



Transcript of **Jacob O. Wobbrock, Ph.D.**

Friday, March 28, 2025

Samsung Patent Appeals

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1 UNITED STATES PATENT AND TRADEMARK OFFICE

2

3 BEFORE THE PATENT TRIAL AND APPEAL BOARD

4

5 SAMSUNG ELECTRONICS CO., LTD.,

6 AND SAMSUNG ELECTRONICS AMERICA, INC.,

7 Petitioners

8 v.

9 MAXELL, LTD.,

10 Patent Owner.

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13 IPR2024-00717

14 U.S. Patent No. 11,223,757

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17 DEPOSITION OF JACOB O. WOBBROCK, Ph.D.

18 (Taken by Petitioners)

19 March 28, 2025

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1 APPEARANCES: 2 3 On behalf of the Patent Owner: 4 ROBERT PLUTA, ESQ. 5 Mayer Brown 6 71 South Wacker Drive 7 Chicago, Illinois 60606 8 (312) 782-0600 9 rpluta@mayerbrown.com 10 -and- 11 SETH W. BRUNEEL, ESQ. 12 Mayer Brown 13 1999 K Street, NW 14 Washington, DC 20006-1101 15 (202) 263-3285 16 sbruneel@mayerbrown.com 17 18 19 20 21 22	Page 2 1 C O N T E N T S 2 WITNESS EXAMINATION BY COUNSEL FOR 3 JACOB O. WOBBROCK PETITIONERS 4 BY MR. MINUTOLI 5 5 6 E X H I B I T S 7 WOBBROCK EXHIBIT NO. PAGE 8 2005 - Declaration of 9 Jacob O. Wobbrock, Ph.D. 6 10 1001 - United States Patent No. 11 11,223,757 B2 12 12 1003 - Declaration of R. Michael 13 Guidash in Support of Petition 14 for Inter Partes Review of 15 U.S. Patent No. 11,223,757 47 16 17 18 19 20 21 22
1 APPEARANCES (Continued): 2 3 On behalf of the Petitioners: 4 GIANNI MINUTOLI, ESQ. 5 DLA PIPER LLP (US) 6 500 Eighth Street, NW 7 Washington, DC 20004 8 (202) 799-4000 9 Gianni.minutoli@us.dlapiper.com 10 11 12 13 14 15 16 17 18 19 20 21 22	Page 3 1 P R O C E E D I N G S 2 Whereupon, 3 JACOB O. WOBBROCK, Ph.D., 4 having been duly sworn by the Notary Public, was 5 examined and testified as follows: 6 EXAMINATION BY COUNSEL FOR DEFENDANTS 7 BY MR. MINUTOLI: 8 Q. Good morning again, sir. Can you please 9 state your full name for the record? 10 A. Yes, my name is Jacob O. Wobbrock. 11 Q. How many times have you been deposed this 12 week? 13 A. Once before. This is the second time. 14 Q. Okay. So I have a bit of a mixed New 15 York-Pennsylvania accent, so if at any point you 16 don't understand my question, please let me know. 17 A. No problem. Will do. 18 Q. Otherwise, I'll assume that you understood 19 the question. Is that fair? 20 A. Sure. 21 Q. Is there any reason why you can't give me 22 your best testimony today?
	Page 4 Page 5

Page 6 1 A. No, no reason. 2 Q. Great. 3 (Wobbrock Exhibit No. 2005 was 4 identified for the record.) 5 BY MR. MINUTOLI: 6 Q. So in the chat, I've put an Exhibit 2005. 7 Do you see that? 8 A. Not yet. 9 Q. Okay. Let me know. 10 MR. MINUTOLI: Rob, do you see it? 11 MR. PLUTA: I do not. 12 MR. MINUTOLI: Let me try it again. 13 THE WITNESS: I see it now. 14 BY MR. MINUTOLI: 15 Q. All right. I think that's all I need for 16 today. 17 A. I am just downloading it. 18 Okay, I have it, and I've opened the PDF. 19 Q. Do you recognize Exhibit 2005? 20 A. Yes, I do. It's my declaration. 21 Q. And this exhibit contains all your 22 opinions in this matter; is that correct?	Page 8 1 top left that I use to identify the date at which it 2 was current. 3 Q. Any new cases since then? 4 A. No. 5 Q. Okay. So I think that's all we want. I 6 just want to make sure that you saw it was there. It 7 wasn't there the other day. 8 If you can go to -- I think it's PDF page 9 30 of 42, paragraph 78 of your declaration. Let me 10 know when you're there. It looks like it's PDF page 11 41 in the electronic document. 12 A. Right. That's the stamp on the bottom 13 there. Yeah, okay. 14 Q. So I'm going to ask you a couple questions 15 about paragraph 78. If you want to take your time to 16 review it, just let me know. 17 A. Thank you. I appreciate that. 18 Okay. 19 Q. Thank you. So at the end of the 20 paragraph, which I guess is on page 42, is the second 21 to last sentence, "The claim provides clear 22 antecedent basis." Do you see that?
Page 7 1 A. This exhibit contains my rebuttal opinions 2 to the declaration of Mr. Guidash. I won't represent 3 that it contains all of my possible opinions in this 4 matter. I think, as I indicate in the conclusion of 5 my declaration, I reserve the right to opine further 6 should additional evidence or additional opinions 7 from Mr. Guidash come to my attention. 8 Q. Okay. Sitting here today, anything you 9 want to add to this declaration? 10 A. Sitting here today, nothing to add. 11 Q. Anything you would like to withdraw? 12 A. Not to my awareness, no. 13 Q. Okay. Anything you need to change? 14 A. No. 15 Q. Okay. So luckily, this exhibit has your 16 CV in it. So if you can go to -- I think it's PDF 17 page 69. 18 A. Okay. 19 Q. And this is a copy of your CV, at least at 20 the time this declaration was submitted? 21 A. Yes, this is my CV as of the 3rd of 22 February 2025. There's a little date stamp in the	Page 9 1 A. I do. 2 Q. Would you agree that that is your 3 construction of, I believe, element 1.i of the '757 4 patent? 5 A. Well, I wouldn't agree exactly that it's 6 my construction. Claim construction, of course, is a 7 matter for the Court to decide. But it's how I read 8 the claim because of the way the claim is written. 9 Q. I'm sorry, are you finished? I don't want 10 to cut you off. 11 A. Yeah. 12 Q. So it would be your interpretation of the 13 claim. I'm not trying to make it legalese. 14 A. Yeah, it's how I see the claim elements 15 are tied together, because the antecedent basis sets 16 up some of the claim elements that then are used in 17 some of the subsequent claim terms. So I'm just 18 reading the claim, I think, as a standard claim, as 19 claim reading is meant to be conducted. 20 Q. And would this be specific to element 21 1.i -- or 1.g, 1.i, 1.j? 22 A. The antecedent basis that I am talking

