 MR. WIN: Okay. I take your point, Your Honor. But the fact remains
9 that when it says the detected second – the second pressure greater than the
10 detected – the second pressure greater than the first pressure, we are talking
11 about the second pressure that was detected, and then obviously that has a
12 greater than magnitude relationship to the first pressure, and the first pressure is
13 something that was detected.

14 Like, you can't have – you can't be talking about these pressures when
15 they haven't been detected yet, and that's consistent with the logic that the
16 board has applied in sort of the relationship between claim element 1a and 1b,
17 as I'm staring at Slide 11 of the slide deck where 1a says detect a first pressure
18 and then 1b says a tactile sensation based at least in part on the first pressure.

19 Well, the first pressure is the detected first pressure. And we sort of have
20 to apply this consistent logic throughout the entire claim, and we know this
21 from the Rexnord case that we've cited in our briefing.

22 JUDGE OGDEN: So kind of what I understand maybe the difference
23 might be between your position and petitioner's position is that you seem to be
24 arguing that you have to detect what the pressure is at each of these stages,
25 whereas I think petitioner's arguing you have to detect that a first pressure has
26 been achieved.

1 And in their position, the first pressure could be predefined, and what
2 you're detecting is just that that pressure, whatever it is, has been achieved,
3 whereas you seem to be arguing, correct me if I'm wrong, that you have to
4 detect what the pressure is.

5 MR. WIN: That's correct.

6 JUDGE OGDEN: Is that right?

7 MR. WIN: That's right. That's right, yes, because without having
8 detected it, there's really no way of determining whether there's a greater than
9 magnitude relationship, unless of course it's pre-defined.

10 JUDGE MCNEILL: Mr. Win, does claim 1 require that the instructions
11 determine that the detected second pressure is greater than the detected first
12 pressure?

13 MR. WIN: Yes, the way we read it, detected second pressure on the first
14 input device, the second pressure greater than the first pressure. And so –

15 JUDGE MCNEILL: The computer readable media needs to recognize
16 that that second pressure is greater than the first pressure through an active
17 comparison.

18 Are there any embodiments in the specification where it compares the
19 pressure to a previously detected pressure?

20 MR. WIN: Yes.

21 JUDGE MCNEILL: Can you please identify those for us?

22 MR. WIN: So, in Slide Number 14 of the slide deck, there's an example
23 in Column 8, Line 62 through Column 9, Line 5, where they're giving you an
24 example of this sort of operation where you're pressing down on the key and as
25 you press down greater and greater and greater in sequential fashion, and it in
26 fact says causes a slight key to progress through a plurality of positions, and

1 through the sequential fashion, you're going to get different tactile sensations
2 based on the progressively increasing pressure.

3 And you have these – and you know that they're progressively increasing
4 by way of the detection at every step of the way along the succession of
5 increasing pressure applied.

6 JUDGE MCNEILL: Would this have to be consistent with the
7 predetermined amounts of pressure being used to determine that each position
8 as the user presses harder and harder?

9 MR. WIN: Not quite, Your Honor. The way I read this is that it's not so
10 much that it's pre-defined, but it's being detected along the way in succession,
11 and those detections are informing what those pressures are, and then therefore,
12 the computer knows that the pressures are in fact increasing.

13 JUDGE MCNEILL: All right, thank you, Counsel.

14 JUDGE OGDEN: Mr. Win, the detection, it seems like there could be
15 two things that you're talking about in terms of the second detection. One
16 would be detecting that there has been a second pressure, or detecting what the
17 second pressure is, and then maybe there's some sort of a determination or
18 maybe that's a detection that second pressure is greater than the first pressure.

19 Could those be two different things? And can they happen at two
20 separate times?

21 MR. WIN: Your Honor, I think it's the same. When you detect a
22 pressure, you obviously detect the presence of the pressure, but you also detect
23 the magnitude of the pressure, and once you know the magnitude –

24 JUDGE OGDEN: Yes, but you may not – you may not necessarily make
25 any sort of determination, even if you have the magnitude. You may not

1 necessarily make any determination that the second pressure is higher than the
2 first pressure. Right?

3 MR. WIN: Other than the fact that the claim language says the second
4 pressure greater than the first pressure. And by antecedent basis, when it says
5 the second pressure, it's clearly the detected second pressure.

6 So the act of detection is in there. And then again, on an antecedent
7 basis, the first pressure refers back to the detected first pressure.

8 So when we read the claim, I'm staring at Claim 11, or Slide 11, where it
9 says the second pressure greater than the first pressure, we're talking about the
10 detected pressures, right?

11 And so by way of the detection, that informs this magnitude greater than
12 relationship.

13 JUDGE OGDEN: Limitation 1c doesn't explicitly say, as far as I can
14 tell, that determining whether the second pressure, that you have to
15 affirmatively determine that the second pressure is greater than the first
16 pressure.

17 Maybe that's an implication and I kind of understand that that's what
18 you're arguing.

19 MR. WIN: Sure.

20 JUDGE OGDEN: It's not necessarily the only way to read this
21 limitation. Another way might be a second detected pressure and then it's just
22 that the second pressure is greater than the first pressure.

23 You may not need to detect that. Maybe it's just inherently, that's the
24 way it is. Why is that reading not the right reading?

25 MR. WIN: I suppose you could possibly read it that way, but I think
26 based on the specification and also just a plain claim language, like I said,

1 looking at the claim language first, I think Your Honor would agree that that
2 certainly is one way to read it, that it's based on the detection and that
3 determination of the greater than relationship sort of goes hand in hand with the
4 detection.

5 That is one way to read it. I think it's a logical way to read it and it's
6 also further supported by the specification. I think a lot of it sort of rests on the
7 fact that we're talking about an antecedent basis here with the second pressure
8 and the first pressure.

9 If Your Honor doesn't have –

10 JUDGE OGDEN: Thank you.

11 MR. WIN: -- any questions, I'm going to jump right into the Komata
12 reference. I'd like to address one. We spent a little bit of time talking about the
13 Komata reference, and that's on Slide 20 of the petitioner's deck.

14 I wanted to point out one thing. Setting aside the inherency issue, there
15 appears to be a misreading of this Komata disclosure where petitioner's
16 pointing to, as a highlight, changes in the level of an analog signal output from
17 the output terminal, 40c of the resistor 40 corresponds to changes in the pushing
18 pressure.

19 So this is not the same thing as saying that changes in the level of the
20 tactile sensation depends on changes in the pushing pressure. What we're
21 talking about here, I want to be really clear, is we're talking about the analog
22 signal output.

23 And now the analog signal output, if you continue reading in this extra, is
24 you're going to drive the A to D converter, which then yields a digital signal.

25 And then that digital signal is going to bear on the action of the game
26 characters, right? It says right here, the digital signal outputted from the A to D

1 converter 16 corresponds to the pushing pressure on the control button 221,
2 control element from the user.

3 Now if the actions of the game characters and the like are controlled,
4 based on the digital signal, right, that has such a relationship with the pushing
5 pressure from the user, it is possible to keep smoother and more analog like
6 action.

7 So what they're pointing to here is changes in pressure that lead to
8 smoother control of the game character action, not the haptic feedback, right?
9 Not the vibration feedback. I think this is –

10 JUDGE RAEVSKY: Mr. Win, can I clarify something?

11 MR. WIN: Sure.

12 JUDGE RAEVSKY: I just want to clarify that you're now disputing
13 solely petitioner's argument under your claim construction. My understanding
14 is you don't dispute petitioner's arguments over Komata, under petitioner's
15 construction, is that correct?

16 MR. WIN: Well, Your Honor, I would say that it's the ordered steps is
17 based on a plain reading of the claim. I mean, even if you don't look at the
18 specification and just look at the claim on its own, the plain and ordinary
19 meaning would have this sort of ordered steps reading.

20 And based on the ordered steps reading, Komata and Tsuji and
21 Rosenberg do not disclose the ordered steps.

22 JUDGE RAEVSKY: Okay. All right. That didn't answer my question.
23 I'm trying to clarify what you dispute and what you don't dispute.

24 MR. WIN: Okay.

25 JUDGE RAEVSKY: And right now, you're arguing under Komata. Do
26 you dispute if we do not adopt your claim construction that Komata anticipates?

1 MR. WIN: I would still – so I would still dispute that Komata does not
2 disclose the steps even under – even if you don’t find that these steps have to be
3 read in a specific order, Komata still does not disclose because of what I just
4 said, in that Komata is talking about changes in pressure that lead to changes in
5 the action of a game character.

6 JUDGE RAEVSKY: Okay, that’s why I want to clarify, because I think
7 it sounded initially like you were addressing Komata under your claim
8 construction in the reply’s argument.

9 But now it seems like you’re adding in an argument that I didn’t see in
10 your response, which is regardless of the claim construction, Komata does not
11 anticipate.

12 Am I wrong in assuming that was not in your response?

13 MR. WIN: I don’t believe that was in my response, Your Honor.

14 JUDGE RAEVSKY: Okay.

15 MR. WIN: It’s something that I just saw and, yes, and reading through
16 this slide, Slide 20, I identified this. But for even then, under the ordered steps,
17 Komata still does not disclose.

18 And that would be more directing our attention to Figure 2 in Petitioner’s
19 Slide 20, right? And if you’re looking at Figure 2 alone, even under the
20 ordered steps interpretation of the claim, it just doesn’t disclose it.

21 This says nothing more than truth table that says, that provides or sort of
22 establishes a relationship between the different sense values and the different
23 drive signals, but it doesn’t say that you sort of have to do this in an ordered
24 step fashion.

25 And I would say the same thing about Tsuji. Same thing with Tsuji. All
26 it does is provide a truth table. There is no disclosure whatsoever in Tsuji that

1 actually says you're going to do three detection steps in order and provide three
2 corresponding tactile sensations.

3 Just like Komata, Figure 2, there's Tsuji, where it just provides a truth
4 table. All right. If Your Honors don't have any other questions, I'm going to
5 move along to Rosenberg.

6 And so with Rosenberg, I'd like to set the stage by going to Slide 43 and
7 Slide 43 of Patent Owner's deck. And so on Slide 43, Slide 44, the point is that
8 Rosenberg is a single press mouse, right?

9 We're not talking about a strawman. We're talking about what
10 Rosenberg discloses, and it really, we need a fundamental understanding of
11 what kind of mouse we're dealing with here, Rosenberg.

12 The mouse is a single press mouse. And so you're only going to get one
13 output sensation corresponding to one detection of a pressure, because that's
14 just how mice work. You're not going to have a multi-press like the cell phone
15 example that I provided earlier.

16 And so with that in mind, when you look at this disclosure of Rosenberg
17 and Slide 43 and 44, and I'll focus on Slide 43 where we're talking about
18 detecting a button press to detecting a single button press, and I've highlighted
19 sort of the key sentence at the bottom where it says to determine the position of
20 the button to control a force output based on that position.

21 So the way that reads is in Rosenberg, you can have a button with a
22 continuous range, and sure, you can press up and down and keep pressing.

23 But ultimately, because this is just a single touch or single press mouse
24 and not a multi-press mouse, what they mean by they're going to control the
25 output is when you get to a certain click point, they're going to output that force
26 because the click is going to register, right?

1 Any other pressure that gets detected along that continuous range, if it's
2 not that click point, you're not going to get – the user's not going to get an
3 output force.

4 And so what they mean by controlling a force dependent on the location
5 of that button is at a certain location, it's going to give you an output, and any
6 other location they're not going to get an output.

7 And that's what they mean by control of force dependent upon where
8 that button is, and a lot of it is axes.

9 Now at Slide 44, we kind of hone in on Line 29-36 of Rosenberg. And
10 now, what I'd like to point out is that this is – Petitioners in their slide, they sort
11 of talk about this as well, but they cut off half of the paragraph.

12 They sort of don't provide any – they sort of zero in on where it says if
13 the origin of the spring is at the rest position of the button, then the further the
14 button is moved from the rest position, the greater the spring force opposing
15 that motion.

16 And that goes along with what I just said earlier, right? Sure, you have
17 this description of how a spring force classically works, and you're providing a
18 description of that.

19 Because this is going to ultimately mimic that type of mechanism. But at
20 the end of the day, you're still going to have one button click, and that's going
21 to control the force, and any other point or position of that button along the
22 way, along the Z axis, even if it's a continuous range, you're not going to get an
23 output.

24 And this is further elucidated when we provide the full context of this
25 paragraph, which goes all the way up to Line 36 where it says for example,

1 when the user positions the cursor over an icon 456 and presses the button, a
2 light spring force resist the press motion of the button.

3 So you press the button. This is a single press mouse. You get a light
4 spring force. The second sentence is very important. It says when the user
5 positions a cursor over a different graphical object, such as icon 46, a heavy
6 spring force is output, having a greater magnitude than the spring force for icon
7 456.

