

Page 1 1 UNITED STATES PATENT AND TRADEMARK OFFICE 2 BEFORE THE PATENT TRIAL AND APPEAL BOARD 3 ---oOo--- 4 INTEL CORPORATION, 5 Petitioner, 6 vs. Case IPR2023-00991 7 BESANG, INC., U.S. Patent No. 7,378,702 8 Patent Owner. 9 _____/ 10 11 12 13 VIDEOTAPED REMOTE CONFERENCING DEPOSITION OF 14 STEVEN PRZYBYLSKI, PH.D. 15 16 17 18 Stenographically reported by NICOLE HATLER 19 California CSR No. 13730 20 May 24, 2024 21 22 23 24 25	Page 3 1 VIDEOTAPED REMOTE CONFERENCING DEPOSITION OF 2 STEVEN PRZYBYLSKI, PH.D. 3 4 5 BE IT REMEMBERED, that pursuant to Notice, and on 6 the 24th day of May 2024, commencing at the hour of 9:03 7 a.m., in the respective locations via Zoom, before me, 8 NICOLE HATLER, a Certified Shorthand Reporter, State of 9 California, personally appeared STEVEN PRZYBYLSKI, 10 PH.D., produced as a witness in said action, and being 11 by me first duly sworn, was thereupon examined as a 12 witness in said cause. 13 ---oOo--- 14 APPEARANCES ALL REMOTELY VIA ZOOM 15 For the Petitioner: 16 JESSICA KAISER 17 Perkins Coie LLP 18 1900 Sixteenth Street 19 Denver, Colorado 80202-5255 20 (303) 454-2907 21 JKaiser@perkinscoie.com 22 23 CHRIS MOULDER, Ph.D. 24 Perkins Coie LLP 25 700 Thirteenth Street, N.W. Suite 800 Washington, DC 20005-3960 (202) 654-3337 ChrisMoulder@perkinscoie.com
Page 2 1 I N D E X 2 PAGE 3 EXAMINATION BY MS. KAISER.....6 4 5 6 7 8 E X H I B I T S 9 PAGE 10 PETITIONER'S 11 Exhibit 1 Depo notice.....10 12 Exhibit 2 Paper No. 2 in IPR 2023-00991.....55 13 14 15 16 17 18 19 20 21 22 23 24 25	Page 4 1 For the Defendant: 2 MICHELLE ARMOND 3 Armond Wilson LLP 4 4685 MacArthur Court, Suite 390 5 Newport Beach, CA 92660 6 (949) 932-0778 7 Michelle.armond@armondwilson.com 8 Also present: 9 Dennis Saelee, videographer 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

Page 5 1 STEVEN PRZYBYLSKI, PH.D. 2 sworn as a witness 3 testified as follows: 4 THE VIDEOGRAPHER: We are on the record. 5 The time is 9:03 a.m. Today's date is May 24th, 6 2024. This is the recorded remote video deposition 7 of Steve Przybylski in the matter of Intel 8 Corporation versus BeSang, Inc. This deposition is 9 being held via web conference. My name is Dennis 10 Saelee. I'm the videographer with Focus Litigation 11 Solutions. The court reporter is Nicole Hatler. 12 Counsel, please introduce yourself and 13 state whom you represent, after which the court 14 reporter will swear in the witness. 15 MS. KAISER: Thank you. This is Jessica 16 Kaiser from Perkins Coie LLP on behalf of 17 Petitioner, Intel. With me is Dr. Chris Moulder, 18 also from Perkins Coie LLP. 19 MS. ARMOND: This is Michelle Armond from 20 Armond Wilson, representing patent owner BeSang and 21 the witness. 22 THE REPORTER: Good morning. My name is 23 Nicole Hatler, California Certified Shorthand 24 Reporter No. 13730. This deposition will be 25 stenographically reported pursuant to CCP 2025.	Page 7 1 MS. KAISER: Yeah. We're having a little 2 trouble hearing the witness. 3 THE WITNESS: Okay. 4 MS. ARMOND: Can we go off the record for 5 one sec so I can do some technical support? 6 MS. KAISER: Yes. 7 THE VIDEOGRAPHER: Off the record at 8 9:07 a.m. 9 (A recess was held from 9:07 a.m. to 9:08 a.m.) 10 THE VIDEOGRAPHER: We're back on the 11 record at 9:08 a.m. 12 MS. KAISER: All right. Can -- can we 13 read back the question. 14 (Whereupon the previous question was read.) 15 MS. KAISER: Yeah. I apologize. Let me 16 ask a clean question. I forgot with the technical 17 difficulties that the witness had corrected my 18 numbering. 19 BY MS. KAISER: 20 Q. So Dr. Przybylski, I put two documents in 21 the Zoom chat, one is Exhibit 1001 and the other 22 one is Exhibit 2029. Can you verify that those are 23 the same two documents that Ms. Armond indicated 24 that you have paper copies in front of you? 25 A. Yes. I can confirm that those are the
Page 6 1 MS. KAISER: And I think Ms. Armond had 2 some clarifying things. Go ahead. 3 MS. ARMOND: Yeah. I just wanted to state 4 for the record before we get started that the 5 witness, Dr. Przybylski, has two paper documents 6 with him in the conference room, clean copies of 7 the Patent Exhibit 1001, and then his expert 8 declaration in this IPR, which is Exhibit 2029. 9 MS. KAISER: Okay. Thank you. 10 EXAMINATION BY MS. KAISER: 11 Q. Dr. Przybylski, my name is Jessica Kaiser. 12 Nice to meet you. 13 A. It's a pleasure. 14 Q. And I'm going to endeavor to say your name 15 correctly during the deposition today. If I get it 16 incorrect, please feel free to -- to remind me. 17 I -- I have put two documents in the Zoom 18 chat here, one is Exhibit 1001, and the other is 19 Exhibit 1029. I wonder if you could open those and 20 just verify that those are the same two documents 21 that Ms. Armond indicated you have paper copies of 22 there. 23 A. I think you said 1029. It's actually 2029. 24 Q. I -- yes. Thank you. 2029. 25 A. Very good.	Page 8 1 same. 2 Q. Okay. And looking at your paper copy of 3 Exhibit 1001, that is the '702 patent; is that 4 correct? 5 A. That is correct. 6 Q. And in the paper copy of Exhibit 1001 that 7 you have with you, does it have any annotations or 8 other markings in it? 9 A. No. It is a completely clean copy. 10 Q. Okay. And then going to Exhibit 2029, the 11 paper copy that you have in front of you, that is 12 your declaration in this proceeding; is that 13 correct? 14 A. Yes. That's correct. 15 Q. And in the paper copy that you have in 16 front of you, does it have any markings or other 17 annotations in it? 18 A. No. It is also a completely clean copy. 19 Q. Thank you. 20 Do you have paper copies of any other 21 documents with you in the room today? 22 A. No. These are the only two. 23 Q. Have you ever been deposed before? 24 A. Yes, I have. 25 Q. About how many times?