Page 10 1 about in paragraph 78 is evident up in the beginning 2 of that paragraph, where element 1.j is the element 3 that refers to some of the claim elements that came 4 in element 1.g and 1.i. Specifically, the first 5 instruction coming from the command voice in 1.g, and 6 the first standby time coming from 1.i. And so 1.j 7 is where those are brought together, and that's what 8 kind of ties it all together there. 9 Q. Okay. So I mean, I know it applies to 10 claim 1, right? 11 A. All of this is in claim 1, yes. 12 Q. So this paragraph, particularly that last 13 sentence, would you say it's 1.j is the limitation 14 that this would apply to? 15 MR. PLUTA: Object to form. 16 THE WITNESS: Well, in paragraph 78, I'm 17 specifically rebutting Mr. Guidash's read, which I 18 think is in error. And in so doing, I'm referring to 19 1.g, 1.i, and 1.j. 20 BY MR. MINUTOLI: 21 Q. Okay. And I guess I should have asked, 22 the claim elements starting on PDF page 29, and I	Page 12 1 It also is responsible for starting the 2 first standby time, and then when that expires, it's 3 responsible for beginning the image recording, which 4 is the capturing of an image. 5 Q. Okay. So elements of, it looks like, 1.g, 6 1.i, and 1.j? 7 A. Those elements I tied together in 8 paragraph 78 in that way. 9 Q. Okay. Thank you. So I also put in the 10 chat room and you got it, Exhibit 1001. Do you see 11 that? 12 A. I see that now, yes. 13 Q. Can you download it? 14 A. I can, yes. 15 I'll go ahead and open it here. Okay. 16 (Wobbrock Exhibit No. 1001 17 was identified for the record.) 18 BY MR. MINUTOLI: 19 Q. Thank you. So I'm going to ask you a few 20 questions. And I apologize in advance, because I 21 think we're going to have to switch between the 22 figure and the spec. So I don't know if there's a
Page 11 1 think they're all up to 26 of claim 1. So when we 2 refer to 1, 1.g, 1.i, 1.j, those are the claim 3 elements we're talking about, correct? 4 A. Yes. In my declaration on stamped page 5 29, I list out the claim elements and their codes, 6 that is the way that I'm using them. I think it 7 seems to be the way you're using them as well. So we 8 can agree to use those codes. 9 Q. I'm not trying to be tricky. I just want 10 to clarify that we're talking about the same claims. 11 A. Yeah. 12 Q. So whether it applies to 1.g., 1.i, 1.j, 13 the second to last paragraph of 78, second to last 14 sentence of paragraph 78, requires that the first 15 camera is enabled and the second camera is disabled 16 in response to the command voice; is that correct? 17 A. The command voice issues the first 18 instruction, which does a few things. That first 19 instruction from the command voice is responsible for 20 enabling the first camera, which is the in camera, or 21 the front-facing camera, disabling the back camera or 22 the out camera.	Page 13 1 way to split it up on your screen, but I'll apologize 2 because I'll be going back and forth a little bit 3 today. 4 A. No problem. I will just ask for your 5 patience as I switch as well between them. 6 Q. No problem. 7 So we're going to start with figure 10, 8 which I think is marked as page 11 in the document. 9 You can take your time to review it, if you'd like. 10 A. Yeah, I'll take a moment to look at it 11 again. 12 Okay. 13 Q. Thank you. Do you recognize this flow 14 chart? 15 A. Yes. 16 Q. Would you agree that this flow chart shown 17 on figure 10 is illustrating how the device -- I 18 believe it's numeral 100, illustrated in figures 4 to 19 7 operates? 20 A. Figure 10 is, in particular, a flow chart 21 of aspects of the operation of figure 6, which is the 22 device showing the function menu. And figure 10 is

Page 14 1 the flow chart of that menu. 2 Q. Would it also include, like, the device 3 shown on figure 4, which is just showing us the front 4 and back drawings, the same device? 5 A. It would pertain to a device like the one 6 shown in figure 4. But it's just more specifically 7 illustrating that -- the interaction that takes place 8 on figure 6. Figure 10 starts with the display 9 function selection menu screen, and that menu screen 10 is the screen referred to in figure 6. 11 Q. So that S501, that's referring to the 12 screen on figure 6? 13 A. That's my understanding, yes. 14 Q. And the same device, though, 100 is 15 showing figures 4 to 8, I believe, device 100 is the 16 same device? 17 A. Generally, these are examples of preferred 18 embodiment devices that help illustrate the 19 specification. I think the devices are fairly 20 similar, if not the same. 21 Q. Okay. Thank you. So here's where we're 22 going to go back and forth. Can you turn to column	Page 16 1 it ends on line 2, the next column. 2 A. I will. Just a moment. 3 Q. Sure. 4 MR. MINUTOLI: It switched to you. I was 5 wondering if you objected. 6 MR. PLUTA: I just cleared my throat. 7 THE WITNESS: Okay, I'm ready. 8 BY MR. MINUTOLI: 9 Q. Thank you. So in that sentence, it refers 10 to figure 5, correct? 11 A. Yes, it does. 12 Q. And you can go look at it if you want. 13 But is figure 5 illustrating the screen shown to the 14 user at startup? 15 A. Well, this portion to which you've 16 directed my attention is referring to figure 5, 17 insofar as icon 302 is referenced as the camera, the 18 camera icon. I don't recall offhand if figure 5 is 19 what's shown at the startup. I would need to go 20 refresh on what the spec says about figure 5. 21 Q. All right. I'm sorry, I didn't mean to 22 cut you off. Go ahead. I could point you to a place
Page 15 1 10, at the bottom of column 10, which is PDF marked 2 19. 3 A. I first went there in my report, so I'm 4 getting these things sorted out correctly here. 5 Sorry. 6 Q. No problem. Take your time. And I 7 apologize if I'm doing a lot of shuffling. I'm not 8 in my office today, so papers are everywhere. So 9 you'll have to bear with me a little bit, too. 10 A. It's okay. Could you just direct me one 11 more time? 12 Q. Sure. In Exhibit 1001, PDF page 19, which 13 is -- I'm going to ask you a question about column 14 10, line 65, plus. 15 A. Okay. All right. I'm there, thanks. 16 Q. No problem. So somewhere in that sentence 17 of line 65, there's a sentence, "When the icon 302 is 18 selected on the basic screen 300 illustrated in 19 figure 5." Do you see that? 20 A. I see that. 21 Q. Just so I don't have to read it on the 22 record, can you keep reading that sentence? I think	Page 17 1 that talked about figure 5. That would be on column 2 5, lines 14 to 19, I think. 3 A. I see figure 5 described also in column 8. 4 Q. Column 8. I can't read my own writing. 5 Sorry. 6 A. No problem. Maybe I'll take a moment just 7 to look at that description again. 8 Q. Yeah. 9 A. Okay. So it says, "Figure 5 is a diagram 10 that illustrates an example of a basic screen 11 displayed on the display unit. The basic screen is 12 displayed when the power of the video recording 13 device is turned on, according to pressing of the 14 power key or when the home key is pressed." 15 So I think that's fair to say, that figure 16 5 is showing what we might colloquially call the home 17 screen for this particular embodiment. 18 Q. Maybe a startup screen is another way to 19 say it? 20 A. I think that's fair to say. 21 Q. Thank you. I apologize for giving you the 22 wrong directions.