8 So the way you parse this out is, and I've described this on the left, is
9 you have a situation where, in the first instance, you have a single button press
10 with a single pressure, and you have a light spring force.

11 And then when the user positions a cursor over a different graphical
12 object, and in this situation, you don't have any pressure, the sentence does not
13 say that you do another press or that you continue to press, right?

14 All the user is doing now is that it's at a rest position and it's going to
15 hover the mouse over a different icon. You're going to get a heavy force
16 output. Because now we're talking about spatial dependency and providing
17 different type L feedback depending on what icon you're hovering over.

18 And this is not – this does not talk about getting a higher force when you
19 press down further. And in fact, another point is when you read the language, it
20 says in the first instance, a light spring force resists a pressed motion of the
21 button, in contrast to the second instance where it says a heavy spring force is
22 output, right?

23 And so they could have said a spring force, a heavier spring force that
24 resists the press motion of the button, but it's not because now we're talking
25 about a spatial dependency type of use case.

1 And this is, if you go to Slide 45, the next slide in Patent Owner's deck,
2 sort of made this point where what petitioner's trying to say is for example,
3 when the user positions a cursor, 446, over an icon 456 and presses the button
4 lightly, a light spring force resist the pressed motion of the button, and then
5 when the user positions the cursor 446 over a different graphical object, such as
6 icon 460, and I put in brackets, and presses the button harder, which is not what
7 it says, then a heavy spring force is output.

8 So this all goes back to the main point that you have – this is not a multi-
9 press mouse. This is a single press mouse. And so you're not going to meet
10 the claim limitations because you don't have three tactile sensations
11 corresponding to three detections of increasing pressure.

12 Similar concept at Slide 46 of the patent owner's deck where I think
13 petitioner makes much of the fact that you have claim 35 and claim 36
14 dependent claims in the Rosenberg patent.

15 But again, that doesn't mean what they're asserting in that claim 35, all it
16 talks about is detecting three positions. So I'll give them that. They detect
17 three positions.

18 It doesn't even talk about whether they're increasing or successive, but at
19 least they detect three positions. But what's missing here is they don't provide
20 three corresponding tactile sensations to those three different positions.

21 And if you read claim 35 and claim 36, all it talks about is it detects a
22 range of at least three positions of said button and said degree of freedom.
23 That's claim 35.

24 And then in claim 36, it says a force feedback mouse, wherein said
25 output force is dependent at least in part on said position of said button. So the

1 antecedent basis goes back to claim 30, and in claim 30, all claim 30 is talking
2 about is detection of one position of said button, not multiple.

3 And according to that one position, you're going to provide when said
4 button is pressed by said user to a predetermined position a command signal is
5 sent.

6 So it's one command signal being sent, corresponding to one pressure
7 detected or one button pressed.

8 JUDGE RAEVSKY: Mr. Win, just a heads up, you have under 30
9 seconds remaining in your main time.

10 MR. WIN: Okay. I'll close real quick with a vibrotactile sensation
11 issue. I'll just say that I think their mischaracterization of the resistive break,
12 resistive break could be – there's no expert testimony.

13 There's no evidentiary support for why a resistive shaft is actually a non-
14 vibrational type of output. You can have a resistive break or friction break that
15 can cause vibration. And I'll leave it at that.

16 JUDGE RAEVSKY: Thank you, Counsel.

17 MR. WIN: Thank you, Your Honor.

18 JUDGE RAEVSKY: You have about 15 minutes remaining. And I'm
19 just setting the clock for Mr. Speed. You have 7 minutes. And when you're
20 ready, you may begin.

21 MR. SPEED: Thank you, Your Honor. Just on that last point about the
22 resistive break not somehow generating vibrations, that's the first I've heard of
23 that.

24 That's not an argument they put in their sur-reply, so we'd object to that
25 as a new argument. And in a similar vein, the notion that Komata or Tsuji does

1 anticipate under our construction that that is also a new argument that's not in
2 the patent owner response.

3 It's not in the sur-reply. And so that would be a waived argument as
4 well. Turning to the substance, looking at our Slide 47, if you could real quick,
5 Mr. Win spent some time on this disclosure about a light spring and a heavy
6 spring force.

7 And I'm still a little confused exactly what the disconnect is between the
8 parties. But what Rosenberg is describing here is that you can have an icon
9 which if you click on that icon, the resistive force that you're going to feel is
10 going to be a light spring force, so like a loose spring that you're accustomed to
11 when you touch it with your finger, it's going to be looser.

12 And so the magnitude of the resistance is less than the heavy spring
13 force. So it's just saying you can have different types of spring forces.

14 And the way that they're different, as Mr. Ward explains in his – on
15 Slide 47, is that the magnitude of the resistive force increases as you get further
16 down.

17 So for the light spring, you're going to – it's going to increase as you go
18 further down, but it's going to be of a lesser magnitude with the heavy springs.

19 So I just wanted to point that out. And then on the claims, if we could
20 turn to Slide 43 of our deck on the claim language, and this is Rosenberg's
21 claims, the idea that the position of the button is what is – the only use of it is to
22 determine a command signal, like the click goes to a computer, that's
23 inconsistent with what the claims say.

24 Independent claim 30 talks about a force feedback mouse where you
25 have an actuator coupled to said button of said mouse, said operative to apply
26 an output force.

1 Now, earlier, it does say that it can also send a command signal, but it
2 also has an actuator that applies an output force, and that's important because if
3 you look at independent claim 36, 36 says that the output force, not the
4 command signal, but the output force, is dependent, at least in part, on said
5 position of said button.

6 And said position, if we look back us, is protecting a position of said
7 button. A means more than one. So claim 30 is broad enough to be multiple
8 positions and 36 makes clear that those positions are going to be used by the
9 processor to command the actuated output of force, which is consistent with the
10 spring force where the force would be of increasing magnitude the further down
11 you press the button.

12 Going to Komata, I just want – our Slide 20, just to be absolutely clear,
13 Slide 20 of Komata has Figure 2, which is a table, as part of the software of
14 Komata.

15 It quite literally has a lefthand column that is 256 pressures and a
16 righthand column that says here's the drive signal that will generate some
17 vibration.

18 So it has stored in the software 256 pressures with 256 corresponding
19 drive signals. And so Komata has instructions, explicitly, for producing a
20 defined effect for pressure 1, for producing a defined effect for pressure 5, and
21 for producing a defined effect for pressure 10.

22 And if 10 is greater than 5 and 5 is greater than 1, it's detecting three
23 different pressures recited in the claim. The processor has those instructions.

24 Again, this is a computer readable medium where the limitation requires
25 that you have instructions that the processor could execute. Komata's Figure 2
26 shows it has those constructions.

1 Under our interpretation of the claims and under theirs as well, it will
2 detect three different pressures of different magnitude and it will output
3 corresponding tactile sensations.

4 The instructions are there. It's not an issue of inherency. It's explicit
5 disclosure. Again, what we heard from Immersion's counsel, they want to keep
6 adding in the word detected, the first detected pressure.

7 That's not what the claim says. The claim simply says, it just gives – it
8 quantifies what the second pressure is. It has to be a pressure greater than the
9 first pressure.

10 And the claim is broad enough to include pressures that have been
11 predefined or pressures that are somehow sequentially detected. It's a broad
12 claim, and the consequence of having a broad claim is that there's three prior
13 art references that anticipate or render it obvious.

14 JUDGE RAEVSKY: Mr. Speed?

15 MR. SPEED: Yes, Your Honor.

16 JUDGE RAEVSKY: Do you agree with patent owner's characterization
17 on Slide 11 that Petitioner is reading in predefined magnitude into the claim?

18 MR. SPEED: I do not agree with that characterization, Your Honor.
19 What we are doing, we are not reading anything into the claim, just like Your
20 Honors didn't read anything into the claim at institution decision as well.

21 What we're doing is reading the claim in a way that encompasses all the
22 embodiments that are disclosed in the specification, and the specification in its
23 Table 9 encompasses a scenario where you have pre-defined values.

24 So we're not limiting this in any way to predefined values. We're just
25 saying that the claim is broad enough to cover that. And their only response

1 that I heard on Figure 9 was that Figure 9, the description just talks about two
2 pressures.

3 But that's because the specification is just explaining this to a person
4 skilled in the art. The figure itself shows four different pressures. And so any
5 POSA reading that is going to know they explain what happened when you
6 detect two pressures.

7 But obviously, if you kept going, you might detect a third, a fourth, a
8 fifth, a sixth, a seventh pressure. And so, the Figure 9 embodiment, they have
9 no real response to that.

10 And so, as Your Honors found at institution, in this case, and as the
11 board found in the earlier Apple case, that embodiment encompasses a scenario
12 which you have predefined magnitudes in which the pressures are detected out
13 of order, which means that the claim should be read that broadly.

14 And as we've demonstrated, Tsuji, Komata, and Rosenberg, all three of
15 them anticipate and/or render obvious those claims.

16 Unless there's any questions, I will rest.

17 JUDGE RAEVSKY: Thank you, Counsel. Mr. Win, you have 15
18 minutes when you're ready.

19 MR. WIN: Thank you, Your Honor. I just want to go back to Slide 44
20 of the patent owner's slide deck. And I think, again, I think there's a
21 fundamental disconnect here, right?

22 I think we know that this mouse is a – it's worded as a continuous range
23 mouse and you can detect the position of the mouse button all along the Z axis.

24 But at the end of the day, this is a single press mouse. There's only one
25 position that's going to actually have functional significance. And so the claim
26 requires three positions and three corresponding haptic feedback, right?

1 And so, and I think it's very clear from all of the disclosures in
2 Rosenberg in both Slide 43 and Slide 44, and even in claim 35 and claim 36,
3 that you're only going to have one position that's going to result in functional
4 significance to the user.

5 The user is only going to get one tactile sensation. So that's one point I
6 want to make. Back to the vibrotactile issue, again, Your Honor, the
7 petitioner's counsel has been unable to point to any embodiment whatsoever
8 that has a non-vibrational feedback, right, aside from the fact that there's a
9 dispute over what friction breaks are.

10 Again, there's no evidentiary support for that. And I think they point to
11 – they're unable to point to any embodiment whatsoever. All the embodiments
12 have some sort of vibrational output.

13 I think there's one – let me go to Slide 18, where they – yes, Slide 19,
14 I'm sorry, where there's this other haptic sensation. And they're saying, well,
15 the other haptic sensation could be something non-vibrational.

16 But if you read it in the full context of the paragraph, all they're talking
17 about is vibrational sensations. You have an actuator with a flexor material
18 with a rotating shaft of a DC motor, and that's causing vibrations.

19 So vibrations or other haptic sensations, there's no mention of anything
20 in this entire specification that has a non-vibrational type of actuator or
21 feedback.

22 And so, I think my final points are that the steps have to be ordered. You
23 have it based on the claim language and an antecedent basis case law.

24 To do so otherwise would invite legal error. And also, with respect to
25 Rosenberg, it's a single press mouse. It's not a multi-press mouse. And so
26 there's only going to be one vibration.

1 There's only going to be detection of one position of that button that's
2 going to result in any sort of functional significance to the user.

3 JUDGE RAEVSKY: Mr. Win, do you have a response to petitioner's
4 characterization of Figure 9 as having four different pressures? And just an
5 example that covers two, would a skilled artisan understand that there could be
6 more pressures detected?

7 MR. WIN: I think at the end of the day, the disclosure is clear. At
8 Column 14 of the patent, they're talking about two pressures. If you want to
9 look to other instances in the specification, where there's more than two
10 pressures, well, those paragraphs in the specification, when they do talk about
11 the three pressures as required by the claim, they're talking about it in that
12 ordered steps fashion.

13 The only time the language is a little unclear as to whether it's being
14 done out of order is that disclosure in paragraph or in Column 14, but those are
15 clearly talking about just two pressures, not three pressures.

16 JUDGE RAEVSKY: Would you agree that Figure 9 discloses more than
17 two pressures?

18 MR. WIN: Figure 9 does disclose more than two pressures, but Figure 9
19 is almost kind of like the disclosures of Komata and Tsuji, in that it's nothing
20 more than a truth table.

21 It doesn't provide any sort of sequential quality to it.

22 JUDGE RAEVSKY: Thank you, Counsel. Do you have anything
23 further?

24 MR. WIN: Nothing further, Your Honor. Thank you.

1 JUDGE RAEVSKY: Okay, thank you to both counsel. This case is
2 adjourned. We'll take a 10-minute break and reconvene to discuss the 478
3 case.

4 (Whereupon, the foregoing matter went off the record at 2:23 p.m. and
5 went back on the record at 2:33 p.m.)

6 JUDGE RAEVSKY: We are back on the record. And we're going to
7 discuss the 478 case, IPR 2024-00478. Let's confirm that we have counsel for
8 both parties on the line.