Page 9 1 A. Somewhere between 15 and 20. 2 Q. And so, you understand that, as we've been 3 doing here so far, to -- to help our friend, the 4 court reporter, we should try not to talk over each 5 other. So I will endeavor not to interrupt you, 6 and hopefully, you will do the same. If you feel 7 like I have interrupted one of your answers, I just 8 ask that you let me know so that I can allow you to 9 complete your answer. 10 Does that make sense? 11 A. Yes, it does. 12 Q. I'm also trying my best to ask you, you 13 know, understandable and clear questions. There 14 might be times when I am not 100 percent perfect in 15 that regard. So if you ever don't understand a 16 question from me, I just ask you to let me know so 17 that I can clarify that. 18 Does that make sense? 19 A. Absolutely. 20 Q. Okay. Your counsel may object to my 21 questions from time to time. But if she does, then 22 you still need to answer the question, unless she 23 specifically instructs you not to answer. 24 Do you understand that? 25 A. I do understand that.	Page 11 1 So Przybylski Deposition Exhibit No. 1, for 2 the record, is also paper No. 20 in IPR 2023-00991. 3 It is titled, "Petitioner's Amended Notice of 4 Deposition." 5 Do you -- do you have that document in 6 front of you? 7 A. Yes, I do. 8 Q. Okay. And you understand that you're here 9 today to provide sworn testimony in IPR 2023-0991 10 in front of the Patent Trial and Appeal Board? 11 A. Yes, I do understand that. 12 Q. What did you do to prepare for your 13 deposition today? 14 A. I have reviewed my declaration, some of the 15 documents that are exhibits within the -- the 16 matter, generally, and I had two preparation 17 sessions with Counsel. 18 Q. Okay. You said that -- that you reviewed 19 your declaration? 20 A. Yes, I did. 21 Q. And that's Exhibit 2029? 22 A. That is correct. 23 Q. And then you said you reviewed some 24 exhibits? 25 A. Yes, I did.
Page 10 1 Q. And if you need a break, you can just let 2 me know. Your counsel may also ask for a break, 3 and I'd be happy to do that whenever you feel like 4 you need one. I just ask that, if there's a 5 question that I have outstanding at that point, 6 that we -- that you answer that question before we 7 take a break. 8 Does that sound good? 9 A. Yes, it does. 10 Q. Okay. I'm going to put another document 11 into the chat. And we will call this one 12 Przybylski Deposition Exhibit No. 1. Let me know 13 when you have that. 14 MS. ARMOND: Counsel, don't you need to 15 assign it, like, an exhibit number, or are you not 16 planing to file this? 17 MS. KAISER: I think we will sort that out 18 later. 19 MS. ARMOND: Okay. Got it. 20 (Exhibit 1 was marked for identification.) 21 THE WITNESS: I'm looking at the 22 Petitioner's Amended Notice of Deposition. Is that 23 what you're -- have I downloaded that correctly? 24 BY MS. KAISER: 25 Q. Yes.	Page 12 1 Q. Which exhibits did you review? 2 A. In part, I reviewed some of the prior art 3 that was, sort of -- that was cited by Dr. Sechen 4 or referenced in the petition and including the 5 '702 patent. 6 Q. Do you remember which prior art references 7 you reviewed? 8 A. I don't remember the exhibit numbers, but 9 if I refer to them by their inventor names, will 10 you understand? 11 Q. I will. 12 A. Lee Johnson, Asbar, those were the 13 principle ones that I spent the most time with. 14 There were others that I looked at briefly or in 15 part, but those were the ones that I spent the most 16 times with. 17 Q. Okay. Any other documents you reviewed in 18 preparation for your deposition today? 19 A. Not specifically. As far as preparation, 20 no. Not that I recall, anyways. 21 Q. Okay. And then you said you had two 22 preparation sessions with counsel, correct? 23 A. I did say that. Yes. 24 Q. When was the first preparation session? 25 A. This past Monday, which I believe was the

1 20th. I'm not -- 2 Q. And how long was that? 3 A. About two to three hours. 4 Q. And besides you, who was present? 5 A. Michelle Armond of Armond Wilson LLP, and 6 I'll -- yeah. For that one, it was just her. 7 Q. Okay. And then when was the second 8 preparation -- 9 A. It was -- 10 Q. -- session that you had for this 11 deposition? 12 A. I apologize for talking over you. 13 It was yesterday. 14 Q. So Thursday the -- May 23rd? 15 A. That's correct. Yes. 16 Q. And how long was that preparation session? 17 A. Again, also between two and three hours. 18 Q. And who was present besides you at that 19 session? 20 A. Michelle Armond of Armond Wilson LLP and 21 Josepher -- I'm sorry. I'm blanking on Josepher's 22 last name. Also of Armond Wilson LLP. 23 Q. For Exhibit 2029, which is your declaration 24 in this proceeding, about how long did you spend 25 preparing that declaration?	Page 13 1 a physical location and not an organizational 2 answer, but please ask again if I misinterpreted. 3 Q. Sure. 4 What -- what company do you currently work 5 for? 6 A. I currently work for Verdande Group, 7 Incorporated. 8 Q. And what -- how many employees does 9 Verdande have? 10 A. Two. 11 Q. And besides you, what does the other 12 employee do? 13 A. The other employee is a co-owner and 14 co-director of the corporation. 15 Q. And you have served as a testifying expert 16 witness in matters other than this one, correct? 17 A. Yes, I have. 18 Q. Approximately how many other matters? 19 A. Specifically litigation support, or can you 20 be more specific? 21 Q. Sure. 22 I had asked about being a testifying expert 23 witness? 24 A. Okay. So testifying by any form? 25 Q. Correct. Page 15
Page 14 1 A. It was, to my recollection, a fairly 2 intensive three-to-four-week period that we focused 3 on this declaration after the completion of the 4 parallel declaration in the micron IPR. So it was 5 probably on the order of 100 hours. I don't have 6 my invoices at my disposal, so I can't verify that 7 plus or minus, but on that order. 8 Q. Okay. And you mentioned the micron IPR. 9 I'll just represent that's IPR 2023-00900. 10 But that IPR involves the same patent that 11 we're talking about here today, correct? 12 A. That is correct. Yes. 13 Q. And when you say that you spent 100 hours 14 on this -- on Exhibit 2029, you're saying just on 15 that declaration or on both your declarations in 16 this matter and the micron matter? 17 A. I was thinking in terms of the preparation 18 of this particular declaration, separate from the 19 time spent on the micron matter. 20 Q. Is there any reason why you cannot give 21 truthful testimony today? 22 A. No. 23 Q. Where do you currently work? 24 A. My office is at 5630 Meadow Lane, Ann 25 Arbor, Michigan 48105. I presume you're asking for	Page 16 1 A. So I have been a testifying expert in -- by 2 deposition expert report, declaration or hearing, 3 on the order of 30 times. I would guess. I don't 4 have a firm number in my mind. 5 Q. And of those 30 times, how many were in 6 patent cases? 7 A. There was -- the vast majority of them were 8 patent cases. I believe if -- a trade secret case 9 would be distinct from that. So other than a -- 10 the non-patent related case, there were very few 11 that were -- at which I was a testifying expert. 12 Q. Okay. So focusing on the patent cases, how 13 many of those were you an expert for in front of 14 the Patent Trial and Appeal Board? 15 A. I would say it's the majority of cases. I 16 don't have a count of how many particular IPRs I 17 have been a testifying witness for, but it was 18 probably around 15, 15 to 20. You know, I have 19 been deposed in other matters. So it's probably 20 slightly less than the total number of depositions 21 that I gave to you earlier, but on -- in the same 22 comparable range. 23 Q. Okay. And thinking about the PTAB matters 24 where you have been an expert witness, how many 25 times have you been an expert witness on behalf of