1 So if we can go to column 11, which is PDF 2 page 20, I'm sure of that, and read the sentence that 3 starts at line 3, please. 4 A. The camera functioning -- excuse me. "The 5 camera function executing unit 104b displays the 6 camera function selection menu screen 310 illustrated 7 in figure 6, S501, and determines the function menu 8 icon that has been selected by the user S502." 9 Q. And I apologize, you don't have to read it 10 out loud. I just was asking you to read it. So I 11 didn't want to cut you off. You're more than welcome 12 to, but I just want you to know, you can just read it 13 and let me know when you're done. 14 A. Okay, that's fine, too. 15 Q. So according to this, and this refers to 16 the screen you talked about before, when the user 17 presses the camera icon 302, the result is the screen 18 shown in figure 6. Would you agree with that? 19 A. When the user presses the icon 302, it 20 transfers control to the camera function executing 21 unit, and then that camera function executing unit 22 displays that menu screen illustrated in figure 6.	Page 18 1 Q. Thank you. And it also discusses that the 2 front or in camera is selected by pressing button 312 3 in figure 6; is that correct? 4 A. Yes, about halfway through the paragraph, 5 it refers to the case where the user selects the in 6 camera icon 312, figure 6. 7 Q. Do you have a preference for front, back, 8 in, out, or should I just keep saying both at the 9 same time? 10 A. I can work with in -- front, in, or first; 11 or out, back, or rear, or second. All of those are 12 fine. So I'll know what you mean. 13 Q. Okay. I'll use at least in and out, so we 14 know. 15 A. Okay. 16 Q. Front and back. So there's no confusion. 17 So again, in that same paragraph passage at line 7 to 18 16, does that disclose another way to enable the 19 front or in camera, other than pressing button 311? 20 A. That precise passage that you referred to 21 in column 11, from lines about 7 to 17 or so, is 22 specifically directed towards the interaction with Page 20
1 That's how I read it. 2 Q. Okay. So is it fair to call that a camera 3 function selection menu screen, as written in the 4 spec at column 11? Is that fair to say? 5 A. It refers to it in column 11, line 4 as a 6 camera function selection menu screen 310. So I 7 think that's fair to say, given that's what the spec 8 uses. 9 Q. Okay. And we'll stick with column 11. If 10 you could read the next few sentences starting on 11 line 7, maybe to line 16, please. And again, you can 12 do that to yourself. 13 A. Yeah. 14 Okay. 15 Q. At the beginning of that passage, we're 16 talking about step S502; is that correct? 17 A. At the beginning, yes. 18 Q. And this passage is talking about that the 19 rear or out camera is selected by pressing button 311 20 that would be shown in figure 6; is that correct? 21 A. Yes, that's what the paragraph is 22 describing to begin with. Page 19	1 buttons 311 and 312 in figure 6, and refers to those 2 buttons, among other things, being able to enable the 3 imaging units to which they're assigned. 4 There is on that same interface in figure 5 6, a voice registering function that's made available 6 to the user. And it says in element 313, register 7 the command voice. And so that's an indication that 8 there's another way of operating the device in figure 9 6 itself. That command voice, we know from the 10 claims, is a voice that issues a first instruction, 11 and among other things, enables the front camera and 12 disables the back camera. 13 So to your question, in that ten-line 14 passage, it's referring to those other icons. But 15 the paragraph after that, for example, goes into the 16 command voice registration, and the command voice is 17 used throughout as another means to enable and 18 disable the camera. 19 Q. And an end voice, is that specific to a 20 user? 21 A. The claim language does not require that 22 the command voice be specific to the user. The claim Page 21