9 MR. SPEED: Yes, you have counsel for petitioner on the line.

10 JUDGE RAEVSKY: And Mr. Speed, you'll be arguing?

11 MR. SPEED: Yes, I will.

12 JUDGE RAEVSKY: Thank you.

13 MR. KIM: And this is Sam Kim. I'm counsel for patent owner.

14 JUDGE RAEVSKY: Thank you, Counsel. Same question as before.
15 We have 45 minutes for each side. Mr. Speed, would you like to reserve any
16 time for rebuttal?

17 MR. SPEED: Yes, can I reserve 5 minutes, Your Honor?

18 JUDGE RAEVSKY: And Mr. Kim?

19 MR. KIM: 15 minutes, please.

20 JUDGE RAEVSKY: Great. So, Mr. Speed, you'll have 40 minutes, and
21 when you're ready, you may begin.

22 MR. SPEED: Good afternoon, Your Honors. This is Nathan Speed
23 again on behalf of petitioner, Valve. This is for the 042 patent. If we could
24 jump right to Slide 2, I'll give a quick overview of the patent and dive right into
25 the issues.

1 The 042 patent describes an input device, like a physical knob you rotate
2 or a touchpad you can control with your finger. These input devices are used in
3 the pack to control one or more systems like the HVAC or radio systems for a
4 car.

5 As we see in the top left, the patent observed that many modern systems
6 were starting to use electronic input devices that lacked conventional
7 mechanical feedback like detent.

8 And a detent is kind of like the click-click you feel when you rotate an
9 old school knob on a car or at least what I'm more familiar with is rotating the
10 scroll wheel on your mouse. They kind of make that click-click sensation.

11 The purported novelty of this patent is alleged discovery that would
12 modern input devices. They would be more intuitive if they simulated the
13 mechanical feedback that users had come accustomed to experiencing with
14 mechanical devices.

15 And so what they do as we can see on the righthand side of Slide 2 is
16 they have an actuator that outputs a vibrotactile effect onto the knob or into the
17 touchpad to simulate a mechanical detent.

18 And if we turn to Slide 3, we can see certain of the examples of a virtual
19 detent that the patent talks about and that Immersion has identified.

20 At the top, we've got Figure 9a. On the righthand side, you can see a
21 knob that has three points, A, B, C, D, and E. And the specification in Column
22 13 explains that as the knob rotates through those five positions, a small
23 vibration is output to give a detent feeling for each of the positions.

24 So kind of like the click-click you would feel when you turn the radio
25 knob.

1 This patent is also clear at Column 6 that it could be even simpler. You
2 could have just a simulated click generated through a pulse. Like the click you
3 feel when you press the spacebar on your keyboard. They can simulate that
4 with a single pulse.

5 And at the bottom, we can see in district court litigation, it's more
6 examples that they've provided, which would be the scroll wheel behavior on
7 your mouse, so the click-click-click you feel as you're scrolling through items
8 or the click you feel from a simple directional pad.

9 So that's like the up-down-right-left on a gaming pad. You press that.
10 You feel a mechanical click typically when you press it.

11 Now, if we turn to Slide 4, we can see of the claim, claim 1, which is at
12 issue today, it's a method, this one. It has three steps, receiving an input signal
13 from the input device.

14 That device in the claim is limited to a touchpad. And then based on that
15 signal you receive at the top profile, you produce a vibrotactile effect, and that
16 effect comprising a virtual detent.

17 Now, if we jump to Slide 5, we'd see the three grounds. There's the
18 Ichinose combined with Levin ground, Wang combined with Ichinose, and
19 Rosenberg by itself.

20 And unless the panel has a preference, I was just going to start with
21 ground 3 and Rosenberg, which is the anticipation ground.

22 Turning to Slide 6, in brief, Rosenberg discloses the laptop. You can see
23 on the lefthand side. It has a touchpad, which is element 16. I've highlighted it
24 in yellow in Figure 1.

25 And it functions like a typical touchpad, allowing users to move a cursor,
26 but then interacts with graphical objects shown on the display, like an icon.

1 Like the 042 patent, Rosenberg's touchpad is configured to output
2 vibrotactile effects in the form of short, vibratory pulses or jolts, is what
3 Rosenberg talks about.

4 For example, as described in Column 12 that we see here on Slide 6,
5 when a user uses the touchpad to control a graphical object, for example, to
6 adjust the laptop's volume or the application's volume, the touchpad outputs a
7 pulse to indicate that the end of the range has been reached.

8 So when you increase the volume to the maximum, you get a pulse to
9 indicate that the end of the range has been reached. So like how a knob will
10 have a stop at the end.

11 In that same volume adjusting context, Rosenberg also talks about
12 outputting pulses to indicate quote ticks or discrete values within the adjusted
13 range. So as you go from volume 2 to 3, all the way up to say 11, you're going
14 to get a click for each time you go from, transition from 2 to 3 to 4, what have
15 you.

16 That's Rosenberg in a nutshell, and it aligns right with the challenge
17 claim.

18 We turn to Slide 7. There's two disputes with Rosenberg. The first is
19 whether or not Rosenberg's touchpad controls a plurality of systems. And the
20 second is whether the pulses, the vibrational pulses of Rosenberg, are truly
21 virtual detents.

22 I'll start with the plurality of systems dispute. And we turn to Slide 8.
23 Immersion has framed this dispute as a claim construction dispute. Ultimately,
24 however, the Board does not need to construe the claim because Rosenberg
25 meets the claim even under Immersion's proposed construction.

1 For the sake of completeness, I'll briefly show why the claim
2 construction that Immersion is proposing is wrong. As you can see, you could
3 see their construction at the top of Slide 8.

4 They are proposing to construe the simple phrase input device configured
5 to control a plurality of systems, to mean input device configured to control a
6 plurality of systems where each system to be manipulated provides context for
7 virtual detents.

8 They are essentially trying to narrow the claim so that the virtual detent
9 that is output is dependent on the system that the input device is controlling at
10 that time.

11 The plain language of the plurality of systems, however, is fairly
12 straightforward. It simply means more than one system. If the claim didn't put
13 devices that must only be configured to control more than one system, that's all
14 the language requires.

15 And there's nothing in the plain language of claim 1 that justifies adding
16 Immersion's narrowing context specific language.

17 Given the claim's plain language, the only way that Immersion's
18 construction would be even plausible would be if there was a clear disavowal or
19 disclaimer in this specification, but there's not.

20 If you turn to Slide 9, we see Immersion's lone support for its
21 construction in this specification. The top disclosure says the detent signal,
22 which is what generates the virtual detent, quote, may be based at least in part
23 on the system which is being actively controlled.

24 In the bottom one, in Column 4, it says in one embodiment, the processor
25 may process code running as an application and utilize that code in determining
26 what virtual detent to signal.

1 These two passages, even if they were limited to – even if they limited
2 the detent signal to one that’s based on the context of the application or the
3 hardware system being controlled, these are just two examples, and the
4 language from the specification is clear that this is just optional functionality.

5 It may be based on this in one embodiment. These are just embodiments
6 describing optional functionality. There’s no indication in these two passages
7 that this is a requirement of every embodiment, much less of the claims.

8 If you turn to Slide 10 –

9 JUDGE RAEVSKY: Mr. Speed?

10 MR. SPEED: Yes?

11 JUDGE RAEVSKY: This is a very – this is a very interesting issue here
12 on claim construction. As I understand it, your position is that systems
13 encompasses software.

14 Your expert, as I understand, in Paragraph 301 of the initial declaration
15 seems to believe otherwise. Your expert says that the claim plainly requires at
16 least two distinct electromechanical systems.

17 How are we to address the position that you’ve taken, being at odds with
18 the position your expert has taken?

19 MR. SPEED: So in the petition, we have observed or we recognize
20 patent owner’s construction, which was that systems would include
21 applications.

22 We didn’t explicitly disagree with that in the petition. We said we were
23 going to apply that construction to Rosenberg to demonstrate why Rosenberg
24 would meet it.

25 When they came back in their patent owner response, they provided their
26 construction for the first time. We explicitly said at Page 23 of our reply brief

1 that we agreed with them, that in light of the intrinsic evidence that systems
2 would include applications.

3 What we disagreed was the next part of the construction, which tried to
4 limit the particular type of applications to those that provide context.

5 So we agree with them that the systems, in light of the specification
6 would include software applications. What we disagree is that it's only certain
7 software applications.

8 They're saying it's the only software applications that provide the
9 context for the virtual detent. We disagree with that. It covers any of the
10 applications.

11 But more fundamentally, even if we had thought their clarifying
12 construction, which is the one that they say is right in light of the intrinsic
13 record, Rosenberg discloses that because its pulses, as I'll show you, are
14 dependent on the application that is being executed.

15 The application that issues the command to the actuator to output the
16 pulse, so it's the application that is providing the context for that.

17 JUDGE RAEVSKY: So does your expert have a credibility problem by
18 saying that systems cover something other than software?

19 MR. SPEED: I think, so, the expert at the petition stage was applying
20 their construction and they said that based on their construction, I would agree,
21 or applying their construction, Rosenberg anticipates under that construction.

22 But they have now – that was before they had ever taken a position on
23 what the claim construction was or offered any intrinsic evidence to support
24 that.

1 In their POR, they identified at least one passage in the specification that
2 talks about how the software code may provide the context for the virtual
3 detent.

4 So they identified a portion of the specification that supports the idea that
5 system includes software. And so now at that stage, we in the reply said, okay,
6 we agree with that, and we demonstrate how – and clearly, Rosenberg is
7 executing software.

8 And so the question becomes if their construction is right and that has to
9 be context specific software to be a system, then does Rosenberg disclose that?
10 And it does. And I'll show you.

11 But if they are wrong and it's just any software, then there's no dispute,
12 again, that Komata meets the limitation.

13 And so I think –

14 JUDGE RAEVSKY: So just to put a loop on this and a bow and tie it
15 up, is it accurate to say that you now disagree with your expert's
16 characterization in the initial declaration Paragraph 301, and you've now
17 broadened your view of what that term means?

18 MR. SPEED: So we have, I think in 301, the expert was saying I'm
19 going to assume that a system includes an application and his analysis is based
20 on that assumption.

21 He opined that in his opinion he wasn't sure that a system would
22 necessarily cover software. Now that we have the reply, or once we saw the
23 patent owner's response and we saw the evidence that they cited, we're not
24 going to pick that fight with them anymore.

25 And so we agree with them that the system would encompass software.
26 A system is a fairly broad term. It's a collection of things working together.

1 And so an application would support that. So he offered this kind of side
2 opinion, if you will, on 301, but his analysis through his opening declaration
3 was under their construction, in which it would, system would include an
4 application.

5 And we agree with that at this point. So I don't see a credibility concern
6 because the analysis that he applied in which the application is a system is the
7 position that we're taking today.

8 And then more fundamentally – so on Slide 10, just to go back to the
9 claim construction issue that they have, what we did in the reply is we pointed
10 out numerous disclosures, and this is at Page 21 of our reply, where the 042
11 patent is saying that the detent signal, which is what triggers the virtual detent,
12 can be based just on the input signal.

13 So on Slide 10, we have at the top that for example, if the input signal
14 indicates a rotation of a knob in more than five degrees, the processor may
15 generate systems signal and a detent signal.

16 So this disclosure and the others that are cited in the reply brief are
17 showing is that the virtual detent can be based just on the input signal. If you
18 turn a knob a certain amount, it's going to output some type of detent signal.

19 And that demonstrates that the application need not provide the context
20 for the virtual detent. It could. But again, the claim doesn't require that it has
21 to do that, because there's embodiments in the specification, and these are the
22 initial embodiments described in which it's just input signal that determines
23 that.

24 Ultimately, all right, sorry, before I go to my ultimately point, Slide 11, I
25 think we're going to see this from there, in their slides, what they argued in

1 their sur-reply is that the disclosures we pointed to all, they all said that the
2 virtual detent could be based at least in part on the input signal.

3 And so they read based at least in part on to mean that there has to be
4 additional information beyond the input signal. But that, respectfully, that just
5 doesn't make any sense.

6 Based at least in part on means that the bare minimum information that
7 you need is the input signal. So it's describing that there are embodiments in
8 which you have just the input signal generating the virtual detent, which means
9 that the system cannot be dictating what kind of virtual detent is being output.
10 It's just the input signal.

11 And that's what Mr. Ward said in his reply declaration. You don't have
12 to take my word for it, it's –

13 JUDGE RAEVSKY: Mr. Speed, I'm sorry, I'm slightly confused. Are
14 you talking about claim 2? Because I don't see the based at least in part on the
15 signal in claim 1.

16 MR. SPEED: No, I'm talking about Slide 11, their response to the
17 disclosure we identified in the specification. So we in our reply at Page 21
18 identified a handful of disclosures that explain that the input signal, there were
19 embodiments in which the detent signal was based only on the input signal.