Page 17 1 a petitioner? 2 A. I don't recall, specifically, if there are 3 any. There may have been one or two. The vast 4 majority certainly have been on the part of the 5 patent owners. 6 Q. In your work with Verdande Group over the 7 last five years, what percentage of your time is 8 dedicated to being an expert witness? 9 A. It varies from year to year. There are 10 always, typically, some engagements that are expert 11 witness and some engagements that are not. So as 12 far as a time breakdown, it's difficult to be 13 precise. But I would say more than 50 percent time 14 as an expert witness and less than 50 percent time 15 other non-expert witness engagements. 16 Q. When you have been retained as an expert 17 witness for a PTAB proceeding, can you give me a 18 general sense of how you approach forming your 19 opinions and drafting a declaration? 20 MS. ARMOND: I will just caution the 21 witness not to reveal any attorney-client 22 privileged information in your response. 23 THE WITNESS: Thank you. 24 So your -- your question relates to after 25 the engagement has -- has commenced or for the	Page 19 1 since the Micron proceeding immediately preceded it 2 temporarily, so there was substantial effort 3 undertaken with regard to the Micron IPR. And so, 4 there was a base level of knowledge and analysis 5 when the work for this proceeding began that I drew 6 upon in forming my initial draft of the 7 declaration. 8 Q. So you said there was a base level of 9 knowledge and analysis when the work for this 10 proceeding began that you drew upon in forming the 11 initial draft of the declaration. 12 Did you use your declaration in the Micron 13 IPR as the starting point for your declaration in 14 this IPR? 15 MS. ARMOND: Again, I'd like to caution 16 the witness not to reveal attorney-client 17 privileged communications. 18 THE WITNESS: I think the starting point 19 is a -- too strong a statement. I -- I endeavored 20 to start fresh with regard to the analysis of the 21 particular claims and -- and the particular 22 analyses offered by Dr. Sechen and as evidenced in 23 the petition in this matter. However, clearly, I 24 did not have to start from scratch vis-à-vis the -- 25 understanding the references that are common to
Page 18 1 entire relationship? 2 BY MS. KAISER: 3 Q. Yes. 4 So once you're on board with -- with, you 5 know, serving as a PTAB expert, what is your 6 process, then, to go from that engagement to having 7 the declaration that you've signed off on, in 8 general? 9 MS. ARMOND: Same caution. 10 THE WITNESS: Thank you. 11 In general, I review the petition and -- 12 and supporting declaration in detail. I review the 13 references cited therein, including the patent at 14 issue and explains. I have some preliminary 15 discussions with counsel about which grounds they 16 would like me to focus on and to offer opinions on. 17 And at that point, I go off and, generally, without 18 interaction or significant interaction, form a 19 first draft of my declaration. And subsequent to 20 that, it's a collaborative effort to finalize the 21 declaration and make it ready for submission. 22 BY MS. KAISER: 23 Q. And is that the process that you followed 24 in this proceeding? 25 A. This proceeding is a little bit different	Page 20 1 both. And there -- you know, there had been a 2 substantial work in drafting my previous 3 declaration, and to -- to some extent, there was 4 commonality there that I may have drawn upon. I 5 don't remember exactly how much -- whether there 6 was any actual paragraphs that carried forward from 7 one to the other. Certainly the legal background 8 section of my declarations were provided by 9 counsel, and I imagine that those are very similar 10 between the two. 11 BY MS. KAISER: 12 Q. If you could pull -- get in front of you 13 Exhibit 2029, which is your declaration in this 14 proceeding. 15 A. Okay. I have it in front of me. 16 Q. Can you go to paragraph 11, and let me know 17 when you're there. 18 A. I'm at paragraph 11. 19 Q. And in paragraph 11, do you see it says, In 20 addition, in 1997, I became a registered patent 21 agent? 22 A. Yes, I see that. 23 Q. Are you still a registered patent agent? 24 A. Actually, I don't know. I've not had any 25 interactions with the patent office as a patent

1 agent. I presume I'm still in good standing, but I 2 don't actually know. 3 Q. You said that you haven't had any 4 interactions with the patent office as a patent 5 agent. 6 Is that ever? 7 A. I have not filed any documents with -- 8 signing it as a patent agent with my patent agent 9 number. No. I -- I've certainly had interactions 10 with the patent office as an inventor where -- and 11 for patents that I have drafted or amended, but 12 there's always been a patent attorney or patent 13 agent acting as the -- as the attorney of record 14 for the matter at -- at which I was working on. 15 Q. So you've never filed a patent application, 16 for example, yourself under your patent agent 17 number? 18 A. That is accurate. 19 Q. As a patent agent, do you do anything to 20 keep up on developments and patent law? 21 A. I certainly follow the IP law trade press 22 to some degree, not as much as I do for the 23 technical subject matters that are important to me. 24 But I do -- do, generally, try and keep up with 25 developments, to some degree.	Page 21	1 Do you see that? 2 A. I see that paragraph. Yes. 3 Q. And is it your understanding that what you 4 have identified in paragraph 15 is the appropriate 5 process for determining whether a prior art 6 reference teaches the limitations of a patent 7 claim? 8 A. Again, as I indicated earlier, this section 9 was provided by counsel, and I have relied on 10 counsel for matters of law. So as I said there in 11 paragraph 15, I have informed -- I have been 12 informed that this is the proper procedure for 13 determining validity -- yeah, validity. And so, I 14 haven't endeavored to do so. 15 Q. When you formed your opinions in this case, 16 is this the two-step analysis that you performed? 17 A. Generally speaking, yes. Again, there was 18 instructions from counsel vis-à-vis what I was 19 being asked to opine on, and I endeavored to follow 20 those instructions. 21 Q. If you go back in Exhibit 2029 to paragraph 22 12. Let me know when you're there. 23 A. Paragraph 12, I am there. 24 Q. Okay. And you see paragraph 12 is 25 immediately under Section 3, materials considered?	Page 23
1 Q. If you go back to Exhibit 2029 and go to 2 paragraph 14. 3 A. I am at paragraph 14. 4 Q. You're not an attorney, that's correct? 5 A. That is correct. 6 Q. And just above paragraph 14, there is 7 Section 5, which is titled, Relevant Law. 8 Do you see that? 9 A. I do see that. Yes. 10 Q. In this case, did you rely on your own 11 understanding of the law as a patent agent? 12 A. No. For matters of law, I relied on the -- 13 counsel. 14 Q. And in forming your opinions in this case, 15 did you apply the relevant law in Section 5 of your 16 declaration? 17 A. I certainly endeavored to. 18 Q. If you go to paragraph 15 of Exhibit 2029. 19 A. I see paragraph 15. 20 Q. And do you see paragraph 15 says, I've been 21 informed and understand that determining whether a 22 patent claim is valid requires a two-step analysis. 23 First, the claim must be construed; second, the 24 properly-construed claim must be compared to the 25 prior art.	Page 22	1 A. I see that. 2 Q. And then in paragraph 12, you say, I have 3 reviewed the '702 patent, Exhibit 1001, and its 4 file history, Exhibit 1002, additionally. And in 5 addition to any other document cited or referenced 6 herein, I have reviewed the following materials in 7 preparing this declaration. 8 Do you see that? 9 A. I see that paragraph. Yes. 10 Q. Okay. So in forming your opinions in this 11 matter, you considered the -- the '702 patent, 12 which is Exhibit 1001, correct? 13 A. Yes. I have reviewed the seven -- '702 14 patent, Exhibit 1001. 15 Q. And in forming your opinions, you also 16 reviewed the file history for the '702 patent, 17 which is in Exhibit 1002, correct? 18 A. I did review the file history. 19 Q. Okay. And then you have a list of 20 materials in paragraph 12 that are numbered A 21 through Y. 22 Do you see that? 23 A. I do. 24 Q. And then in Exhibit 12 -- or sorry -- 25 paragraph 12, you also identify any other documents	Page 24