1 doesn't contain that further limitation. It just 2 says that the -- I'm down in the claim, claim 1 here. 3 "The audio input interface receives the 4 command voice giving a first instruction." It 5 doesn't further teach in claim 1 alone that the 6 command voice is or must be specific to a user. The 7 embodiment that we're discussing does allow the user 8 to register his or her voice as a command voice. And 9 so that's certainly a possibility in some 10 embodiments. 11 Q. Does it also have to be a certain command, 12 like enable camera, or something like that? And by 13 "it," I mean the command voice. Sorry. 14 A. The first claim does not impose a 15 limitation on the key word or key phrase that the 16 user has to use. Various embodiments will often 17 employ a particular phrase. Sometimes it's called a 18 wake-up phrase, or a wake-up command, or a key 19 phrase, or a key word command, which is what enables 20 the device to recognize and understand that it's 21 meant to be a trigger. 22 Q. Thank you for that. Based on the same	Page 22 1 video data from the in camera (S504) and displays the 2 input video data on the display unit 121." 3 So as part of that, as it says, it enables 4 the first imaging unit. 5 Q. And when it's enabled, the front camera or 6 the first unit is outputting image signals at that 7 point? 8 A. It describes at the end of line 17 in 9 column 11, "displays the input video data on the 10 display unit as a live view S505." So it would be 11 showing image signal data on the display from the in 12 camera at that point. 13 Q. Okay. So the in camera's outputting 14 signals that are being input into something to get 15 put on display; is that correct? 16 A. The in camera is recording image signals, 17 and those data are displayed in some output. It says 18 a live view on the display unit in step S505. 19 Q. And I'm sorry if I'm using imprecise 20 terms. So when this sentence says, "enables," does 21 that line up with the phrase in your interpretation, 22 "outputting image signals," I guess is what I'm Page 24
1 passage we've been talking about, would you agree 2 that if the front or in camera button 312 is pressed 3 by the user, S502 jumps to S504? 4 A. So in figure 6, button 312, it is labeled 5 photographing using in camera. And the decision 6 block in figure 10 labeled S502 has a branch where 7 when the in camera is the selected function, it goes 8 to block 504, S504. 9 Q. That would be the selection of the front 10 camera? 11 A. That's correct. 12 Q. In case I misspoke. 13 A. Yeah. 14 Q. Thank you. Sorry. So in figure 10, I 15 guess at step 504, the front camera is enabled at 16 that point, S504? 17 A. So in column 11, line 13, it says -- or 18 line 12, rather, "On the other hand, in a case where 19 the user selects the in camera selection icon 312" -- 20 again, that's from figure 6 -- "the camera function 21 executing unit 104b enables the first imaging unit 22 123" -- that's the in camera -- "starts inputting Page 23	1 trying to find out? 2 A. Well, the spec language here refers to 3 "enables the first imaging unit, starts inputting 4 video data from the in camera and displays the input 5 video data on the display unit." So it doesn't just 6 stop at enables as if that entails everything that 7 follows. 8 So it's separately saying that the imaging 9 unit is enabled, and then it starts capturing video 10 data from the camera. And then it displays those 11 things. So it's enabling it so it can do those 12 things. And so if the camera weren't enabled, it 13 couldn't capture image data. 14 But, for example, you can have a camera 15 that is -- let's say the camera module is receiving 16 power, but you know, the image data is not being 17 displayed to the screen. So it's being explicit 18 about enabling first, and then those subsequent steps 19 of capturing and displaying. 20 Q. And for it to be displayed, the camera is 21 outputting the signals to some device that puts it on 22 display. Is that fair? Page 25

Page 26 1 A. The camera, I would say, is capturing the 2 image signal data, and then sending that to the 3 display. In a device around the time of the 4 invention, and today as well, it would be, for 5 example, processed by an image signal processor, an 6 ISP, that would translate the data that the camera is 7 capturing into the displayed data that's capable of 8 being shown on the screen. 9 Q. So we may have to switch to another image 10 here. But that same paragraph mentions the live view 11 S505. Is the live view shown in figure 7 or a 12 different figure? 13 A. So further down in column 11, starting 14 around line 30, it says in S505, the step we're 15 talking about from figure 10 here, "the camera 16 function executing unit displays the live view 17 display screen 330 illustrated in figure 8 and 18 operates the voice recognition executing unit." 19 So I would like to maybe direct our 20 attention to figure 8. I think you mentioned figure 21 7, but figure 7 is the figure referring to the option 22 for the user to record their command voice. Figure 8	Page 28 1 that would be either the out camera or the in camera, 2 or possibly both, actually, because there's also a 3 picture-in-picture contemplated in this embodiment, 4 for example, in figure 12. 5 In any case, the live view in S505 is 6 either or both of the out or in cameras. And what 7 they chose to illustrate in figure 8 is the out 8 camera view, but it could be the in-camera view or it 9 could be, like figure 12 shows, a view of both the 10 out and in cameras. So that's just kind of an 11 artifact of how figure 10 was constructed. 12 Q. It's a bad question by me. I apologize. 13 So you just confirmed the S505 could be enabled in 14 camera, enabled out camera; or in figure 12, both 15 cameras enabled? 16 A. Enabled and displaying their image to the 17 screen is what those figures, what figure 8 is 18 showing, and figure 12. 19 Q. So referring to figure 10, if button 312 20 was pressed to enable the front in camera, right, 21 S504, the timer has not been started; is that 22 correct? I'll rephrase that.
Page 27 1 is showing the aforementioned live view from step 2 S505. 3 Q. And that's because I don't know what I'm 4 talking about, so I apologize. 5 A. No, it's okay. There's a lot flying 6 around here, I know. 7 Q. So thank you. So figure 8 is the live 8 view, correct? 9 A. Figure 8 is the live view corresponding to 10 the S505 step in figure 10. 11 Q. And that's displaying what's coming out of 12 the enabled front or in camera, figure 8? 13 A. Figure 8's labeled out camera view. So I 14 think it's what's coming out of the out camera in 15 this case. At the end -- let's see. Sorry, so in 16 figure 10, the way figure 10 is drawn is that the -- 17 in step S504, we have the in camera being operated. 18 In S503, we have the out camera being operated. 19 Both of those, in this particular flow 20 chart, just come together like two streams joining 21 into a river and come together in step S505, which 22 just says, "display live view on display unit." So	Page 29 1 So referring to step 504, if button 312 2 was pressed, the camera would be enabled, but the 3 standby timer has not been started yet; is that 4 correct? 5 A. So when button 312 in figure 6 is pressed, 6 and -- in figure 10, then we proceed from step S502 7 to S504. At that point, the timer waiting -- what's 8 called the waiting process down in steps S510 and 9 S511. We haven't reached that yet, because it's a 10 flow chart, and we're just in step S504. But these 11 subsequent steps also happen, right? So it's not 12 like we just sort of sit in the S504 box and stay 13 there. 14 So then we go to S505, which displays the 15 live view on the display unit. And we talked about 16 that being figure 8, as an example of that. And then 17 there's a branch at S506. If there's a command voice 18 input in S507, and that voice is correct in S508, 19 then we consider which camera it was again, was it 20 out or in. Since we're talking about button 312, it 21 would be the in camera. And so then we'd proceed to 22 the standby time or the waiting time.