20 So like turning the knob five degrees. Their only response to that is that
21 those embodiments were described as based at least in part. And they're
22 reading based at least in part to mean additional information is required.

23 Mr. Ward explained at Paragraph 67 in his declaration, before he had
24 even seen this sur-reply argument, that the language based at least in part means
25 what it means, which is that the bare minimum information is the input signal,
26 and therefore, there are embodiments where that's the only signal, and

1 therefore, Immersion's construction would require that the system be in control,
2 dictate the virtual detent signal, is incorrect.

3 But again, I'll just get to what I think is the bigger point here, which is
4 even under their construction, Rosenberg meets the claim. Rosenberg at
5 Column 6 is explicit that the laptop runs many applications, and that it's the
6 application that utilizes input from the touchpad and outputs force feedback
7 commands to the touchpad.

8 It's saying this on Column 6, Lines 7-23. Rosenberg is saying that the
9 applications are dictating the force feedback command. So putting that into this
10 language that Immersion uses, it's the application that's providing context for
11 the virtual detents.

12 And if you go to Slide 13, we see additional disclosures that support that
13 same basic idea. At the top, we have Column 3, Lines 46-48. And that is
14 saying that the device, the display on the laptop, shows a graphical environment
15 based on the application.

16 That makes sense. It's running a program. It's going to show what the
17 program wants to do. And then at Column 13, Lines 6-21, it's explaining that
18 the forces that are output on this laptop, or on the touchpad, which would
19 include its pulses, are based on how you're interacting with a GUI element, like
20 an icon or some other element that's been presented in the application.

21 So it's the application that is presenting the GUI element that you
22 interact with and it's your interaction with that that triggers the force feedback
23 command.

24 And so again, in their own terminology, the application is providing the
25 context for the virtual detent.

1 And I'd like to go to Slide 14. Again, their only response to these
2 disclosures, and this again, this demonstrates that Rosenberg meets the claim
3 under their construction.

4 The only response is that we have no evidence. We have, respectfully,
5 however, Rosenberg's disclosure is plain on its face, and that's evidence itself,
6 and we also have Mr. Ward's reply declaration where he explains this exact
7 same interpretation at Paragraph 101.

8 So we do have evidence on this point, and that was their only response.
9 Unless there's any questions, I'll go to the second issue, which is whether or
10 not Rosenberg's pulses meet the claim of virtual detents.

11 If you go to Slide 16, you can see their argument kind of in a nutshell.
12 Basically, as I understand it, they're arguing that Rosenberg's pulses are just
13 generic vibrations, and therefore, they're not virtual detents.

14 This is a misinterpretation of Rosenberg. If you go to Slide 17, as an
15 initial matter, I just want to point out that Rosenberg's jolts or pulses are just
16 single pulses, single, short pulses of force, short vibrations, which is consistent
17 with the 042 patent saying that a simulated click generated through a single
18 pulse can be a virtual detent.

19 So as a matter of physics, they're the same thing. So what Immersion
20 seems to be getting at is that context matters, and that a pulse generated when
21 you would expect to get mechanical feedback, that's a virtual detent.

22 But a pulse generated in some other context might not be a virtual detent.
23 But mimicking traditional mechanical detents, that's what Rosenberg does.

24 If you go to Slide 18, Rosenberg really can't be clearer on this. On
25 Column 13, Lines 31-54, Rosenberg's describing a scenario in which a

1 software designer wants to allow a user to select an icon with a touchpad, but to
2 do so without clicking a physical button or even tapping a touchpad.

3 Rosenberg says that prior to its invention, such a design was problematic
4 because a user has physical confirmation of execution when pressing a physical
5 button, but would not have such confirmation in this touchpad design.

6 Rosenberg's solution to that problem is to generate a pulse that quote can
7 act as that physical confirmation without the user having to press a button or
8 other selection.

9 Rosenberg is just quite literally teaching the use of a pulse to simulate the
10 physical detent that one would expect to feel when you click a button.

11 This is a virtual detent. The same type of feedback, a click of a button,
12 that Immersion identifies as a virtual detent in the district court litigation.

13 If we turn to Slide 19, we can see their response. Their response is that
14 there's no virtual detent because you're using a touchpad and you're not
15 pressing anything.

16 And so you're hovering over the icon. But the whole point of hovering
17 over the icon is to select the icon. And what the embodiment does is it provides
18 confirmation to the user that they selected it by generating the pulse.

19 So in the old school, you would click a button and you would feel the
20 mechanical click, and in this Rosenberg touchpad, which predates their patent
21 by years, in this Rosenberg touchpad, you get a pulse that simulates that click.

22 Immersion in its sur-reply, they even call the pulses confirmation pulses.
23 And the confirmation that the pulse provides is a simulated click that replicates
24 the confirmation that a user would get from pressing a mechanical button.

25 The pulse in this embodiment is indistinguishable from the simulated
26 click that the 042 patent says is a virtual detent. And if you turn to Slide 20, we

1 can see again, this is the Column 20 from Rosenberg on the lefthand side,
2 which I showed in the intro of Rosenberg, and it describes a whole host of
3 different types of scenarios where you would output pulses, and they align
4 neatly with the patent's description of virtual detents.

5 So you have the blue one in Rosenberg. It's talking about when you
6 reach the end of the range, say volume, you get a pulse output. That aligns with
7 the Figure 9b virtual detent that has a hard stop profile.

8 It says when the fan reaches a maximum, the processor may send a
9 detent signal to the actuator comprising a barrier detent. It sends a pulse to
10 indicate that you're at the end of it.

11 And if you look at the yellow highlighting for Rosenberg, it's talking
12 about using pulses to indicate the location of the ticks for discrete values or
13 settings in an adjusted range. Again, so the click-click-click, you feel like
14 you've turned the radio or the temperature in the car.

15 That aligns with Figure 9a's that we saw earlier where you had the knob
16 rotating vibrations at each of five different positions.

17 And then the last one, I'll say orange, it talks about how you can have in
18 Rosenberg the strength and/or frequency of the vibration can be correlated with
19 the adjustment of a control to indicate current magnitude of the volume or other
20 adjusted value.

21 So, you're going to get a stronger vibration if you get it, if you turn the
22 fan to maximum or if you turn the volume up. That aligns with Figure 9c's hill
23 virtual detent, which talks about the same thing, the vibrotactile effect may
24 gradually increase as you increase the site.

25 Rosenberg is disclosing the same virtual detents the patent is describing.
26 Unless there's any questions on Rosenberg, I can move on to the Levin ground.

1 JUDGE RAEVSKY: I wonder if your reply squarely addresses patent
2 owner's arguments about there being no detent profile in the references. Can
3 you address that issue?

4 MR. SPEED: Yes, thank you, Your Honor. So on that point, that
5 argument is a little confusing to us because we've presented in the petition what
6 we used to call Rosenberg, Rosenberg 1.

7 The reason we did that is because Rosenberg 1, within the four corners of
8 its text, doesn't talk about a profile per se. What Rosenberg 1 does do is say,
9 hey, if you want more information on how to control mechanisms for providing
10 haptic feedback, go see my earlier patent called Rosenberg 2.

11 So it incorporates it by reference. Rosenberg 2 is the one that has
12 discussion of profiles. Rosenberg 2 basically says a profile is just pre-stored
13 haptic data that you use to trigger an actuator or some other mechanism to
14 provide haptic feedback.

15 Our petition at Pages 54-56 explains that a person in the skill of the art
16 reading Rosenberg 1 would have understood it to incorporate Rosenberg 2's
17 profiles.

18 I have yet to hear any dispute on that issue. So as I understand it, they
19 have not disputed that a person in the skill of the art would understand that
20 Rosenberg's profile, Rosenberg 2's profiles, would have been read as part of
21 Rosenberg 1's.

22 But we also argued as a backup obviousness, we said, look, if it's not
23 incorporated by reference, it's obvious to do this because Rosenberg 1 is telling
24 you to look at these profiles in Rosenberg 2 and you need a way to tell the
25 actuator to output the vibrotactile effect.

1 And then in our petition, at Page 56, we get into the details of exactly
2 how this would have worked, which is that, we say for example, when a user
3 uses the touchpad to increase the volume of a video game that the computer
4 detent is controlling, the processor accesses a profile associated with that
5 system and the force profile's haptic data associated with a virtual detent, such
6 as a pulse sensation.

7 So whether it's because Rosenberg 1 incorporated the profiles from
8 Rosenberg 2, or because it would have been obvious to use it, we demonstrated
9 that a person skilled in the art reading Rosenberg would know that a pulse is
10 being output.

11 It's being output in response to a command that's being sent to the
12 actuator, and that command would take the form of a profile. So I'm not – so
13 when they say in their reply that we haven't proven the profiles, I took that to
14 be kind of a continuation of the – your pulses are not virtual detents, so
15 therefore you don't have a profile for a virtual detent because your pulses aren't
16 detents.

17 JUDGE RAEVSKY: That's how I read your reply, too, actually, Mr.
18 Speed, and that's my concern. I'm wondering if you've squarely addressed
19 patent owner's argument that Rosenberg 2 discloses only force profiles which
20 are not vibrotactile profiles, they're merely force profiles.

21 Now, I think you appear to be going after that in your next paragraph on
22 Page 27 of your reply, after you say that their argument collapses based on a
23 virtual detent argument.

24 You referred to Immersion never disputing the petition showing
25 regarding Rosenberg 1, relying on Rosenberg 2. But I would like to hear more

1 about your response to patent owner saying it's just force profiles, not
2 vibrotactile profiles.

3 MR. SPEED: Right, Your Honor. So I think again, this is – we set this
4 forth in the petition at 54-56. And so the certain of the specific profiles in
5 Rosenberg 2 are force profiles, and there hasn't been much discussion of what
6 the particular force effects were in the Rosenberg 2 reference, because what we
7 used in the petition was the simple fact that Rosenberg describes a profile as
8 just stored data for the haptic effect.

9 And so our petition supported by Mr. Ward explained profiles were well
10 known in the art, and so when a POSA would have known that Rosenberg's
11 pulses, the vibrotactile pulses, need to be commanded somehow.

12 You have to tell the actuator to do this. And so what Rosenberg 2 is
13 showing, is demonstrating, is that profiles, yet some of them might be force
14 profiles or force feedback, but profiles of haptic data, is what Rosenberg is
15 describing, would have been used in Rosenberg 1 to output the pulse vibration,
16 and/or it would have been obvious to do that.

17 So that is, I think in 55-56, we describe in detail the implementation of
18 Rosenberg, whether based on a direct reading of Rosenberg or based on an
19 obvious implementation.

20 The pulses in Rosenberg are vibrations. So you wouldn't use a force
21 feedback profile with those pulses. But you're going to use a profile of some
22 sort.

23 I mean, this is the whole reason why ground four that we had before with
24 the Goldenberg ground, the parties have largely treated that as irrelevant at this
25 point because there's been no dispute that you would use profiles in Rosenberg
26 1, and the only haptic effect that's being provided in Rosenberg 1 is a vibration.

1 And so the command parameters of that profile, which is just an
2 instruction to an actuator, is going to be a vibrational one, because that's the
3 context in which it's being used.

4 JUDGE RAEVSKY: Okay. I understand. Thank you.

5 MR. SPEED: So turning to the Ichinose and Levin ground in Slide 24,
6 on Slide – just a brief overview of the combination, so Ichinose, you see here in
7 Figure 1a, Ichinose controls car systems as a touchpad on the steering wheel.

8 So you use the touchpad to control a cursor on the display which is
9 shown in 2b. If you look really closely, you can see there's like a hand. That's
10 the cursor.

11 And so as you move your finger on the touchpad, you can move the
12 cursor on the screen to select different functions. So what you see in 2b is the
13 hands on top of the tuning function to increase the radio frequency.

14 Ichinose, as we see on Slide 25, Ichinose says that they have an
15 embodiment in which there is a feedback device with the touchpad, so that it
16 causes a vibration to be experienced.

17 And as I've highlighted in blue on Slide 25, one scenario where Ichinose
18 says you should do this is when you use the touchpad to click on an icon on the
19 screen.

20 So if you click the radio button to increase the radio, you should get a
21 vibration. So in summary, Ichinose discloses a touchpad that's controlling
22 multiple systems in a car, and it vibrates when you select a button.

23 Ichinose is very, very close to the claim. If there's any daylight at all,
24 it's that Ichinose doesn't use the explicit term virtual detent. And so that's
25 where we went to – we brought in Levin for the combination.

1 If you turn to Slide 26, Levin describes detents that are output up using
2 an actuator. So it's not a mechanical detent, it's a simulated one, and that these
3 detents can be simple jolts.

4 And so what we argued is that a person skilled in the art reading
5 Ichinose, seeing, oh, I need to output a vibration when someone clicks the
6 button, they would have implemented that as a vibrational jolt, because that's
7 what Levin is teaching.