1 cited or referenced herein. 2 Do you see that? 3 A. I do. 4 Q. And so, my understanding of paragraph 12 -- 5 and I just want to confirm this with you -- is that 6 the basis for your opinions is Exhibit 1001, 7 Exhibit 1002, the specifically-enumerated documents 8 in paragraph 12, and anything else that is cited or 9 referenced in Exhibit 2029; is that correct? 10 A. Since in this question you're asking 11 specifically on what I based my opinions on, I also 12 significantly relied upon my personal knowledge as 13 a long-time member of the technical community 14 focused on seven-factor memories and my long 15 history working in this industry. 16 Q. Okay. And I understand that. 17 Well, let me -- let me ask you a different 18 question. 19 When you look at the -- the documents that 20 are specifically enumerated in paragraph 12, if 21 there are exhibit numbers that are not listed here 22 and that are not otherwise cited in your 23 declaration, is it fair that those would be 24 materials that you did not consider in forming your 25 opinions?	Page 25	1 A. It's correct. That Exhibit 1005 is not in 2 my list. However, I will draw your attention to 3 Item C in that list, which is US Patent Application 4 No. 2002/0028541 in Lee, and my understanding is 5 that those are related. 6 Q. Okay. Let me give you some context, then, 7 for Exhibit 1005. Well, let me ask you this 8 question. 9 Have you reviewed Exhibit 1005 before? 10 A. Let me spend some time. Give me a second, 11 please. 12 I believe I've seen it before, but I don't 13 have -- did not spend a great deal of time with it 14 at that time. 15 Q. Okay. And I've put Exhibit 1007 into the 16 chat. Exhibit 1007 is published US Patent 17 Application No. 2002/0028541 that I believe you 18 referred to as Lee. Let me know when you have that 19 open. 20 A. I have that open. 21 Q. Okay. And do you see that Exhibit 1007, 22 the first named inventor is Thomas H. Lee? 23 A. Yes, I see that. 24 Q. And if you go to Exhibit 1005, which is the 25 '941 patent, do you see that the inventor is	Page 27
1 A. I think that under the general rubric of my 2 own personal knowledge and experience and 40 years 3 of reading documents and being familiar with 4 specific integrated circuits and technical 5 concepts, there are probably a link back to other 6 documents through my personal knowledge and 7 experience that helped me reach my opinions in 8 addition to these that I specifically reviewed in 9 this matter. 10 But since those are all under the general 11 personal knowledge category, it's difficult to say 12 if there was a particular document somewhere along 13 the line that I read 20 years ago that has, 14 ultimately, informed my opinion here. 15 Q. Okay. Let -- let me give you a more 16 concrete example and question. 17 So I put into the chat Exhibit 1005 in this 18 proceeding, which is US Patent No. 7,052,941. Let 19 me know when you're able to download that. 20 A. I am looking at Exhibits 1005, Patent 21 No. 7,052,9412 Lee. 22 Q. Okay. If you look at paragraph 12 of 23 Exhibit 2029, do you agree with me that 24 Exhibit 1005 is not included among your materials 25 considered?	Page 26	1 Sang -- Sang-Yun Lee? 2 A. Yes, I see that. 3 Q. Okay. Does that refresh your memory about 4 whether Exhibit 1005 and 1007 are related? 5 Or let me actually ask that question in a 6 different way. 7 Does that change your view about whether 8 Exhibit 1005 and Exhibit 1007 are related? 9 A. Give me a moment, please. 10 I'm assuming related with regard to a 11 commonality of subject matter, but it's accurate 12 that the -- there's no commonality of inventorship, 13 apparently, nor is there commonality of the -- of 14 the priority dates and the sequence of applications 15 between the two references, 1007 and 1005, that I 16 can see here. 17 Q. Okay. And so, you'd agree that the fact 18 that you listed Exhibit 1007 in paragraph 12 of 19 your declaration, Exhibit 2029, doesn't indicate 20 that you considered Exhibit 2000 -- or 21 Exhibit 1005, correct? 22 A. That's correct. 23 Q. The best of your knowledge, were you ever 24 provided with a copy of Exhibit 1005 to review in 25 this matter?	Page 28

1 MS. ARMOND: Jessica, I think that 2 actually touches on attorney-client privilege and 3 work product. Could you, maybe, ask it a different 4 way so it doesn't? 5 MS. KAISER: I'm not sure I -- that I 6 agree that it does, but let me ask -- I will ask it 7 a different way. 8 BY MS. KAISER: 9 Q. I think your testimony before was that you 10 may have seen Exhibit 1005, but you didn't spend 11 much time on it. 12 Is that accurate? 13 A. I think that paraphrases what I said, but 14 reasonably accurately, we can get the court 15 reporter, if it's important. 16 Q. For -- so just, again, to reorient us, with 17 paragraph 12 of your declaration, which is 18 Exhibit 2029, you see, for example, that Sub Item B 19 is Exhibit 1003, and then exhibit -- or I'm 20 sorry -- then Sub Item C is Exhibit 1007. 21 Do you see that? 22 A. Yes, I see that. 23 Q. And you'd agree that, for example, Exhibits 24 1004, 1005, and 1006 are not included in this 25 enumerated list in paragraph 12?	Page 29 1 documents cited or referenced herein, I have 2 reviewed the following materials and -- in 3 preparation of this declaration. And this list 4 does not include Exhibits 1004, 1005, 1006. I had 5 access to all of the exhibits of the -- that are -- 6 had been filed in this matter because I downloaded 7 them myself. I said I had some vague familiarity 8 with 1005 because it looked familiar to me. 9 To the extent I relied on 1005 in forming 10 my opinions, that would go through my general 11 knowledge of the subject matter that has been 12 accumulated through the review of hundreds of 13 documents over time. I did not specifically cite 14 to 1005 in my declaration; therefore, it did not 15 show up in this list, in Section 3, materials 16 considered of my declaration. 17 BY MS. KAISER: 18 Q. Okay. Is it fair to say that the basis for 19 your opinions in your declaration is cited in your 20 declaration? 21 A. As I've testified earlier, the documents 22 that I specifically cite to are listed here. And 23 the ones that I have reviewed specifically and have 24 relied on, to some extent, are listed here. 25 Documents that I have looked at or reviewed to some
Page 30 1 A. Yes, I see that. 2 Q. So is it fair to say that, if there are 3 exhibits that are missing from that list, that you 4 did not consider them in forming your opinions in 5 this declaration? 6 MS. ARMOND: Asked and answered. 7 MS. KAISER: Michelle, I just want to say 8 that, you know, it's against the PTAB rules to make 9 objections that suggest an answer to the witness. 10 So I'd appreciate you not doing that. I haven't 11 asked this question, and he hasn't answered it. 12 MS. ARMOND: I think I disagree on that. 13 I'm trying to keep it real short. 14 THE WITNESS: Can you repeat the question, 15 please? 16 BY MS. KAISER: 17 Q. So my question is, is it fair to say that 18 if there are exhibits that are missing, in other 19 words, not listed in the enumerated list in 20 paragraph 12 of your declaration, that you did not 21 consider them in performing -- or sorry -- in 22 forming your opinions in the declaration? 23 MS. ARMOND: Same objection. 24 THE WITNESS: So the language specifically 25 of paragraph 12, is that in addition to any other	Page 31 1 degree, but not specifically cited to, may not have 2 shown up in this list. I do not remember how much 3 time I've spent looking at 1005 during my 4 involvement in this matter, but, again, I did not 5 cite to it in my declaration. 6 Q. So Dr. Przybylski, do you understand that 7 I'm entitled to you -- know what the basis of your 8 opinions are in your declaration? 9 A. I take your word for it. 10 Q. Okay. So if I wanted to understand the 11 basis for your opinions in your declaration, could 12 I understand that from reading your declaration? 13 A. I would expect so. I mean, I have cited to 14 many documents, as appropriate, throughout my 15 declaration to provide context for the opinions 16 provided there. 17 Q. Are there any secret documents that you 18 relied upon in forming your opinions in your 19 declaration that you didn't bother to cite? 20 A. Not that I'm aware of. 21 Q. Great. 22 Are you familiar with -- as a patent agent, 23 with the idea of disclosures being included as a 24 reference in to a patent? 25 A. Yes. I'm generally familiar with that
Page 32	Page 32