1 So there's a series of steps which lead to 2 the timing display -- sorry, the standby time 3 determination, and the length of that time, which the 4 system will automatically determine based on which 5 camera is being used, and which is the trigger for 6 capturing the images, is it the voice command or is 7 it the touch operation instruction as the claim 1 8 refers to it. 9 So it's a series of steps, and it's which 10 input method and which camera. And that's what 11 ultimately would lead to the timing that you just 12 referred to. 13 Q. Okay, thank you. And then after step 14 S511, step S512 says, "Perform recording sequence"; 15 is that correct? 16 A. Yes. 17 Q. So that would be the recording, the actual 18 recording of the video from the in camera, or it 19 could be out camera, but in this scenario, it's the 20 in camera? 21 A. If we're talking about in figure 6, having 22 pressed button 312, indeed, that is the in camera,	Page 30 1 displayed in step S505 on the display unit. And so 2 that still has to exist in the system, but it's not 3 being recorded as claim 1 contemplates. 4 Claim 1 refers to that as acquiring the 5 image signal. And we see that where it says, like in 6 claim 1, element 1.g, it says, "image signal acquired 7 by the first camera." So the camera has to acquire 8 the signal, and then the recorder, you know, writes 9 it to memory for storage. 10 Q. And the writing to memory for storage is 11 step S512? 12 A. There has to be keeping that data in 13 memory prior to S512, because anything in a computing 14 apparatus that we can see on a screen is in memory 15 somewhere, in order to exist in the system. 16 And so, for example, it would be a common 17 practice at the time of the invention to put the 18 image that's being displayed on the screen in some 19 kind of volatile memory, like RAM, random access 20 memory, which is being held in a way temporarily to 21 be shown on the screen. 22 And that way, the user can see it. That's Page 32
1 and so the recording in S512 in figure 10 would be 2 from the in camera. And it could be video, but it 3 could also be a still photograph. When they say 4 recording, sometimes we casually think of that as 5 just video. It sounds like a video term. But the 6 '757 uses recording broadly to mean just capturing 7 and storing image data. 8 Q. Like a still image? 9 A. Could be. 10 Q. Okay. Sorry if I cut you off. In this 11 long sequence, up until step 512, nothing is being 12 recorded, correct, if I understand what you said? 13 A. So I think it's helpful to make this 14 distinction by way of using claim 1. The recording 15 that claim 1 refers to by a recorder that's 16 "configured to record at least one of the first image 17 signal or the second image signal on a storage," 18 that's the recording step, where it's capturing and 19 storing the image signal, and that's what happens in 20 step S512. 21 Up until that point, we still have image 22 signal data coming into the camera and being	Page 31 1 how we can get figure 8, for example. And so that 2 out camera view in figure 8 is still in memory, in 3 order to be there in the first place. But that 4 doesn't mean a photograph has been captured and 5 recorded to memory that's, say, non-volatile memory 6 that will preserve it for a longer period of time. 7 Q. Okay. And I think in 1.e, which is the 8 recorder limitation, it refers to this -- a storage. 9 So this temporary RAM, that's not the storage 10 according to claim 1.e, correct? 11 A. My read of the intended storage in 1.e is 12 that it's concerned with recording image signal data 13 on the storage in the device, like taking a photo and 14 having that photo stored. 15 Q. I understand. So it's been about an hour. 16 Do you want to take a few minutes break or do you 17 want to keep going? 18 A. I can go for a half an hour more if the 19 court reporter feels okay. Maybe 30 more minutes. I 20 know that it can be tiring for them. 21 THE COURT REPORTER: I'm good. 22 BY MR. MINUTOLI: Page 33

Page 34 1 Q. I think you read this paragraph already, 2 starting at column 11, lines 30 to, say, 33. If you 3 want to look at that again. 4 A. Okay. 5 Q. There's a reference to a command voice 6 recognition unit. Do you see that? 7 A. I see that. 8 Q. And that is the -- we'll call it unit 9 responsible for the figuring out if the voice is 10 recognized; is that correct? 11 A. So in line 32, it says, "operates the 12 voice recognition executing unit 104c." And then 13 it's determined whether the user has selected either 14 the shutter icon, which is like a manual trigger, or 15 whether there's the command voice that's been input. 16 So the unit responsible for recognizing that command 17 voice is the voice recognition executing unit 104c. 18 Q. That unit doesn't start or is not needed 19 until -- I guess at least at S507? Or I'll rephrase 20 that. 21 So it looks like at least step S505, the 22 voice recognition unit, is not needed until then?	Page 36 1 because the in camera was selected, the S505, the 2 command voice recognition unit is not needed until 3 S505 at the earliest, I guess? 4 A. If we picked the in camera option in 5 figure 6, which is button 312, as of step S505, the 6 command voice has not been considered in the flow 7 chart of figure 10. 8 Q. Okay. I think I want to ask you about 9 step 507. So if you can turn to lines 38 to 59, 10 that's still in column 11. Let me know when you've 11 had a chance to review it. 12 A. Can you give me the line numbers again you 13 would like me to review? 14 Q. Yes, 38 to 59. It's a slightly bigger 15 passage. 16 A. Okay. I'll just take a moment. Thank 17 you. 18 Q. Please. 19 A. Okay, I'm ready, thank you. 20 Q. You're welcome. And I think you testified 21 to this earlier. So at step S505 is where the 22 command voice is detected -- or I'll rephrase that.
Page 35 1 MR. PLUTA: Object to form. 2 THE WITNESS: It's possible that the 3 command voice recognition unit could be involved in 4 step S600, where the command voice could be 5 registered. It would be not unusual to have that 6 involved in that registering process which is -- you 7 know, an interface for which is given in figure 7. 8 For example, the user might record their 9 command voice, and then the system could give 10 feedback as to whether it's easily recognizable or 11 not. In such cases, that would require some of the 12 recognizing capabilities in that step. 13 Apart from, though, the registering 14 process that happens further up in figure 10, as of 15 figure S505 -- sorry, step S505, the command voice 16 has not been considered at that point yet. That 17 decision takes place initially in S507, where there's 18 the consideration of whether there was a command 19 voice. And then the recognition of it as being 20 correct is step S508. 21 BY MR. MINUTOLI: 22 Q. If we did the flow from S502 to S504,	Page 37 1 According to this passage, a command voice 2 is detected at step S507; is that correct? I'll 3 rephrase it again. 4 A determination of whether a command voice 5 has been input is step S507. Would you agree? 6 A. I would probably use the term from the 7 spec in line 39, which is the term "detected." So 8 there's an initial detection of whether there's a 9 voice command. And then if there is, that audio is 10 attempted to be recognized to see if it, in fact, is 11 an accurate command voice. And so, first, it's 12 detected, and then it's attempted to be recognized. 13 So step 507 is the detection step. And 14 then step 508 is the recognition step. 15 Q. A little bit later on in that same column, 16 line 60. On line 60 on PDF page 20, if you could 17 look at that passage to the start of column 12, line 18 11, please. 19 A. Okay. 20 Okay. 21 Q. So in this passage -- and I'm sorry, I've 22 been calling it button 311 and 312 buttons. The spec