8 And indeed, Levin says to do jolts for each change of the radio
9 frequency. And as we saw Ichinose for Figure 2b, that's the scenario that was
10 literally depicted in Ichinose, that you would get a jolt each time you select up
11 on that button.

12 Now, there's a – if you look at Slide 28, there's a handful of arguments.
13 One is whether or not Levin was even analogous prior art. We responded to
14 that in our reply.

15 There was no response to it in the sur-reply. And based on this slide, I
16 don't think that they are maintaining or advancing that argument today.

17 And so we'll rest on our briefs on that argument, unless Your Honors
18 have any questions.

19 Okay. So without any questions, then I'll jump to Slide 37 and the
20 dispute of whether or not Levin teaches vibrotactile jolts. You can see on Slide
21 38 the argument that Immersion is presenting is basically that the jolts in Levin
22 would be understood to be force feedback detents. So not vibrations, but force
23 feedback.

24 Notably, on that point, they don't cite any expert testimony. They rely
25 on their attorney's own interpretation of a single sentence in Levin, which is at
26 Column 11, 62-63.

1 And if you look to Slide 39, you can see the full paragraph there actually
2 rebutts what they're saying. This paragraph is describing obstruction forces that
3 could be used to hinder the turning of the knob.

4 That's a force feedback effect. I agree with that. It then says in yellow,
5 and I've underlined it, alternatively, you can just use a jolt force. So Levin is
6 literally saying you can use force feedback to do certain things or you could
7 alternatively just use a jolt force.

8 So he's contrasting jolts from force feedback effects. And if you turn to
9 Slide 40, we can see in his declaration he identified an additional paragraph or
10 passage in Levin, and this is at Column 10, Lines 14-21, where it's talking
11 about the force detents.

12 It says the force detents can be simple jolts or bump forces to indicate the
13 detent's position or the detents can included forces that attract the knob to the
14 particular rotational position and resist movement away from it.

15 So again, Levin is distinguishing a jolt from resistive and assistive force
16 feedback. Now, why is he distinguishing them? Why is he distinguishing the
17 two?

18 Because as we explained in our petition, and what Mr. Ward explained in
19 his opening declaration, and if you can turn to Slide 41, persons of skill in the
20 art understood at this time that a jolt was a vibrotactile effect.

21 Mr. Ward explained this in his opening declaration at Paragraph 71. And
22 he didn't just say it. This isn't an expert just giving you his opinion that might
23 help his case.

24 He provides a footnote and if you look at Slide 42, you can see that the
25 footnote cites evidence. It cites there's three different references here that he

1 cited again in his opening declaration confirming that references in this space
2 refer to jolts as vibrotactile effects.

3 If we turn to Slide 43, he explained in the specific combination of Levin
4 and Ichinose, that a POSITA would have understood Levin's particular jolts to
5 be vibrotactile effects, which are perfectly suitable for use with a vibrating
6 touchpad, which is what Ichinose already has.

7 So you've got Levin disclosing jolts. A person in the skill of the art
8 would understand a jolt to be a vibrotactile effect. And let's use those in a
9 vibrating touchpad. That's the combination in a nutshell.

10 If we turn to Slide 44, we thought we had in our opening, in our petition
11 with our opening declaration, we marched up having to make clear that jolts are
12 vibrations.

13 Now, Immersion didn't address any of that in their patent owner
14 response, and so just to be safe, we identified additional evidence in our reply,
15 one of which is Rosenberg, which I already discussed.

16 Rosenberg talks about in the context of a vibrating touchpad, that you
17 output a jolt to a pulse sensation. So Rosenberg, which Immersion referenced,
18 recognizes that jolts are vibrotactile effects.

19 And if you turn to Slide 45, the patent itself says a virtual detent may
20 comprise a simulated click generated through a pulse, a single pulse, right?

21 And sorry, on Slide 44, the other point I wanted to note is that Rosenberg
22 consistently refers to jolts or pulses. He's treating them interchangeably
23 because that's how a person skilled in the art understood the terms.

24 And so when we look at 45 and we see the patent, the patent's talking
25 about a pulse. Rosenberg confirms that POSA's would have known a pulse and
26 a jolt are the same thing.

1 And so the patent is saying that a virtual detent can be as simple as a
2 single pulse or jolt. And again, if you look at the provisional application for
3 this patent, Paragraph 12 literally says the perception of a virtual detent might
4 be a jolt or a bump.

5 That's what Levin is describing. If we turn to 46, Mr. Ward's reply
6 declaration at 82-83, he identifies additional references that say the same thing,
7 jolts can be output as a single period of vibration or part of a period of
8 vibration.

9 A jolt is simply a short vibration. And if you turn to 47, he cites another
10 references. This is Exhibit 1092. It says the same thing, that a jolt or – it
11 describes jolts as vibrations that are quote high enough frequencies as to feel
12 like a single jolt or pulse to the user.

13 The evidence we have introduced that jolts were known in the arts to be
14 vibrotactile effects is substantial. Therefore, I'm surprised that Immersion
15 doesn't truly dispute any of that in its sur-reply.

16 Instead, as we see on Slide 48, what Immersion argues now is inherency.
17 Basically, they're saying you're right, jolts can be vibrotactile effects, but
18 Levin's jolts are not – but jolts are not inherently vibrotactile effects and, oh,
19 Levin is – his jolts are not vibrotactile effects because he's limited. His
20 teaching should be limited to force feedback.

21 That argument is wrong for reasons I'll discuss in a second, because
22 Levin is not limited to force feedback teachings. But more fundamentally, the
23 focus on inherency is misplaced because this is an obviousness combination.

24 The question is, what does Levin teach a person skilled in the art, how
25 would they apply that teaching to Ichinose's vibrotactile touchpad? And if we
26 look on 49, again, Mr. Ward was clear in his opening declaration in Paragraph

1 71, 121, that a POSA reading it, given their background knowledge, they would
2 know that the particular jolts Levin is talking about, those are vibrations.

3 It wasn't relying on inherency. It was saying Levin's explicit disclosure
4 of a jolt combined with all this basic knowledge that we've seen that jolts were
5 understood to be vibrotactile effects, they would have understood that Levin's
6 jolt was a vibrotactile effect.

7 And if you look at Slide 50, they agree. You can at least make a jolt with
8 a vibrotactile effect. So now we're at a point where everyone agreed.

9 So Levin discloses the use of simple jolts to simulate detents. Jolts were
10 known in the art to be produced with vibration, and Ichinose's touchpad already
11 vibrates.

12 And the reasons existed to use Levins's jolts in Ichinose's system. You
13 want that mechanical feedback so that you can focus on the road and know
14 you've actually changed the radio without having to look down to see if you've
15 done it.

16 Nothing more is needed to establish obviousness. Regardless, just to be
17 clear, Levin is not limited to force feedback teachings. If you turn to Slide 51,
18 Levin provides an overview of his disclosure, and he says force feedback
19 devices can provide physical sensations to the user manipulating the knob.

20 He then calls them programmable feel sensations or on the other one
21 force sensations. So he's describing in very broad terms that you can have a
22 knob that can admittedly have force feedback on it, but it can have other
23 physical sensations, which would include vibrotactile sensations.

24 And if you look at Slide 52, it's paragraph – at Column 14, Lines 26-29,
25 it's explicit that the force effects that Levin has, they include obstruction forces
26 and assistive forces.

1 Okay, force feedback. But it also includes vibrations and jolts. So we
2 can put jolts aside for a second. It says vibrations. There can be no dispute that
3 Levin's knob can vibrate. That's not a force feedback effect until Levin's
4 teachings are not limited to force feedback.

5 It includes vibrations. And then that opens up the door to all the
6 references we've introduced in this proceeding that uniformly describe jolts as
7 a vibration effect.

8 We haven't seen a single reference where a jolt is described as being
9 outputted somehow by a force feedback effect. It's always described as a
10 vibrotactile effect. The evidence in this is uniform.

11 If we turn to Slide 53, Immersion tries to argue that vibrations are only
12 used to augment other effects, never to simulate a detent in Levin. Okay, that
13 first thing assumes that a jolt based detent is not a vibrotactile effect, which is
14 wrong for the reason we've already discussed.

15 But fundamentally, again, the mere fact that Levin can vibrate means that
16 its sensations, its feel sensations, are not limited to force feedback, and
17 therefore, it's teaching vibrotactile effects, which is consistent with Mr. Ward's
18 testimony that a person reading Levin, seeing the term jolt, would understand
19 that to be a vibrotactile effect.

20 If we turn to Slide 54 –

21 JUDGE RAEVSKY: You have a minute remaining, Counsel.

22 MR. SPEED: A minute? Yes. So then, in that last minute I'll just point
23 out, there's also a challenge to the motivation to combine, but the motivation to
24 combine challenge largely rises and falls to this force feedback issue.

1 Their contention is, to put it briefly, that you would never look to a force
2 feedback reference and apply force feedback to a touchpad, because force
3 feedback requires a three-dimensional object that can resist or assist rotation.

4 Touchpads are two-dimensional, so you would never think to do that.
5 That falls apart completely once Levin is read fully to disclose vibrotactile
6 effects, including jolts.

7 Once that jolt can be produced on a touchpad, that's all we needed for the
8 motivation to combine. There are specific reasons, both in Ichinose and Levin,
9 that bring the POSA to that combination.

10 They both say in a car. Safety is paramount. You want to be able to
11 keep your eyes on the road, but at the same time, know you're actually
12 selecting the functions on the screen, and so lets output some type of sensation.

13 Ichinose is not, you said generically, like choose a vibration, and Levin
14 taught that specific vibration you want to do is a jolt that just tells the person
15 that they've clicked it and that's it. That's all the combination required.

16 The claims are obvious in Ichinose and Levin. They're also anticipated
17 by Rosenberg. I'll rest on our briefing for weighing Ichinose combination.

18 JUDGE RAEVSKY: Thank you, Counsel. You have about four and a
19 half minutes remaining. Mr. Kim, you have 30 minutes of your 45 minutes,
20 and you may begin when you're ready.

21 MR. KIM: Thank you, Your Honor. This is Sam Kim on behalf of
22 patent owner. So, I'd like to also take a step back and set some context about
23 like what the invention is about and what it's not about, right?

24 So, if you would turn to Slide 1 of our – sorry, Slide 4 of our
25 presentation. So the invention is providing virtual detents through vibrotactile
26 feedback, right?

1 So the problem that was happening was we had these physical knobs and
2 sliders, right, and so the technology was moving towards well, let's make those
3 away from mechanical, let's make those electronic, right?

4 The problem with that is now you don't have these little physical
5 sensations that you're used to when you're using a traditional mechanical
6 control device, right?

7 So the solution is, well, we need to simulate that, right? And so the way
8 that the art would do this, and this includes Levin, was you would have these
9 knobs or sliders and you would have force feedback, right?

10 Now, what I'm going to say just as a general theme is petitioner is
11 conflating a ton of terms. So for example, specifically here, when we're saying
12 a virtual detent and a vibrotactile feedback, those are two separate terms with
13 different scope.

14 You can't just point at any vibrotactile feedback and say there's a virtual
15 detent. The parties agree and do not dispute that that vibrotactile effect has to
16 simulate a mechanical detent, has to simulate that knob or that slider or that
17 mechanical control device.

18 That's the problem that the patent is trying to solve. When you look at
19 the prior art, and I'll get more into this when we get there, you had laptops that
20 had vibrotactile effects, right, but again, the vibrotactile effects are not virtual
21 detents because those are two separate terms, and you had knobs that had force
22 feedback, not vibrotactile effect.

23 None of the art appreciated that you would simulate a physical control
24 with a touchpad using vibrotactile effects. They just, none of the art has that.
25 None of the art discloses a virtual detent.

1 And I'll explain kind of why that is. But just as a foundational thing,
2 that's what the invention is trying to solve. That's why the prior art does not
3 render it invalid at all. It's not close, right? None of the art appreciated that
4 this is a problem you're trying to solve.

5 The way the art tried to solve that problem was through force feedback.
6 Now, I was saying that like, so what petitioner is doing is they're just pointing
7 at any disclosure of vibrotactile feedback and saying, well, there's your virtual
8 detent.

9 That's conflating those two, right? Secondly, and I'm glad that petitioner
10 cleared this up, they were – it sounded like they were maybe trying to also
11 conflate saying force feedback also includes vibrational.

12 But to be clear, when we say force feedback, and the art talks about force
13 feedback, it's talking about assistive, resistive forces on a knob or a slider. It is
14 not talking about like vibrational effects. Okay?

15 And you'll see this kind of thing, like petitioner will see something, like
16 a disclosure of like a haptic effect, right? A haptic effect can include both a
17 force feedback or vibrational, right? It's a genus to those two species.