1 concept. 2 Q. Okay. And what does that concept mean? 3 A. My understanding of that concept is that, 4 when a patent specifically calls out a document and 5 says it's incorporated by reference, it's as if 6 that entire document was in the referring document. 7 Q. When you're reviewing a patent for purposes 8 of being an expert witness, do you -- is it a part 9 of your analysis or do you find it -- strike that. 10 You decided -- going back to paragraph 12, 11 who decided which exhibits you would list under 12 your materials considered? 13 A. Ultimately, it was my decision. I -- in my 14 draft, I had been keeping a list of documents that 15 I had referred to in preparing the first draft, and 16 this list was derived, principally, from that list. 17 There may have been changes over the course of the 18 revisions of the declaration documents as 19 additional citations were added, but principally, 20 it was my list that generated this final list. 21 MS. ARMOND: And it's been about an hour. 22 Whenever you're ready for a break. 23 MS. KAISER: This is probably a good time 24 as any. Why don't we go off the record. 25 THE WITNESS: Okay.	Page 33 1 A. Is there a particular paragraph in which I 2 use that term? 3 Q. Yes. In paragraph 90. I believe the third 4 full sentence. 5 A. What I'm trying to convey by that term in 6 that sentence in paragraph 90 is a physical 7 structure that is a part of a semiconductor device. 8 And in that context, by device, I mean integrated 9 circuit. 10 Q. Okay. And still referencing paragraph 90 11 of Exhibit 2029, it's your opinion that, in the 12 context of the '702 patent, SOI is an acronym for 13 Silicon-on-Insulator, correct? 14 A. Yes. And that specifically is how the '702 15 patent refers to it in column 4, lines 45 to 46, as 16 cited in my paragraph 90. 17 Q. Okay. And, again, in the context of the 18 '702 patent, it's your opinion that a person of 19 ordinary skill in the art would be familiar with 20 the term SOI and understand it to refer to a 21 semiconductor device structure, in which silicon 22 structures are fabricated on or above an insulating 23 layer, correct? 24 A. Yes. That is a paraphrasing of that 25 sentence within my paragraph 90 about what a POSITA
Page 34 1 THE VIDEOGRAPHER: Off the record at 2 9:58 a.m. 3 (A recess was held from 9:58 a.m. to 10:11 a.m.) 4 THE VIDEOGRAPHER: We are now on the 5 record. The time is 10:11 a.m. 6 BY MS. KAISER: 7 Q. Welcome back, Dr. Przybylski. 8 I want to go to your declaration again, 9 Exhibit 2029, and direct you to the section 10 starting at paragraph 89, which is about the 11 construction of the term SOI pillar. Let me know 12 when you're there. 13 A. Paragraph 89, I'm there. 14 Q. Great. 15 So in your declaration, you offer an 16 opinion about the appropriate construction of the 17 claim term SOI pillar, which appears in claims 14 18 through 17 of the '702 patent, correct? 19 A. Yes. Ultimately, towards the end of that 20 section in paragraph 94, I opine that in this -- In 21 the context of the present proceeding and the '702 22 patent, in my opinion, an SOI pillar is a 23 Silicon-on-Insulator structure taller than it is 24 wide. 25 Q. What is a semiconductor device structure?	Page 35 1 would be familiar with and understand it to mean. 2 Q. And that paraphrasing is accurate, yes? 3 A. I don't know exactly what words you used, 4 but nothing jumped out at me as you were speaking 5 as being inaccurate. So I believe it was generally 6 accurate. 7 Q. And you had pointed me to paragraph 94 for 8 your construction of SOI pillar. 9 Do you recall that? 10 A. Yes, I do. 11 Q. And in looking at that construction, you 12 say, In my opinion, an SOI pillar is a 13 Silicon-on-Insulator structure taller than it is 14 wide. 15 Do you see that? 16 A. Yes. That is the contents of the bulk of 17 my paragraph 94. 18 Q. And am I correct in understanding, based on 19 your paragraph 94, that it's your opinion that the 20 pillar portion of this term means that it is taller 21 than it is wide? 22 A. Yes. And that -- and that derives from the 23 plain and ordinary meaning of the word pillar as 24 illustrated in my previous paragraph referring to 25 several lay dictionaries for their definitions of

Page 37 1 the word pillar. 2 Q. So, Dr. Przybylski, I asked you yes-or-no 3 question. And so, I'd like you to try and listen 4 to the question and answer the question I'm 5 actually asking you. So let me try that again. 6 Am I correct in understanding, based on 7 your paragraph 94, that it is your opinion that the 8 pillar portion of SOI pillar means it is taller 9 than it is wide, yes or no? 10 A. Yes. As I've indicated in my paragraph 94, 11 it's -- that is the construction that I have 12 concluded with based on my review of dictionaries 13 and other sources. 14 Q. Okay. Again, it's a yes-or-no question. 15 We can stay here all day if we have to, or we can 16 be done with this deposition pretty quickly. But 17 it will be all day if you can't answer yes-or-no 18 question yes or no. So let me ask again. 19 Am I correct in understanding, based on 20 your paragraph 94, that it is your opinion that the 21 pillar portion of SOI pillar means it is taller 22 than it is wide, yes or no? 23 A. In response to your admonition of me, I did 24 answer yes, but I am allowed to qualify my answers 25 and to elaborate, as appropriate. So I did answer	Page 39 1 witness. He's answering your question, Counsel. 2 THE WITNESS: I was not -- 3 MS. KAISER: He's really not. He's 4 engaging in lengthy soliloquies for very simple 5 question for what I can't discern any reason for. 6 But go ahead. Say whatever you want. 7 MS. ARMOND: Is there a question pending? 8 Because you just interrupted him. 9 MS. KAISER: I'll ask it for the tenth 10 time. 11 BY MS. KAISER: 12 Q. Dr. Przybylski, to be clear, all I'm trying 13 to understand -- I'm trying to parse your proposed 14 instruction for SOI pillar to make sure that I 15 understand. And just to preview, what I'm trying 16 to understand is what -- what you understand the 17 pillar to be and then how you understand SOI in the 18 context of pillar. So that's where I'm trying to 19 get to, but not being very successful. 20 So I'm -- I understand that the basis for 21 your opinion is in your declaration, and I'm not 22 trying to divorce this from the basis of your 23 opinion. I'm just trying to understand what your 24 opinion is. Okay? 25 So in that context, is it your opinion that
Page 38 1 yes, and then I qualified it, and I will do so 2 again. 3 Yes. In my paragraph 94, my proposed 4 construction of SOI pillar includes the language, 5 Taller than it is wide, and that that derives from 6 the plain and ordinary meaning of the word pillar. 7 Q. Okay. I'm not asking what the basis of 8 your opinion is right now. We'll get to that. 9 What I'm asking is what your opinion is. 10 Do you understand the difference between 11 those two? 12 A. I do understand the difference, and I did 13 answer your question with a yes, and then I 14 qualified it as I saw fit to make sure that the 15 record was clear about what -- everything I wanted 16 to say about your question. 17 Q. Okay. Well, let me make my question very 18 clear. Okay. I'm not asking for the basis of your 19 opinion. What I'm trying to understand is, in your 20 construction of your SOI pillar, is it your opinion 21 that a pillar is taller than it is wide? 22 A. Again, I believe I answered that question, 23 but yes. The -- 24 Q. Okay. Thank you. 25 MS. ARMOND: No. Hey, don't interrupt the	Page 40 1 in the term SOI pillar, in the plans of the '702 2 patent, pillar is taller than it is wide? 3 A. Yes. As I've said multiple times and as I 4 explicitly say so at the tail end of my paragraph 5 93, The term pillar, by itself, means a structure 6 that is taller than it is wide. 7 That is my opinion. 8 Q. Thank you. 9 All right. Now, going back to paragraph 10 94, the other piece of your construction of SOI 11 pillar is a Silicon-on-Insulator structure. And is 12 that -- is -- would I be correct in understanding 13 that the Silicon-on-Insulator structure piece of 14 your construction relates to SOI in the term SOI 15 pillar? 16 A. Yes. As we've already established, the 17 '702 defines the acronym SOI as an acronym for 18 Silicon-on-Insulator. And so, that is in -- in my 19 proposed construction. On paragraph 94, it's a 20 direct lifting of that expansion of the acronym 21 from the '702 patent. 22 Q. And then going, then, back to paragraph 90, 23 and keeping in mind the Silicon-on-Insulator 24 structure in your construction, would I be correct 25 in understanding, from both paragraph 90 and 94,