Page 38 1 calls them icons. But you understand they're the 2 same thing for at least this? 3 A. For our purposes, we can treat them as the 4 same. 5 Q. Thank you. So according to at least the 6 beginning of that passage, and what's shown in figure 7 10, I guess, at step 509 is a check to see whether 8 icon 312 or icon 311 were selected; is that correct? 9 A. In step 509, it's considering which camera 10 is the currently operated imaging unit. And so from 11 figure 6, if it was 311 that was pressed, it would be 12 the out camera. And if it was 312 that was pressed, 13 it would be the in camera. That's what's being 14 considered at step S509. 15 Q. So is it checking which button was 16 pressed? 17 A. So the flow chart itself is -- that 18 decision point, S509, is -- says which is operated 19 camera. And the spec says in that step, the camera 20 functioning executing unit checks whether the camera 21 that is currently operated is the first imaging unit, 22 the in camera, or the second imaging unit, the out	Page 40 1 refers to as TB, which stands for time B. And it's 2 contrasting that to the short standby time, TA. 3 Those also appear in figure 9, which, of course, 4 precedes figure 10. 5 Q. TB would be the long timer, long time? 6 A. That's correct. 7 Q. So I think you mentioned this already. So 8 if button 311 was pressed, that would be what's 9 called the short time, TA? 10 A. In this example, 311 is the out camera. 11 And the out camera would lead to the short time, TA, 12 the short standby time. 13 Q. S510, correct? 14 A. Step S510 is the -- refers to it as a 15 waiting process, which is also the term used in 16 figure 9, but diagrams this. In the spec, that's 17 called the standby time. So this is the short 18 standby time, TA. 511 has the longer standby time, 19 TB. 20 Q. Okay. A couple more questions before we 21 break. Is that okay? 22 A. Sure.
Page 39 1 camera. 2 Now, it then says, in parentheses, "(in 3 other words, whether the icon selected in S502 is the 4 out camera selection icon 311 or the in camera 5 selection icon 312)." 6 So I take that to mean that in this 7 example, that it's illustrating -- step by step, this 8 example is referring to whether 311 or 312 in figure 9 6 were pressed. But the way it's written is that 10 it's considering which is the camera currently 11 operating. 12 And 311 and 312 are ways to get to that 13 point. It could be the case that perhaps we've 14 reached those cameras being operated perhaps through 15 some other means, but the example that it's giving us 16 here is from figure 6's 311 and 312 buttons. 17 Q. Okay, thank you. And in the same passage 18 a little later on, there's a mention of a long timer 19 for the first standby time is started at step 511 if 20 it's the in camera. Is that correct? 21 A. It mentions when it's the in camera that's 22 operated, it executes a long standby time, which it	Page 41 1 Q. So if I understand what we've been talking 2 about so far, the front camera is enabled only up 3 about step 507-ish; is that correct? Or before 507? 4 A. Well, in the example where the user 5 presses on button 312 in figure 6, which I think is 6 the example we've been discussing, generally, in step 7 505 and 504, really the in camera is starting to 8 acquire a video signal or an image signal, and then 9 displaying that on the display unit. And those are 10 steps 504 and 505 in figure 10. 11 Q. No steps come before -- I'm sorry, and 505 12 is the live view, which I incorrectly mentioned 13 earlier today, right? 14 A. 505 is the live view that's displayed on 15 the display unit, of which figure 8 is an example, 16 although figure 8 is an example from the out camera, 17 as we previously discussed. It's just the particular 18 example they chose to show. 19 Q. So this last passage we mentioned from 20 line 66 through the beginning of column 12, that 21 pretty much corresponds to limitation 1.i in claim 1. 22 Would you agree, the control limitation?

Page 42 1 MR. PLUTA: Object to form. 2 THE WITNESS: Well, there's a number of 3 parts that we went through in the example and in the 4 flow chart of figure 10 that involves the first and 5 second camera, which are not part of 1.i, you know, 6 initially. I mean, they're mentioned in 1.i, but 7 they're introduced up in much earlier parts of claim 8 1. 9 So I don't -- I guess I don't feel 10 comfortable saying that those lines in the spec sort 11 of map exactly to the entirety of 1.i. I think it's 12 more integrated than that in claim 1. 1.i does, 13 though, refer to the controller that must control the 14 first standby time, enable the first camera, disable 15 the second camera. It refers to the longer standby 16 time for -- the longer standby time for the in camera 17 versus the out camera. So it's related, of course, 18 to what we just read. You can certainly say that. 19 BY MR. MINUTOLI: 20 Q. And partly because there's just so many 21 steps to claim 1 that sort of add -- or provide an 22 antecedent basis for each other; is that correct?	Page 44 1 1.i. 2 Q. Understood. Thank you. So what we just 3 described today regarding figure 10, that's not 4 what's happening in figure 10, correct? 5 MR. PLUTA: Object to form. 6 THE WITNESS: Well, figure 10 is an 7 illustration of a case -- of a use case that 8 originates with the use of figure 5, icon 302, and 9 then figure 6, and the menu there. 10 And so in particular, figure 10 is 11 concerned with the pressing of button 312 in figure 6 12 or 311 in figure 6, which are using the in or out 13 camera, having pressed a button on the screen. And I 14 already have illustrated how figure 10 is not a 15 complete depiction of the entirety of the control 16 flow. 17 For example, in the example of showing the 18 live view in the display unit of 505, that's the in 19 camera or the out camera, or it could be both. But 20 in figure 8, they just illustrate that as the out 21 camera. They're not showing that that branch is from 22 out or in.
Page 43 1 A. Yeah, claim 1, it really builds up from a 2 number of elements towards claims 1.g, h, i, and j, 3 where they kind of all come together. And so it's 4 just hard to sort of isolate and tease out one piece 5 from another, and say that as if they're separate. I 6 think it's they just -- the way it's written, it just 7 has to be read as a whole. 8 Q. So earlier today, we discussed paragraph 9 78, which you said is a rebuttal to Mr. Guidash's 10 opinions. We established that your interpretation 11 requires the front camera to be enabled in response 12 to the command voice and the image recording device 13 does the standby time and then the recording. Is 14 that correct? 15 A. It's my opinion that the claim is written, 16 such that the command voice which gives the first 17 instruction also enables the first camera, disables 18 the second camera, initiates the standby time, and 19 then results in a recording of the image signal. And 20 I take that from the way that claim 1 is written, 21 where in paragraph 78, I explain how those tie 22 together in element 1.j, drawing on elements 1.g and	Page 45 1 And so figure 10 is a particular 2 embodiment, but claim 1 is claiming more scope than 3 just figure 10's operation. 4 Q. Okay. Are you finished? I don't want to 5 cut you off. 6 A. Mm-hmm. 7 Q. So figure 10 does not enable the front 8 camera in response to the command voice, correct? In 9 the embodiment of figure 10, I should say. 10 MR. PLUTA: Object to form. 11 THE WITNESS: Figure 10's initial 12 branching is from that menu in figure 6. And that 13 branch happens in S502 where it's just saying, from 14 that menu, is the in camera button 312 or the out 15 camera button 311 the one picked from that menu 16 screen in figure 6? 17 It's not -- it's not diagramming the 18 totality of the operation of the claimed apparatus. 19 Claim 1 is the apparatus that's claimed. Figure 10 20 is illustrating one particular embodiment. 21 MR. MINUTOLI: Okay. You want to take a 22 ten-minute break?