18 But you can't point at the discloser of the genus and say, okay, vibration
19 is included in there. You have to take – you have to read the disclosure for
20 what it says, and when you read the disclosure for what it says, and we'll walk
21 through this, none of the art appreciated simulating a physical control on a
22 touchpad through vibrotactile effects.

23 And just to also kind of close the loop on this, too, if you look at
24 Petitioner's Slide, I think it's 3, hold on one second. So petitioner was kind of
25 pointing at what Immersion is contending in that district court.

1 And then to be clear, that contention is coming from our infringement
2 contentions. Now, we have argued that you do not look at the infringement
3 contentions for trying to understand the scope of the claims. You just don't do
4 that.

5 But the reason why I'm just kind of doing that, explaining what's
6 happening there, is because they are the ones that pointed at this first. On
7 infringement, what you have is you have these touchpads that have vibrotactile
8 effects.

9 And you can configure the touchpads, depending on the game. I want in
10 this game the touchpad to act like a directional pad, a physical directional pad.

11 Right? And then for this game, I want the touchpad to instead act like a
12 physical scroll wheel, the scroll wheel that is on your mouse that petitioner was
13 talking about, right?

14 This is another example of like conflating the two, and again, we'll see
15 this. Petitioner wants to point at all disclosures of scrolling and say, oh, okay,
16 you're simulating the scroll wheel. That is not how it works, right?

17 Scrolling by itself through a cursor, for example, there's no scroll wheel.
18 You can just use the cursor and drive the scroll bar. There's no mechanical
19 control in that scenario that you're simulating. You're just dragging a virtual
20 thing.

21 And so in that context, your vibrotactile effects are not simulating any
22 mechanical detent. They're just providing confirmation or information about
23 like what's happening.

24 And I'm going to just touch on this briefly, just because also because this
25 is kind of at dispute. If you turn to Slide 5, now petitioner said they only

1 pointed at two things, but they acknowledge that the claims say there's a
2 plurality of subsystems, a plurality of systems, right?

3 And when you look at the disclosures, and this, and we'll see this
4 specifically, when they're trying to say software counts as this, it doesn't.
5 Those disclosures don't describe software as systems, right?

6 So we had – they're basically –

7 JUDGE RAEVSKY: Mr. Kim, you agree that at least some software
8 qualifies as systems, correct?

9 MR. KIM: That's exactly right. Some, not all, right? That's what the
10 dispute is. And they're trying to say, and as Your Honor picked up on, they
11 first tried to say, like, yes, when they're talking about systems, they're talking
12 about these mechanical systems.

13 That's kind of what the patent was talking about, the problem it was
14 trying to solve, right? But, and I think I have this here, okay, if you turn to
15 Slide 5, right, it says, okay, you have a plurality of systems. You might have a
16 video system and a stereo system.

17 Let's also kind of maybe make this a little bit easier to understand, too.
18 Let's say you had an AC system and in that instance you want to have like a
19 control slider, right? That makes sense for that kind of manipulation, right?

20 And for like a stereo system, you want a knob, because that's how you
21 control the volume, right? So you have this plurality of systems where you
22 have these different physical controls that you would use for those systems, and
23 then you want to simulate the detents for those systems with vibrotactile
24 feedback.

1 That's what the invention is talking about. You have a plurality of
2 systems, and then you can potentially vary the controls based on the system.
3 You don't have to.

4 So we're not saying that the controls are specific to the application, that
5 there's a one-to-one relationship. They can both be knobs, right?

6 But the point is, you're simulating that knob for one system versus
7 another in a way that, because it makes sense given that context, right? That's
8 the only point that we're trying to make there, right?

9 So this disclosure, when it says you may do that, right, it's saying, okay,
10 if you have physical systems, this is what you do, right? So if you turn to Slide
11 6, you can see this concept of like, okay, you have a containing system, which
12 is the entirety of Figure 2, and then you have subsystems within that that you
13 can then control.

14 And then this is also bore out by, if you see on Slide 7, you have a
15 preamble system that's just like the box around the whole thing, and then you
16 have a plurality of subsystems within that system.

17 So when the patent is talking about plurality of systems, it's talking about
18 subsystems within the thing that you're looking at, right?

19 JUDGE RAEVSKY: Mr. Kim, I wonder why we're talking about the
20 preamble of claim 15 without addressing, A, whether it's limiting, and B, its
21 applicability to Claim 1.

22 MR. KIM: That's fair. I'm just using it as an illustration to draw a
23 distinction between a plurality of systems that the patent is talking about and
24 when it's thinking about plurality of systems, is it thinking about like the laptop
25 as a whole or is it thinking about the subsystems within the laptop, right?

1 So it's just a way of showing them like if you look at the claim language,
2 the claim language reflects that kind of understanding of what a plurality of
3 systems is.

4 JUDGE RAEVSKY: Do you agree that the claim preamble of claim 15
5 is not limiting? Or do you believe it's limiting?

6 MR. KIM: I think it's non-limiting in the sense that like system when
7 it's in a preamble like that just means you can have a logical organization of the
8 elements that are to follow.

9 But that the plurality of systems is separate from this kind of logical –
10 it's a subsystem of the containing – of the containing system. That's the only
11 point we were kind of having that slide there, which I kind of explained this
12 concept of – that's depicted in Figure 2, in the previous slide, where you have
13 the system as a whole and then the plurality of systems are actually subsystems
14 within that system that you want to vary the haptic effects based on.

15 JUDGE RAEVSKY: So let's assume that were true for claim 15, setting
16 aside that the preamble is non-limiting. Just assume for the sake of argument
17 it's true. Why would that then apply to claim 1, which is a method claim?

18 MR. KIM: So that informs of the construction what plurality of
19 subsystems is.

20 JUDGE RAEVSKY: But the question is why?

21 MR. KIM: Because they both contain the term plurality of subsystems,
22 except for like in 15's case, some of the confusion is because –

23 JUDGE RAEVSKY: But Mr. Kim, let me push back a bit. They don't.
24 I think you might have misspoken. They don't say plurality of subsystems,
25 they just say plurality of systems.

1 MR. KIM: Sorry, yes. And I was going to clarify with my next point.
2 Some of the confusion, and we can kind of move on from this point, too,
3 because it's not – we don't necessarily need the support from claim 15 to make
4 the point that we're making.

5 When the claim is talking about plurality of systems, it means
6 subsystems as distinct from the containing system. It's just that it's a little
7 confusing because it uses the term system. But that's what the patent means
8 when it's talking about the plurality of systems.

9 JUDGE RAEVSKY: Let me ask you in a slightly different way. Where
10 is a containing system in claim 15?

11 MR. KIM: In 15 –

12 JUDGE RAEVSKY: I apologize, I meant to say claim 1. Where is a
13 containing system in –

14 MR. KIM: It's not claimed. It's not claimed. The reason for this
15 distinction, I think, will become clearer when we get to that issue. And so
16 maybe in the interest of time, we can kind of move on from the claim 15
17 argument and kind of maybe address the original question you have in terms of
18 applications being systems, right?

19 And we're saying that it's not all software, right? Is that okay or –

20 JUDGE RAEVSKY: Please proceed.

21 MR. KIM: Okay. So if you look at Slide 8, it's saying you may also –
22 so you have these physical systems that you can control like your stereo and
23 your climate.

24 So like, you may control those physical systems. But then, it also says
25 you may also control software code running as an application, but in the context

1 of the software, in that software code, that's what's defining the physical
2 control that you're simulating, right?

3 So it's not all application is are systems, right? The only basis for saying
4 that like all applications are systems, so first of all, only petitioner is saying that
5 and the only support for them saying that is by pointing at our infringement
6 contentions, which is why I was saying that kind of points already at dispute,
7 which is to say that's not where you look when trying to determine the scope
8 and the meaning of the claims.

9 Anyway, like every time that they do that, it's based off of this reading of
10 the pics, which also explains why you don't do that in the first place. And so I
11 can explain and clarify kind of what those mixups are.

12 JUDGE RAEVSKY: It feels like we've moved past the infringement
13 contentions, which I agree are not that relevant. It's really the intrinsic
14 evidence that we're mostly looking at here.

15 MR. KIM: Sure.

16 JUDGE RAEVSKY: It seems like what the real dispute is, is a system a
17 software or not? And you are saying that it's more than software, it's a context.
18 But, A, I don't see how that comes from the specification. There's a lot of non-
19 limiting language that you're citing. And B, I confess, I don't really understand
20 what context is supposed to mean here. Is there something, some way you can
21 enlighten me on that one?

22 MR. KIM: That's fair, too, and let me also clarify that like your question
23 as to like whether applications fall in or not, that's fair that that's confusing.

24 What I'll kind of preface anything by saying that that is a secondary
25 argument for us. You don't need to reach that or consider that for
26 understanding that none of the prior art validates the 067, right?

1 JUDGE RAEVSKY: Sorry, let me see if I understand you correctly.
2 Are you saying we don't need to find that the claim requires context to find for
3 you. You're interpreting the claim slightly differently. Is that right?

4 MR. KIM: That is a distinction that distinguishes specifically that
5 reference, the Rosenberg, the laptop reference. But that is not the only
6 distinction for that reference.

7 The larger issue is, as we were saying before, so just to answer your
8 question in terms of like what the context is, right, the context point is that,
9 what I was trying to say before, you have these physical controls that you're
10 trying to simulate, right?

11 And certain physical controls make more sense in certain contexts, right?
12 Like I was saying, like a stereo, you have a knob, and so that's why you
13 configure a knob and you're trying to simulate a knob.

14 But the thing is, you have a physical controller, so the knob is there, so
15 then you're just trying to – you're in that sense, like where you have the
16 existing knob, there's a physical thing that you are – that you are simulating,
17 right?

18 And then when you're doing air conditioning, let's say you have a slider
19 that's like one side is heat and the other side is cold. So instead of a knob, you
20 use a slider for that.

21 And so in that sense, you have one system with one set of controls and
22 another system using another set of controls. And then those kind of different
23 virtual detents, because you're simulating different controls. Right?

24 JUDGE RAEVSKY: The difficulty I'm having with – the difficulty I'm
25 having with this argument is that the claim language appears to be so clear,

1 although an input device is configured to control a plurality of systems, the
2 method is only receiving a detent profile associated with one of those systems.

3 And it sounds like your claim construction is trying to read multiple
4 detent profiles for multiple systems. Is that correct?

5 MR. KIM: So this is also kind of the dispute that was kind of the
6 issue, and this is kind of a nuanced point, so I'm glad you – because I want
7 to clarify this, right?

8 We're not saying that you have to have multiple detent profiles.
9 We're not saying that, right? Because it says one, right? What we're saying
10 is like the systems each have one and it could be the same, but each of the
11 systems have one.

12 That's the context argument. That's just the specific under our claim
13 construction that the subsystem has to provide the context. That's just that
14 argument. But we have other distinctions outside of the claim construction
15 requiring that the systems provide the context.

16 JUDGE RAEVSKY: Okay, so you don't believe that the claim
17 requires receiving multiple detent profiles, but you do believe that the
18 systems each have their own detent profile, and we should read that into the
19 claim?

20 MR. KIM: That's what the – that's the argument for that construction
21 of plurality of systems. And then we have independent arguments for why
22 the prior art does not validate, but that's what the argument is for that claim.

23 JUDGE RAEVSKY: Understood.

24 MR. KIM: Yes. Because more broadly, the issue, like I was saying,
25 is everything is just a lot of conflation, right? There's conflating vibrotactile
26 effects such as one term with virtual detent, right?

1 They're just saying, oh, here's an effect. There's a detent. The detent
2 needs to simulate the mechanical detent. It needs to simulate the control that
3 you're trying to simulate, right?

4 Similarly, if you're pointing at like a jolt, right, and I'm going to point
5 to this, petitioner's claim that there's no disclosure of jolt and force
6 feedback, I'm going to show you exactly where it says that in Rosenberg,
7 which is the thing that they cited.

8 Jolts can be either force feedback or vibrotactile effects. When you
9 read Lenin, it's only talking about, like I was saying, the way it solved the
10 problem was let's provide force feedback on the knob.

11 When it's talking about vibration, it's saying let's layer that on top of
12 this force feedback to indicate other information, other meta information like
13 the speed of the fan. And I'll walk into that.

14 But basically, what I'm trying to communicate here is petitioner's
15 case relies on improperly conflating multiple terms and reading genres as
16 disclosing species.

17 The entire catch revolves on that. When you read the actual
18 disclosures of what the references are saying, there is no scenario where you
19 are simulating a mechanical control with a virtual detent. None of the prior
20 art tries to solve that.

21 You have laptops and you have a sign. None of the laptops try to do
22 that. And when you look at the physical art, where it's like knobs and
23 sliders, they are only trying to fix that problem with these force feedback
24 resistive assistive forces.