1 that a Silicon-on-Insulator structure, in your 2 opinion, is a semiconductor device structure in 3 which silicon structures are fabricated on or above 4 an insulating layer? 5 A. Yes. That is a recitation of the middle 6 paragraph -- middle sentence of my paragraph 90. A 7 POSITA would understand it to refer to a 8 semiconductor device structure in which the silicon 9 structures are fabricated on or above an insulating 10 layer. 11 Q. Okay. I'm not sure that that exactly 12 answered the question that I asked. So let me ask 13 it a slightly different way. 14 Based on your opinions in paragraph 90 and 15 94, would it be correct to say that your proposed 16 construction of SOI pillar, and what you say in 17 paragraph 94 is, A Silicon-on-Insulator structure, 18 taller than it is wide, could also be phrased as 19 semiconductor device structure in which silicon 20 structures are fabricated on or above an insulating 21 layer and where that semiconductor device structure 22 is taller than it is wide? 23 A. Since you're suggesting a slight changing 24 of the wording of my proposed construction from 25 Silicon-on-Insulator structure to semiconductor	Page 41 1 that are different between the two. I have not 2 considered that. 3 Q. Okay. So as you sit here right now, do you 4 have an opinion on what a Silicon-on-Insulator 5 structure is? 6 And let me just clarify my question. 7 As you sit here right now, do you have an 8 opinion on what a Silicon-on-Insulator structure, 9 in your proposed construction of SOI pillar, means? 10 A. I think I've articulated that clearly in my 11 paragraph 90 where I say that a POSITA will be 12 familiar with this term and understand it to refer 13 to a semiconductor device structure in which 14 silicon structures are fabricated on or above an 15 insulating layer. That's a straightforward 16 articulation of what a POSITA would understand SOI 17 to refer to. 18 Q. Okay. So earlier what I was asking you, 19 that you wouldn't agree to, was whether that 20 sentence was an articulation of an SOI structure. 21 So I'm confused. And what I'm trying to 22 understand -- and I'm not -- I'm not trying to be 23 badgering or anything else. I'm genuinely trying 24 to understand what you mean by Silicon-on-Insulator 25 structure.
Page 42 1 device structure, I really have to think about that 2 to understand if there is any significant change in 3 scope due to that change in language. That's -- I 4 put a lot of time and effort into thinking about a 5 construction that was as simple as possible and 6 used the language of the '702 patent, 7 Silicon-on-Insulator. And to change that language 8 is -- I can think about it for a while, if you want 9 me to, but I hesitate to adopt your change in 10 language without due consideration. 11 Q. So let me ask you this. 12 In your construction of SOI pillar in 13 paragraph 94 of Exhibit 2029, you -- with -- with 14 regard to the SOI piece of SOI pillar, you've, 15 essentially, just expanded the acronym; is that -- 16 is that fair? 17 A. Yes. Because that is how the '702 patent 18 defines the acronym, and that would be consistent 19 with a POSITA's familiarity with the term. A 20 POSITA, faced with an altered potential 21 construction in relating to semiconductor device 22 structure instead of Silicon-on-Insulator 23 structure, would be given pause to think about why 24 it's from -- not directly using the language of the 25 '702 patent. And so, there may be nuances of scope	Page 44 1 So is it a fair characterization to say 2 that, in your construction of SOI pillar, a 3 Silicon-on-Insulator structure means -- I'm going 4 back to the language of paragraph 90, a 5 semiconductor device structure in which silicon 6 structures are fabricated on or above an insulating 7 layer? 8 A. Yes. I've -- as I've answered several 9 times, that language is my characterization of what 10 a POSITA would understand the term SOI to mean, and 11 Silicon-on-Insulator as an expansion of that 12 acronym. 13 Q. And that's what you mean when you say SOI 14 structure in paragraph 94? 15 A. I think, for the purposes of construction, 16 we look to the -- what a POSITA would understand 17 the term to mean, and that's what I'm articulating 18 in paragraph 90. So to that extent, yes. 19 Q. Okay. If you look -- I'm still in 20 paragraph 90, but if you scroll to page 48 of your 21 declaration, you've reproduced Figure 1 of the '702 22 patent and annotated it. 23 Do you see that? 24 A. Yes, I do see that. 25 Q. And do you see part of the purple -- well,

Page 45 1 let me just say, you've annotated some structures 2 as vertical memory devices in purple. 3 Do you see that? 4 A. Yes, I do. 5 Q. Okay. And if you take the left-most 6 structure that has the arrow pointing to it as a 7 vertical memory device. 8 And just -- just so we're looking at the 9 same part of the figure -- 10 A. Okay. 11 Q. -- do you see that there's a vertical stack 12 there with an "n+", a "p", and then another "n+"? 13 A. I do. 14 Q. In your opinion, is that -- well, strike 15 that. 16 Is it okay with you if I just, for ease, 17 refer to that as an NPN stack? 18 A. I will understand what you mean by that. 19 Q. Okay. 20 A. Even though it's not -- everything in an 21 NPN stack is an n+pn+ stack. But you can 22 abbreviate that without the pluses for expediency. 23 Q. Okay. Thank you. 24 Does that NPN stack that is the -- the 25 furthest to the left one on Figure 1 of the '702	Page 47 1 Q. Okay. So just to break that down, the NPN 2 stack is taller than it is wide, correct? 3 A. It's -- 4 Q. It's depicted in that way? 5 A. It's drawn that way, and a POSITA would 6 recognize that it would be built taller than it is 7 wide, if not precisely the same aspect ratio. 8 Q. Okay. And the NPN stack, in your opinion, 9 is an SOI structure because it is above insulating 10 layer 151, correct? 11 A. Yes. Correct. 12 And in addition, it is a semiconductor 13 device structure. It's made with silicon. 14 Q. How many SOI -- oh, I'm sorry. 15 A. I was just going to clarify and say -- 16 (Reporter clarification.) 17 THE WITNESS: I was saying that this is a 18 doped silicon, not just silicon. So I was 19 clarifying my answer a little bit. 20 BY MS. KAISER: 21 Q. Okay. So just to make sure the record is 22 clear, in your opinion, the NPN stack, in Figure 1 23 of the '702 patent, is an SOI structure because it 24 is doped silicon and above insulating layer 151, 25 correct?
Page 46 1 patent, does it meet your construction of an SOI 2 pillar? 3 A. Can we refer briefly to the '702 patent? 4 Let's see. There. Please repeat the 5 question. 6 Q. Sure. 7 So, again, I'm referring to Figure 1 of the 8 '702 patent, which is reproduced in paragraph 90 of 9 your declaration, which is Exhibit 2029. 10 And my question is, the NPN stack -- you 11 can pick any of them, but I'm referring to the one 12 that's the furthest to the left -- does it meet 13 your construction of SOI pillar? 14 A. So my construction of SOI pillar, as stated 15 in paragraph 94, is an SOI structure that is taller 16 than wide. It's -- a POSITA would recognize that 17 stack as an -- as an S -- SOI structure, a 18 semiconductor structure of -- of -- constructed 19 above the diametric layer 51. It is drawn taller 20 than it is wide, not specifically to scale, but a 21 POSITA would recognize that, in reality, if 22 fabricated, that this would have an aspect ratio 23 that is roughly comparable to what is drawn here 24 and that -- so that it would meet the taller than 25 it is wide aspect of my proposed construction.	Page 48 1 A. Yes. And it is drawn and likely fabricated 2 with the appropriate pillar shape. So you were -- 3 I'm sorry. You weren't asking about the pillar 4 part. You were asking about the SOI part. So my 5 apologies for misunderstanding. 6 Q. No, no. You're -- I'm sorry. 7 A. So, yes. It is -- a POSITA would recognize 8 that collection of n+Pn+ as a SOI structure. But, 9 you know, this is -- that is all. 10 Q. Okay. And just because of the interruption 11 and -- and the confusion on terminology, let me 12 just start over and ask the question again. 13 In your opinion, the NPN stack, in Figure 1 14 of the '702 patent, is an SOI structure because it 15 is doped silicon and above insulating layer 151, 16 correct? 17 A. That is correct. And that's what I've told 18 you previously. I do want to point out, though, 19 that, you know, that the '702 patent is not the 20 subject of -- of my opinions. It's -- this is 21 included here as an illustrative exposition of how 22 I came to the construction that I did. But my 23 opinions are only tangentially related to the '702. 24 They are principally related to the rebuttal of the 25 arguments in Dr. Sechen's declaration on the