Page 46 1 THE WITNESS: Okay. 2 (Recess.) 3 BY MR. MINUTOLI: 4 Q. Thank you for your time so far. I hope 5 you had a good break. 6 Let's try something different. We'll go 7 back to Exhibit 2005, paragraph 123, which in the 8 file is page 62 -- or page 63 of the PDF. 9 A. Okay. 10 Q. And take your time and read it. I will 11 ask a few questions about this one. 12 A. Paragraph 123, you said? 13 Q. Yes. Sorry. 14 A. Okay. 15 Q. So in this paragraph, you're essentially 16 stating that Kim does not have a voice activated 17 camera control for turning on the camera to capture 18 an image; is that correct? 19 A. It's my understanding that Kim doesn't 20 have a voice command for taking photos of any kind. 21 Q. Okay. And in this paragraph, you're 22 rebutting Mr. Guidash's opinion -- I think it's his	Page 48 1 A. Yes. 2 Q. And because Kim does not have a voice 3 activated camera, let's call it a camera activation 4 command, you believe that it's not probably 5 compatible with the other reference, I think it's 6 Chinn; is that correct? 7 MR. PLUTA: Object to form. 8 THE WITNESS: Mr. Guidash is putting forth 9 a proposed combination of Kim, Yamamoto, and Thorn. 10 And he's asserting in his paragraph 156 that both Kim 11 and Yamamoto have voice activated commands for 12 commanding a camera and capturing images. 13 In paragraph 123, I'm rebutting the point 14 that Mr. Guidash makes about Kim being related to 15 voice activated cameras and image capture, because in 16 fact, Kim is not related to or capable of voice 17 activated camera control or image capture. So that's 18 my point of paragraph 123. 19 BY MR. MINUTOLI: 20 Q. Okay. Thank you. Mr. Guidash has a few 21 more paragraphs on motivation for that combination, 22 correct?
Page 47 1 opinion in paragraph 156, which is Exhibit 1003. Do 2 you agree with that? 3 A. I cite to paragraph 156 from Mr. Guidash's 4 report. I don't have that, of course, open in front 5 of me, but that's what I cite to in my paragraph 123. 6 Q. I could put it up if you want. I'm only 7 going to ask you a few more questions, but I have 8 that exhibit. I can put it in the chat room if you 9 want to confirm. It's not a memory test. So if you 10 want to see it, I can put it up for you. 11 A. I appreciate that. Sure, why not. 12 (Wobbrock Exhibit No. 1003 was 13 identified for the record.) 14 THE WITNESS: It just appeared there. 15 BY MR. MINUTOLI: 16 Q. I think that's page 79 of the PDF, I 17 think. I could be wrong. 18 A. Okay. I'm ready. Thank you. 19 Q. Thank you for reviewing. So the paragraph 20 123 of your report, or your declaration, was 21 commenting on that paragraph of Mr. Guidash's report, 22 right?	Page 49 1 A. He does. He continues on to talk about 2 what he thinks a POSITA would understand, I think 3 incorrectly. I don't find his basis particularly 4 compelling, which is what I wrote out in my report. 5 But he does have a few more paragraphs that he 6 devotes to this combination. 7 Q. Okay. And thank you for being honest. In 8 paragraph 123, you don't discuss those other 9 paragraphs. I think it's paragraphs 157 to 162. Is 10 that correct? 11 A. In paragraph 123, I begin my rebuttal 12 argument with referring to paragraph 156. I also 13 have a few more paragraphs -- I guess Mr. Guidash and 14 I are alike in that way -- and my subsequent 15 paragraphs do address some of Mr. Guidash's further 16 assertions. 17 For example, in paragraph 124, I believe 18 rightly, correct -- question his assertion of what a 19 POSITA would be motivated to do there with those 20 prior art. And in 125, I continue further. So I 21 guess we both have a few things to say. 22 Q. So in 125, if I'm reading this correctly,