25 When it's talking about vibrations and when it's even considering
26 vibrations, it's only doing that to lay around on top of the force feedback,

1 because they've already solved the problem of the mechanical detent with
2 the force feedback.

3 And so if you turn to Slide 11, this is kind of the point that I've been
4 saying, right? The parties agree that a virtual detent is a vibrotactile
5 feedback that simulates a mechanical detent, right?

6 You have to simulate the mechanical control. The vibrotactile
7 feedback by itself is not enough. Right? And so, if you scroll down to –
8 we're going to start talking about the grounds.

9 Can you jump down to Slide 30? This is the petitioner's entire case,
10 right? You have these two classes of prior art, right? You have laptops with
11 vibrotactile feedback, right, and then you have these physical controls, right?

12 That's the problem that the patent is trying to solve is, like, hey, we
13 have these physical controls, but we want to simulate those on a touchpad
14 with vibrotactile feedback.

15 None of the art appreciated that. You either had a touchpad that only
16 had vibrotactile feedback, or you had these knobs that only had force
17 feedback controls.

18 All right, so if you turn to Slide 31, this is what we're saying, right?
19 With the touchpad, there's no virtual detents, no detent profiles, and then no
20 plurality of systems, right? But all of the art that they point at, there's no
21 plurality of systems in any of the touchpad art.

22 And then the sliders and knobs, they just don't have the virtual
23 detents. To your point, to the extent that there's a detent profile, it's a force
24 feedback detent profile, not a detent profile for vibrotactile feedback, right?

25 Those are two different kinds of feedback being outputted to two
26 different kinds of media. You can't look at the disclosure of a force

1 feedback detent profile and say that's enough to disclose the claimed detent
2 profile, which is for virtual detents.

3 And as Your Honor picked up on, petitioner has not addressed that in
4 argument.

5 JUDGE RAEVSKY: I would be interested in hearing your response
6 to how petitioner is addressing Rosenberg 1, incorporating Rosenberg 2,
7 Rosenberg 1 having vibrations and incorporating Rosenberg 2's force
8 profiles.

9 Does that sufficiently tie up, tie together, those two references to say
10 that those force profiles are detent profiles? Why or why not?

11 MR. KIM: So there are two issues that are kind of being picked up,
12 because I want to also kind of make sure that we're not conflating, right?

13 The one is whether Rosenberg 2 was properly incorporated by
14 references and you can rely on that disclosure, right? We have not – we're
15 not disputing that.

16 We're going to take them as a whole, right? What we're saying is
17 like, the short answer to your question is, well, force profiles do not disclose
18 the detent profiles for virtual detents. That is not enough.

19 JUDGE RAEVSKY: But why not? I seem to understand petitioner
20 saying you've got the vibration happening in Rosenberg 1. And it's
21 undisputed that Rosenberg 2 is part of that. And it has force profiles used
22 for the haptics in Rosenberg 1.

23 Why are those there if we're not comprising a vibrotactile effect?

24 MR. KIM: So this also kind of goes back to something that petitioner
25 said as well. This goes back to their conflating, right? They're saying that

1 like haptic data, right, which is the genus of the two, right, the specific genus
2 that's being disclosed by Rosenberg 2 is the force profile, right?

3 What is that? You're talking about like these are the haptic effects I
4 want to output to the physical control, right, to the knob or the lever, right?

5 What does that look like? I want it to have like these characteristics,
6 like – and this behavior given that mode of – that form factor, right?

7 When you go from a three-dimensional control that has like a rotation
8 or like a slider and you want to put that into a touchpad, a two-dimensional
9 touchpad, this is what we're saying, right?

10 Those are different form factors. The way that you would experience
11 the simulation of a force feedback knob is not the same the way that you
12 would experience that on a touchpad, right?

13 Because, one, you're not outputting assistive resistive forces. You're
14 outputting vibrations. Those profiles are going to be different.

15 JUDGE RAEVSKY: So is your point that there's no vibration in
16 Rosenberg 2, and therefore it's not a detent profile?

17 MR. KIM: Yes.

18 JUDGE RAEVSKY: So it's interesting to me, digging into
19 Rosenberg 2 a bit more, that there seems to be some disclosure that suggests
20 to me that there might be vibration, and I'd like to look at that with you if
21 you don't mind and get your feelings on that, your opinion on that.

22 MR. KIM: Oh, okay. So Rosenberg 2?

23 JUDGE RAEVSKY: I'm starting at Column 18 of Rosenberg 2,
24 Exhibit 1010. Ands I'm looking at Lines 63-65. And there it says the stored
25 force values, and by the way, earlier in the paragraph, it's referring to force

1 profile, the stored force values can be output in sequence according to a
2 particular time interval.

3 So there's a sequence of these force profiles that are output. And then
4 later, in the next column, Column 19, let's see, Line 56, the host computer
5 sends a rapid sequence of commands to repetitively apply resistance along
6 an access.

7 So it seems to me that the way it's being applied here in Rosenberg 2,
8 it being the force profile, is applied repeatedly. So maybe if we look at the
9 force profile itself, it might not be a vibration but when it's applied
10 repeatedly, isn't that a vibration?

11 I realize we might be looking at this disclosure the first time. I'm just
12 curious what your thoughts are. You can feel free to elaborate in your
13 rebuttal as well.

14 MR. KIM: Okay. So, okay, so this is – I'd like to maybe jump to this
15 and see if this answers your question, if it helps. Or if it doesn't, then we
16 can kind of make a turn.

17 Let's see. Where is this? So force feedback generally is opposition,
18 right? So like when you're turning a knob, it can be an opposition or like a
19 click, right?

20 The intensity and like the – so let's say like you're turning a knob like
21 repeatedly, right, and there's a click-click-click-click-click, right? That's
22 repeated frictional effects, that's not vibration, right?

23 That's just saying you're feeling it repeated, right? Vibration is like,
24 and this is kind of where I'm trying to find this, but Rosenberg talks about
25 this, right?

26 So if you scroll down to –

1 JUDGE RAEVSKY: Sorry, do you mean Rosenberg 1 or 2?

2 MR. KIM: Sorry, I think this actually might be Levin. Oh, no, sorry,
3 Rosenberg. One second. Rosenberg 1. Rosenberg 1. If you scroll down to
4 Slide 55, and this kind of goes to the point of like, okay, where is the line
5 between force feedback, vibrational forces, jolts, right, jolts and pulses,
6 right?

7 If you look at Slide 55, this is Rosenberg 1. This is one of the things
8 that Petitioner was saying. And they were trying to say like, oh, there's no
9 disclosure of a jolt as a force feedback.

10 That's false. It says it right here, right? For example, a jolt or a pulse
11 sensation can be output, which is a single impulse of force. That's force
12 feedback, right?

13 And then it says, it explains that the touchpad can be jolted in the Z
14 axis to provide the pulse, right? And then it says a vibration sensation can
15 also be output.

16 It's saying that those two are different, right? How is it different? A
17 vibration is a time varying force that is typically periodic. Right? You can't
18 look at these generic disclosures of things and say, well, sometimes jolts can
19 be implemented with a vibration and say all jolts are vibrational.

20 That's the error that they're making repeatedly for the entirety of their
21 arguments. Rosenberg, the disclosure of jolts, is a force feedback effect.

22 It is not a vibration. Those are separate things. So when you have a
23 force profile, yes, you can have like a repetition of it with like a little knob
24 that goes click-click-click-click, but that is not a vibration.

25 Repeated –

26 JUDGE OGDEN: Mr. Kim?

1 MR. KIM: Repeated is not periodic.

2 JUDGE OGDEN: Mr. Kim, is there kind of a continuum here where
3 if you have a force that's slow and continuous, maybe you'd call that a force
4 feedback, but if it's rapid and happens again and again, maybe that's a
5 vibration?

6 Is there sort of a continuum there and maybe we're talking about
7 where's the dividing line between where force feedback ends and where
8 vibration begins?

9 MR. KIM: No. No. So to be clear, no, there is not. It's not a
10 continuum, right? There's a difference between the periodicity of a
11 vibration versus like the repetition that you have through a force feedback,
12 right?

13 Like the force, like the way that you implement those forces are
14 different, right? Like when you have a knob and you're doing like a
15 resistant or assistive force, like a mechanical assistance or resistance
16 happening there, when you have a vibration that's a quick oscillation
17 according to like that – according to a time period, right, that's typically
18 periodic, right?

19 I mean, in some sense they're both like forces, which is kind of what
20 petitioner is latching onto, but force feedback and vibrotactile feedback are
21 two different species of haptic effects.

22 It's not a continuum.

23 JUDGE RAEVSKY: I apologize, I was distracted by the line of
24 questioning and didn't realize we had gone into your rebuttal. We've only
25 just barely gone 30 seconds in. Feel free to continue as long as you need to.

1 MR. KIM: Okay. Okay. So Rosenberg, that's the point I'm trying to
2 make, though, is just that Rosenberg does not disclose the virtual detents,
3 right?

4 And so, if you go to Slide 35, right, Rosenberg has no virtual detents.
5 None of the art has virtual detents, right? 36, no detent profiles, only force
6 profiles for Rosenberg 2.

7 And then the third tertiary point is that plurality of systems, right? So
8 let's go to the no virtual detents, right? If we could go to Slide 37, this is
9 what they said in their reply.

10 It says Rosenberg 1 explicitly teaches, right, when pressing a physical
11 button, right? Now he clarified that that's not what they meant, but the way
12 this is – this is misleading.

13 This makes it sounds like it's saying you press a button and then you
14 get the sensation that you would expect from getting a button, right?

15 But when you look at the disclosure, and Petitioner recognizes this, it
16 says the opposite, right? It says, don't press the button, and it still has some
17 confirmation.

18 The problem with not pressing a button is there's no confirmation, so
19 let's provide a confirmation. That's all it's saying. There's no mechanical
20 control to simulate that.

21 Rosenberg doesn't have that concept at all. It just doesn't have this
22 concept of simulating a mechanical detent. It says don't press the button,
23 right?

24 Provide a confirmation. So you're not simulating a mechanical
25 detent, you're just hovering. The hovering doesn't have a mechanical detent
26 to simulate.

1 And then the second thing that the petitioner points at, if you look at
2 Slide 39, is they're saying, they claim that 39 has a hill detent, the hill virtual
3 detent, right?

4 If you go to Slide 40, right, you need to compare against the claims
5 and not the specific claim. What they're trying to say is like, whoa, if you
6 look at the 042, it has this virtual hill detent effect.

7 Ours has that, too. First of all, no, it does not. Second of all, you
8 don't compare against the specification, you point at the claims, right?

9 When you look at this thing that they're pointing at for the hill effect,
10 if you'd turn to Slide 41, this is what I was trying to explain, the difference
11 between our invention and what Rosenberg's disclosing, right?

12 Our invention is you have a scroll wheel and you want to simulate that
13 scroll wheel with a touchpad. What is Rosenberg saying? Rosenberg is
14 saying you scroll through the use of the cursor, right?

15 It's not saying use of the scroll wheel. It's saying use the cursor to
16 scroll, which means like grab the scroll bar or touch the buttons, right?

17 There is no physical control that you're simulating there. That is
18 completely virtual. That's what we're trying to say is that scrolling through
19 the use of the cursor has no mechanical control to simulate.

20 Here, the pulses are not pulses, right? Again, they're saying, well, it
21 says pulse, and a pulse can be a virtual detent. It can, but that's not what this
22 is saying, right?

23 Our patent says when you have a pulse or a click, you're simulating a
24 mechanical detent. There is nothing to simulate here. Right?

25 This is just saying you're scrolling, which is a purely virtual effect,
26 versus ours. The way this would be implemented with ours is you have a

1 scroll wheel that you're trying to simulate and you would do that like on the
2 touchpad.

3 So that's why when you look at Rosenberg, there is no support for this
4 concept of virtual detents. The embodiments that they're pointing at, they
5 don't apply. They don't say what the petitioner says that it says.

6 JUDGE RAEVSKY: Mr. Kim, could you please address the language
7 that you quoted on this slide from Rosenberg 1? It's the second to the last
8 sentence. Pulse sensations can be used to indicate the location of the ticks or
9 discrete values or settings in the adjusted range.

10 I think petitioner points to this line and says this is just like Figure 9a
11 in the patent. Why is it different in your view?

12 MR. KIM: Because in Figure 9a in the patent, you have like a knob
13 or you're trying to simulate a knob. There's nothing that you're trying to
14 simulate here.

15 It's just saying, and look how it says ticks in quotes, right? It's just
16 saying like have that kind of effect. Why do you have that kind of effect?

17 It's not so that you're simulating a mechanical detent. There is no
18 mechanical detent to simulate. It's just saying have these effects to have
19 served a confirmation or an indication function, right?