Page 49 1 petition. 2 Q. So it's your position in this deposition 3 that your opinions are not related to the '702 4 patent? 5 A. What I was trying to articulate was that 6 the -- the purpose of my declaration here is not to 7 characterize the '702 patent, but to rebut and 8 illustrate deficiencies in the arguments put 9 forward by Dr. Sechen and the petition. 10 Q. Okay. Well, I want to make it clear that 11 there was nothing in my question that asked about 12 what the purpose of your declaration was, what you 13 were characterizing, what you were rebutting. So I 14 would appreciate it if you would listen to the 15 questions that I'm asking and answer it then. I 16 recognize that you have a bunch of other stuff that 17 you want to say, and that's fine. If your counsel 18 wants you to say a bunch of other stuff, she will 19 have the opportunity to ask you questions. But 20 this is my opportunity to ask you questions. So 21 let me ask my question again. 22 In your opinion, the NPN stack -- sorry. 23 MS. ARMOND: And I'd just like to say, 24 Jessica, I haven't indicated that -- your 25 characterization of what you think is happening,	Page 51 1 witness. He is here. He has rescheduled the 2 deposition for your convenience, and he is prepared 3 to spend all day here answering your questions. So 4 stop badgering him. 5 BY MS. KAISER: 6 Q. Dr. Przybylski, I think you have answered 7 this question. It's yes-no question, so just see 8 if you can answer it yes or no. 9 In your opinion, in Figure 1 of the '702 10 patent, the NPN stack is an SOI structure because 11 it is doped silicon and above insulating layer 151, 12 yes? 13 A. So I have answered your questions, and I've 14 always, to the best of my ability, answered yes or 15 no and qualified and explained so that the record 16 is complete. 17 Let me say again that I have not offered an 18 opinion on anything with regard to Figure 1. 19 Figure 1 is included in my paragraph 90 to 20 illustrate how the '702 patent is using the term 21 S -- SOI and SOI pillars. But it is -- it's not 22 formed an opinion, I have not offered an opinion 23 with regard to that stack. 24 That said, you're asking whether that 25 particular pillar meets the construction presented
Page 50 1 like, this is your -- your cross-examination. 2 MS. KAISER: Correct. So maybe let's not 3 get into a soliloquy about, you know, speaking 4 objections right now. 5 MS. ARMOND: And please just ask 6 questions. You know, you've been badgering and 7 criticizing the witness this whole time. And can 8 we keep it a little bit more professional, please. 9 MS. KAISER: If you could instruct your 10 witness to actually answer the questions, then I'd 11 be happy to address him in whatever way you want. 12 But when I ask him a very specific yes-or-no 13 question, and he answers it yes, but then tells me 14 that his declaration is not directed to the 15 challenged patent in this case, it's a little 16 disconcerting, if I'm being honest. So -- 17 MS. ARMOND: He -- he is answering your 18 questions. He's answered every single one. And he 19 did not say that his declaration was not directed 20 to the '702 patent. You're, you know, just 21 mischaracterizing it. So anyway, we can get back 22 to the record -- 23 MS. KAISER: I think the record will show 24 what the record shows. 25 MS. ARMOND: But please stop badgering the	Page 52 1 in paragraph 54. And I've said repeatedly, so far 2 to your questions, is that, yes, it does appear to 3 be an SOI structure, and it does -- and it is drawn 4 with an aspect ratio that is taller than it is 5 wide. So a POSITA would look at that and likely 6 consider it an SOI pillar per my proposed 7 construction. 8 Q. Okay. Okay. So as we've just been 9 discussing, as part of your work in this case in 10 your declaration, you've formed an opinion on the 11 meeting of SOI pillar, correct? 12 A. Sure. I examined the -- the '702 patent. 13 I examined dictionaries. I examined other 14 references that use comparable language. And I 15 have proposed a specific construction that we've 16 been talking about. 17 Q. Great. You understand that stackable 18 add-on layer is a term in claims 1 and 13, correct? 19 A. Yes. The element labeled 13B in the 20 present matter is a stackable add-on layer having a 21 plurality of vertically oriented semiconductor 22 memory cells. 23 Q. Okay. Have you formed an opinion in this 24 matter on the proper construction of stackable 25 add-on layer?