Page 50 1 you say that, "Additionally, modifying Kim to arrive 2 at the claimed invention would require a complete 3 redesign of Kim's system." 4 What did you mean by that, if you recall? 5 A. Yeah, Kim is really directed towards a -- 6 well, sometimes we call it a pico projector or a nano 7 projector system. And so it displays a projected 8 image on a surface, like a table or wall or desk, and 9 it's not primarily concerned with camera control or 10 voice operation or image capture. 11 And modifying Kim to do all the things 12 that Mr. Guidash wants Kim and the combination of -- 13 to do, is really to redirect the purpose of Kim 14 entirely. And so it would take a reconsideration of 15 how Kim is designed and what Kim is designed for. 16 I don't really even think that a POSITA 17 would regard Kim and Yamamoto as analogous art, 18 because they're -- I mean, they're hand-held devices, 19 but beyond that, they're directed towards completely 20 different purposes. So that's some of what I'm 21 getting at in these paragraphs. 22 Q. Pico projector, is that what you said,	Page 52 1 where we have the controller setting the first 2 standby time, which from 1.i, we know is the case 3 where the first camera is enabled and the second 4 camera is disabled, is a time from a recognition of 5 the first instruction, which we know from 1.g must 6 come from the command voice to give that first 7 instruction, to a start the recording of the first 8 image signal acquired by the first camera. 9 And so that's the structure of claim 1. 10 And support for that interpretation in the spec, for 11 example, I think is useful to look at. Let's see, 12 the bottom of column 2, starting around line 60. So 13 I'm going to go ahead and read this out loud, so 14 we're all on the same page and then I'll break it 15 down. 16 So it talks about "an operation unit that 17 selects one of the first imaging unit and the second 18 imaging unit to be enabled." So that phrase is 19 referring to one of the first imaging unit. That's 20 the in camera, and the second imaging unit the, out 21 camera, to be enabled. So the operation unit enables 22 one or the other of those.
Page 51 1 P-I-C-O? 2 A. Yeah, I don't recall if that term is 3 exactly in Kim, but it's a term of art that refers to 4 a small hand-held type projector. 5 Q. Just a few more questions, I think. 6 So can you show me where in the '757 is 7 support for a front camera that is enabled in 8 response to a command voice? 9 MR. PLUTA: Object to form, relevance. 10 THE WITNESS: Sure. So, yeah, let me just 11 begin by anchoring this in claim 1, and then I'll 12 show you where I find support for that, for my 13 reading of claim 1 in this regard. 14 Claim 1 has the -- in element 1.g, the 15 command voice giving a first instruction. And then 16 in 1.i, we have the controller instituting the first 17 standby time in the case where we're using the first 18 camera. And that first standby time is in response 19 to the first instruction given by the command voice, 20 and it says where the first camera is enabled and the 21 second camera is disabled. 22 And then in 1.j, it's all tied together,	Page 53 1 And then two lines later, it says, "and a 2 control unit that causes the recording unit to start 3 a process of recording a video signal input from the 4 imaging unit" -- that's the camera, of course -- "the 5 imaging unit enabled by the operation unit," which we 6 just talked about. 7 So again, the imaging unit is enabled by 8 the operation unit in accordance with the command 9 voice input to the audio input unit. So that imaging 10 unit is enabled by the controller essentially in 11 accordance with the command voice. 12 And then it talks about the delay time 13 being set by the apparatus further at the top of 14 column 3. And it says, "after input of the command 15 voice in accordance with the imaging unit enabled by 16 the operation unit." 17 So put simply, the command voice causes 18 the operation unit to enable the imaging unit. And 19 this passage from 260 to about, what, 3-5 or so, I 20 think makes that pretty clear. So that's one place 21 in the spec that gives support. 22 Q. Anything else besides the claims?

Page 54 1 A. That's my answer. 2 Q. Claim 2 talks about the front camera is 3 enabled in accordance with the command voice; is that 4 correct? 5 A. Claim 2 refers to the first camera, that 6 front camera, enabled according to the command voice. 7 Q. Is that a part of your interpretation of 8 claim 1? Does that help you -- I'll rephrase that. 9 Is this sentence in claim 2, did you use 10 that in forming your opinion about claim 1? 11 A. Well, my read of claim 1 as an independent 12 claim is as I described, as I offered. I read the 13 claim limitations and worked through the antecedent 14 bases, and so on, like we have discussed today. 15 Claim 2 is a dependent claim from claim 1. 16 And I consider in all the claims, as I do all the 17 spec, and the four corners of the whole patent in 18 coming to my opinions. In the case of claim 2, it is 19 enabling the first camera. It's silent as to the 20 second camera. That's not mentioned in claim 2. And 21 so claim 2 is concerned with the enabling of the 22 first camera. Claim 1 is, as I just described,	Page 56 1 Q. In what sense is claim 2 more restrictive 2 than claim 1? I missed that part. 3 A. Yeah, the device of claim 2 would have to 4 be a device that is capable of showing a 5 picture-in-picture display and synchronizing timing 6 for recording. And so the demands of claim 2 on the 7 device are more restrictive than the demands of claim 8 1, which don't impose those restrictions. 9 Q. Thank you for saying that again. I 10 apologize. 11 MR. MINUTOLI: I have no more questions 12 for you. Thank you for your time. 13 Robert? 14 MR. PLUTA: I have no questions. 15 MR. MINUTOLI: Thank you very much for 16 your time. We'll go off the record. 17 (Whereupon, at 11:03 a.m., PT, the instant 18 deposition ceased.) 19 20 21 22
Page 55 1 concerned with enabling the first camera and 2 disabling the second camera. 3 So claim 2 would result in a device -- a 4 device that meets claim 2 would need to be able to 5 enable the first camera. And if the second camera is 6 already enabled, it would not disable it, which claim 7 1 would require. Claim 2 doesn't require that. 8 And so the device of claim 2 would have to 9 have the capability of the picture-in-picture 10 display, which also has support in the spec. So 11 figure 12 and the discussion of figure 12 is an 12 example where we see the front and the back camera 13 both being able to produce the video feed that's 14 shown live on the screen and also be recorded. 15 And there's also consideration about if 16 recording is taking place with those two feeds at the 17 same time, then synchronizing those feeds by having 18 both of them use a longer delay time, for example, 19 before they start and so on. So it's a more 20 restrictive device for claim 2 than for claim 1. 21 So that's my -- how I interpret and read 22 claim 2, in light of the specification.	Page 57 1 CERTIFICATE OF REPORTER 2 3 UNITED STATES OF AMERICA) ss: 4 COMMONWEALTH OF VIRGINIA) 5 I, Desirae S. Jura, RPR, CSR (CA), the officer 6 before whom the foregoing proceedings were taken, do 7 hereby certify that the foregoing transcript is a 8 true and correct record of the proceedings; that said 9 proceedings were taken by me stenographically to the 10 best of my ability and thereafter reduced to 11 typewriting under my supervision; and that I am 12 neither counsel for, related to, nor employed by any 13 parties to this case and have no interest, financial 14 or otherwise, in its outcome. 15 16 17 _____ 18 Notary Public in and for the 19 Commonwealth of Virginia 20 21 22 My commission expires: 11/30/2027

Notice Date: Monday, 31. March 2025

Attention: Jacob O. Wobbrock, Ph.D.

Re: Samsung Patent Appeals
Deposition of Jacob O. Wobbrock, Ph.D. (3/28/2025)

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