20 It's saying, okay, as you're moving, I want to let you know that, okay,
21 there's changes in discrete values, right? But it's not simulating a physical
22 control. It's not simulating a mechanical detent.

23 JUDGE MCNEILL: So, Mr. Kim, are you saying the physical control
24 that's being simulated by the virtual detent needs to be the same kind of
25 control that you're receiving the input signal from?

1 So if the input signal, if it's a scroll bar, then it needs to be a similar
2 kind of input signal? So therefore, Rosenberg's hovering input can't
3 simulate a click of a button? Am I understanding correctly?

4 MR. KIM: Okay, let me – I want to be careful what I'm saying is a
5 requirement or not. Right? The claim construction says simulate a
6 mechanical detent, right?

7 If you are hovering, there is no mechanical detent that you're
8 simulating.

9 JUDGE MCNEILL: So you're saying that the mechanical detent that
10 you're simulating needs to be of the same nature as the input that you're
11 providing?

12 MR. KIM: I'm saying that there needs to be a mechanical detent that
13 you're actually in fact simulating. What I'm saying is like when you read
14 these disclosures, it's not teaching you that it's simulating a mechanical
15 detent.

16 JUDGE MCNEILL: Isn't Rosenberg simulating the mechanical
17 detent for a button press and that's why it's a giving a click sort of
18 sensation?

19 MR. KIM: No, so what it's explaining there is it's explaining the
20 problem, right? It's saying, like, okay, you know how when you click,
21 there's a confirmation, right?

22 It's saying that's nice that you have that confirmation, right?
23 Unfortunately, when you hover, there's no confirmation, but we still need a
24 confirmation, right?

25 JUDGE MCNEILL: So it's simulating a click confirmation when you
26 hover, isn't it?

1 MR. KIM: No, because you're not actually clicking, right?

2 JUDGE MCNEILL: Okay, so you're arguing then that they have to
3 be the same in nature, is what it sounds like. I just want to be clear about
4 what you're saying the scope of the claim is.

5 MR. KIM: What I'm saying is like when you –

6 JUDGE MCNEILL: The input signal needs to be of the same nature
7 as what you're simulating.

8 MR. KIM: So, sorry, I didn't mean to interrupt. Like –

9 JUDGE MCNEILL: You're fine.

10 MR. KIM: I'm saying something a little more nuanced, right? And I
11 understand like why you're saying that that's what is required, right? I'm
12 saying, what is this disclosure teaching us? What is this disclosure saying,
13 right?

14 It's not saying simulate a button click, because you're not clicking a
15 button. That's not how you would read that. The prior art didn't appreciate
16 the invention, what the invention was trying to do.

17 Any time it's talking about like vibrotactile effects or like these
18 physical controls, there's no concept of like we're trying to simulate a
19 mechanical detent, right?

20 This is just saying we need to somehow convey information through a
21 vibrotactile effect. But then when you look at the use cases for when they're
22 doing that, it's totally divorced from the situation where you would expect
23 that mechanical detent.

24 There is no mechanical detent that is being simulated.

25 JUDGE MCNEILL: Okay, I think I understand your argument.

26 Thank you.

1 JUDGE RAEVSKY: There are seven minutes remaining if you wish
2 to reserve time for rebuttal.

3 MR. KIM: So the only other things I will say is just real quickly, for
4 Ichinose-Levin, the petitioner kind of made a point of like on this record,
5 there's nothing additional in this record that would cause the board to
6 reverse its findings, right?

7 Neither Ichinose or Levin disclose virtual detents. It's only
8 vibrotactile effects that we're saying that conflation is happening. And then
9 Levin specifically only has force profiles.

10 The board, if you look at the previous findings on Page 50, they're
11 saying, sorry, the previous finding was that, on page 47, is like there's no
12 indication like why you would put these assistive resistive forces from Levin
13 into the touchpad.

14 Nothing's changed. There's no additional information that would
15 change that. And then for Wang-Ichinose, it's the same deal. None of the
16 art has a virtual detent, so the combination of them cannot have it, either.

17 And then specifically for Wang-Ichinose, I mean, this is – when
18 you're looking at trying to combine Levin with Ichinose, Ichinose is a
19 vibrotactile touchpad.

20 It has vibrations already. So the fact that even if Levin had vibrations,
21 which it doesn't, why would you put those vibrations into Ichinose?

22 It has vibrations already, so there's no reason to combine those two.
23 Or Wang-Ichinose, Wang specifically says like you want to have physical
24 controls in all cases, right?

1 You want to have that knob provide the feedback because it's bad that
2 you have these non-physical controls. And so what Wang is saying, we
3 want to have force feedback.

4 And so there's no motivation to combine those two or to put
5 vibrotactile feedback into Wang.

6 And so that's my – unless there's further questions.

7 JUDGE RAEVSKY: Thank you, Mr. Kim. You have five minutes
8 remaining. Okay, Mr. Speed, you have about four and a half minutes
9 remaining.

10 MR. SPEED: Thank you, Your Honor.

11 JUDGE RAEVSKY: You may begin when you're ready.

12 MR. SPEED: I can be short on this. On the profile, Rosenberg 1,
13 Rosenberg 2 issue, I just wanted to kind of go back to the petition. And at
14 Page 50 of the petition is where we explain Rosenberg 1 explicitly
15 references Rosenberg 2, which Rosenberg 1 says Rosenberg 2 describes,
16 quote, in greater detail, architectures and control methods that can be used
17 for reading sensor signals and providing haptic feedback.

18 And then on 51, we explain, with Mr. Ward corroborating our
19 argument, that a POSA would have understood that that means incorporating
20 Rosenberg's profiles.

21 And we cite to numerous profiles in Rosenberg, including Figures 10-
22 13 and 15-16, right? And then when we get to Page 54 of the petition where
23 we're actually mapping it to the profile, we again, we point to the profiles in
24 Rosenberg 2 and we again point to the various figures that are in there, these
25 force profiles.

1 And I just want to highlight for the board that Figure 13, which we've
2 cited in the petition, is described in Rosenberg 2, and Mr. Ward quotes this
3 at his Paragraph 295 of his declaration, which we cite at Page 51 of the
4 petition, he's quoting Column 35 at the first full paragraph of Column 35,
5 says Figures 13a-13b are graphs illustrating force versus time profiles for
6 vibration force.

7 And then earlier, when they have the listing of the figures, Rosenberg
8 2 is describing Figures 13a-b which are vibration forces at a force profile.

9 So again, it's a force because the force is the consequence or the
10 output of the force generates a vibrotactile effect, but it's a vibration as
11 shown in Figures 13a-13b, which we cited.

12 And again, they now can see that they haven't disputed their person
13 skilled in the art reading Rosenberg 1 would understand to incorporate
14 Rosenberg 2's profiles.

15 Rosenberg's 2 profile is a whole slew of them, one of which is
16 vibrations, and there's also no argument that it wouldn't have been obvious
17 to use a profile to command the actuator.

18 Something has to tell the actuator in Rosenberg 1 what to do. And the
19 only discussion of that we find in Rosenberg 2, which is used profiles, which
20 is pre-stored command parameters for an actuator.

21 The only other point I just wanted to raise is I heard a lot about how
22 hard this is to do in touchpad versus physical objects. I think it's remarkable
23 because if you look at the specification, the entirety of the specification is
24 focused on knobs.

25 Figure 9a-9h, which is the only depiction of a virtual detent, it's a
26 physical knob. It's all describing physical knobs. They just have a handful

1 of throwaway sentences that say, oh, by the way, because we're using
2 vibrations, you can do this on a touchpad, too.

3 So when they disclosed this to the public –

4 JUDGE RAEVSKY: Okay, but Counsel, isn't a bit unfair to look at
5 that other specification and say this is why it would have been obvious to do
6 something? It sounds like we're straying to the realm of hindsight here.

7 MR. SPEED: No, I think it's fair to look at specifications to see if
8 they are trying to set a hurdle or a burden for the prior art that they
9 themselves did not try to clear in the specification.

10 I think it's the In re Epstein case from the federal circuit that says you
11 can't expect – you can't argue that no one would have been able to or
12 thought to do this because it's very challenging, it's very hard to go from
13 knobs to touchpads, when your own specification doesn't provide any details
14 on how you – how the vibration on a knob is any different than the vibration
15 on a touchpad.

16 And that is Rosenberg, vibrations on a touchpad is also the
17 combination of Ichinose and Levin. Unless there's any questions, I'm happy
18 to rest our case.

19 JUDGE RAEVSKY: Hearing none, thank you, Counsel.

20 MR. SPEED: Thank you.

21 JUDGE RAEVSKY: All right, Mr. Kim, you have five minutes, and
22 you may begin.

23 JUDGE MCNEILL: Counsel, you're on mute. Please unmute your
24 mic. Thank you.

1 MR. KIM: Sorry, thank you. So just a quick on the last thing that the
2 petitioner said. We're not saying that, oh, this is so hard, that's why they
3 didn't do it.

4 The prior art just doesn't do that, right? Like when you look at the
5 disclosures, they say, okay, how do we simulate these detents? Let's use
6 force feedback.

7 And when they do consider using vibrations, they're saying, well,
8 let's layer that on top of the effects that convey additional information,
9 right?

10 Because why would you do that? You're already simulating the
11 detent with the force feedback. Why are you adding vibrations? It's so that
12 you can augment the additional information that you have.

13 With respect to the force profiles, we kind of talked to that at length.
14 Our briefing kind of addresses everything that they are saying there.

15 But Rosenberg, specifically, I would just like to – petitioner addressed
16 the force profiles, but I'd also like to reiterate again, Rosenberg does not
17 disclose virtual detents, only vibrotactile effects, no force – only force
18 profiles.

19 It does not disclose a plurality of systems as explained under our
20 construction, but also under a plain and ordinary meaning of the term.

21 When you look at Rosenberg's disclosure, it does not describe
22 applications as systems. It just doesn't say that. The only reason why, and
23 then if you, as Your Honors picked up on, at first, their expert was saying
24 systems are physical systems.

25 Why are they pointing at systems? Because they're pointing at our
26 infringement contentions. That is the only support that they have for saying

1 that all applications, including the ones in Rosenberg, should be counted as
2 systems.

3 And that's just not –

4 JUDGE RAEVSKY: Counsel, I'm not understanding your point,
5 because now you're talking about plain and ordinary meaning, but you
6 already agreed that at least some software are systems.

7 So why does petitioner need to say that applications are systems when
8 you already essentially agreed that under ordinary –

9 MR. KIM: Sorry. Right. So to clarify, the dispute is whether all
10 applications – if you were to – if a POSA reading the patent at the time,
11 right, would have read Rosenberg's disclosure and saw application, the term
12 application, whether they would have appreciated Rosenberg's disclosures
13 of applications to be a plurality of subsystems. Right?

14 And what we're saying, no, the term plurality of subsystems does not
15 include all applications, right? They would not have read Rosenberg and
16 said, okay, these applications are subsystems. Right?

17 And then their expert kind of reached that same conclusion. The only
18 reason why they're saying, when you look at their briefing and they say,
19 okay, we're pointing at applications here, even if we don't agree with it, the
20 only reason why they're saying that you would read Rosenberg that way is
21 by looking at our infringement contentions.

22 The dispute is not whether it covers some applications. What we're
23 saying is, we had to clarify that like when it says applications, it needs to
24 provide the context, right?

1 When you look at the plain disclosure of Rosenberg, it doesn't talk
2 about applications as systems. There's no support for saying systems, the
3 plurality of systems, covers all applications.

4 The only support that they have for that is pointing out our
5 infringement contentions, because the disclosure doesn't say that. When
6 you search for the word system, it's only talking about that containing
7 system.

8 That's why I was trying to make the distinction between the
9 containing system and the subsystems that you're trying to control. When
10 Rosenberg talks about system, it's only talking about the laptop system, the
11 operating system.

12 It's not saying and you have all these applications that are also
13 systems, right? And while I'm at it as well, they tried to make the point of
14 saying, well, and then these applications also output the effects, and
15 therefore, they provide the context.

16 I think we've kind of had extensive discussion as to why that's not
17 simply firing vibrotactile effects, is not the same as an application that
18 provides the context for one effect versus the other.

19 So were there any other questions for that? Okay. So hearing none,
20 that's everything I wanted to say.

21 JUDGE RAEVSKY: Thank you, Counsel. We appreciate both
22 counsels' participation today and answering our questions. And we thank
23 the court reporter and the staff for their help as well.

24 This hearing is adjourned and the judges will leave the call, but
25 counsel, please stay on the line in case the court reporter has any questions.

26 MR. SPEED: Thank you, Your Honor.

1 MR. WIN: Thank you, Your Honor.
2 (Whereupon, the hearing in the above-entitled matter was concluded
3 at 4:04 p.m.)

IPR2024-00477 (Patent 7,336,260 B1)
IPR2024-00478 (Patent 9,430,042 B1)

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