1 And if you'd like me to, I'll direct you to 2 paragraph 88. 3 A. I'm already there, but thank you. 4 So to read from paragraph 88, I have not 5 been asked to provide an opinion on the 6 constriction of stackable of add-on layer. I have 7 been asked to assume that Intel's proposed 8 constriction is correct and apply, as appropriate, 9 in my analysis for the purposes for responding to 10 Dr. Sechen's opinions. 11 Q. Okay. So I understand from paragraph 88 12 that you are not asked to provide an opinion. My 13 question was a little bit different. 14 My question was, do you have an opinion on 15 the construction of stackable add-on layer? 16 A. No. I have not been asked to formally 17 provide such an opinion, and I did not go through 18 the effort of thinking about that and forming an 19 opinion, a formal opinion. 20 Q. And when you say that you have not been 21 asked to provide an opinion, you're referring to 22 you have not been asked by counsel to form an 23 opinion, correct? 24 A. That is correct. Yes. 25 Q. In your work on this case, are you -- do	Page 53 1 infringement in district court? 2 A. As I just mentioned, I know very little 3 about the parallel district court case, and I am 4 not sitting here right now aware of any 5 construction issues in that proceeding. 6 Q. In -- have you ever seen the district court 7 complaint, in which BeSang accuses Intel of 8 infringing the '702 patent? 9 A. If it's an exhibit in this matter, I 10 probably downloaded it and may have glanced at it, 11 but I certainly did not pay any attention to it. 12 And it is not listed in the materials considered in 13 my declaration. 14 Q. In forming your opinions in this matter, 15 you reviewed Intel's petition; is that fair? 16 A. Yes. The petition for IPR 2023-00991 is 17 listed as the materials considered. 18 Q. All right. I'm going to send you a 19 document here. The document is paper No. 2 in IPR 20 2023-00991. For purposes of this deposition, we'll 21 call it Przybylski Dep Exhibit 2. 22 (Exhibit 2 was marked for identification.) 23 BY MS. KAISER: 24 Q. Let me know when you're able to download 25 that.
Page 54 1 you have an understanding that BeSang has accused 2 Intel of infringing claims of the '702 patent in 3 district court? 4 MS. ARMOND: Hold on. There's some 5 background noise here. 6 THE WITNESS: Maybe if we can turn up the 7 volume. Go off the record for a sec. 8 MS. ARMOND: No. Just hang on a sec. 9 All right. All right. I think the 10 background -- we had some trucks, I apologize, 11 outside. 12 MS. KAISER: No. You're fine. 13 BY MS. KAISER: 14 Q. Let me -- let me ask the question again, if 15 that's all right. 16 Dr. Przybylski, in your work on this case, 17 do you have an understanding that BeSang has 18 accused Intel of infringing claims of the '702 19 patent in district court? 20 A. I'm aware that there is a parallel 21 proceeding in district court. I don't know 22 anything else about it. 23 Q. In -- in your work on this case, did you 24 attempt to determine how BeSang is interpreting 25 stackable add-on layer in accusing Intel of	Page 55 1 A. I'm looking at the petition in the present 2 IPR. 3 Q. Great. Can you go to page 12 of the 4 petition? 5 And when I say page 12, I mean the page 12 6 at the bottom, not page 12 of the PDF. 7 A. The page with the first words, Existing 8 technology? 9 Q. Yes. 10 A. I have it. 11 Q. Wonderful. 12 If you could scroll down to the last 13 partial paragraph on that page, there's a sentence 14 that says, PO may argue. Let me know when you see 15 that. 16 A. I'm looking at the first three lines of 17 that paragraph. 18 Q. Okay. And do you see that sentence says, 19 PO may argue that the stackable add-on layer 20 is/being bonded encompasses any layer that is 21 directly or indirectly adhered to the recited layer 22 of the substrate? 23 Do you see that? 24 A. I see that sentence. 25 Q. And then there's a footnote -- there's

Page 57 1 Footnote 7. The Footnote 7 comes off of, PO may 2 argue. 3 Do you see that? 4 A. Yes, I see that footnote. 5 Q. And that -- that footnote refers to the 6 patent owner's district court complaint. 7 Do you see that? 8 A. Yes, I see that. 9 Q. Did you review the district court complaint 10 to determine whether this statement was an accurate 11 representation of patent owners' allegations? 12 A. No. As I indicated previously, I was not 13 asked to form an opinion on stackable add-on layer 14 in which -- and this couple of pages is about that 15 construction. And so, I, basically, skipped over 16 this section of the petition. 17 Q. As a person of ordinary skill in the art, 18 if you had been asked to form an opinion about 19 stackable add-on layer, could you have done so? 20 A. Certainly, if I had been asked to do so, I 21 would have put in the necessary time and 22 consideration that I put into all of my opinions 23 and would have -- and I don't see at this point any 24 impediment to my doing so. 25 But, again, I was not asked and did not put	Page 59 1 to respond to Dr. Sechen's opinions, I was -- 2 necessarily had to reach that conclusion. If 3 there's some point in my declaration where I did 4 something along those lines, I would appreciate you 5 pointing me to it. 6 Q. Well, as far as I know, it's not in your 7 declaration. So would it be fair to say that, if 8 that comparison isn't in your declaration, that you 9 don't have an opinion about it? 10 A. That is accurate. My declaration includes 11 all of my opinions in this matter. 12 Q. Okay. If you go back to Exhibit 2029 and 13 you go to paragraph 97, let me know when you're 14 there. 15 A. I'm at 97. 16 Q. Okay. And you can see that paragraph 97 is 17 referring to Ground 1A, which is obviousness over 18 Lee; is that correct? 19 A. Yes. In the major section of the 20 petitioner's arguments, when Ground 1A is 21 Subsection A, and then sub -- Subsection 1 is 22 relating to claims 13 to 15 of Ground 1A. 23 Q. Okay. And for claims 13 through 15 for 24 Ground 1A, you say, I have not been asked to opine 25 on whether claims 13 through 15 would have been
Page 58 1 in that effort. 2 Q. Okay. And so, the reason why, as you sit 3 here today, you don't have an opinion about the 4 correct construction of the stackable add-on layers 5 because you weren't asked to form such an opinion? 6 A. Well, that is certainly the principle 7 reason, yes. 8 Q. Okay. In forming your opinions in this 9 case, did you compare the construction at the 10 bottom of page 12 of the petition to any of the 11 prior art references in the petition? 12 A. I'm sorry. That didn't make sense to me. 13 Can you say it again or rephrase it? 14 Q. Sure. 15 Assume for me that stackable add-on layer 16 encompasses any layer that is the correctly or 17 indirectly adhered to the resided layer of the 18 substrate. Taking that assumption, did you make an 19 assessment or form an opinion about whether any of 20 the prior art references in the petition would 21 teach that? 22 A. I don't recall having opined whether any of 23 the cited references -- let me start again. I'm 24 sorry. 25 So I do not recall whether, in -- in order	Page 60 1 obvious over Lee specified in Ground 1A, correct? 2 A. That is what I say in paragraph 97. Yes. 3 Q. And you were not asked -- when you say, I 4 have not been asked, you were referring to by 5 counsel, correct? 6 A. That is correct. 7 Q. I asked you some questions earlier about 8 the co-pending district court litigation between 9 BeSang and Intel. 10 Do you remember that? 11 A. I remember those questions. Yes. 12 Q. Do you also understand that there's 13 co-pending litigation where BeSang has accused 14 Micron of infringing claims of the '702 patent? 15 A. I don't remember that specifically, since 16 my involvement in that matter has passed. But 17 it's -- it's likely, certainly. 18 Q. And as you sit here right now, do you 19 recall reviewing the complaint in the district 20 court case where BeSang is accusing microns of the 21 claims of infringing of the '702 patent? 22 A. So as I indicated previously, with regard 23 to my process for the Micron IPR, I certainly 24 downloaded all of the exhibits in that attached to 25 that petition. If there was a complaint as part of

1 that collection of exhibits, then I downloaded it 2 and may have reviewed it. I have no -- reviewed it 3 in brief -- briefly reviewed it, but I have no 4 recollection doing so. 5 Q. Okay. And I'll represent to you that that 6 complaint is an exhibit in this IPR proceeding, as 7 well, the Micron complaint. So that would also be 8 true here, that you would have downloaded it, but 9 you would have reviewed it, at most, only briefly? 10 A. That -- that's a fair characterization. I 11 would have glanced at it in passing, but not more 12 so than that. 13 We've been going about an hour now. Can we 14 take another break, please? 15 Q. Sure. Go off the record. 16 THE VIDEOGRAPHER: Off the record at 17 11:04 a.m. 18 (A recess was held from 11:04 a.m. to 11:15 a.m.) 19 THE VIDEOGRAPHER: We're back on the 20 record at 11:15 a.m. 21 BY MS. KAISER: 22 Q. Welcome back. 23 A. Thank you. 24 Q. If you could pull back up your declaration, 25 Exhibit 2029, and go to paragraph 49, let me know	Page 61 1 A. I do. 2 Q. And you reviewed the Lee reference in 3 forming your opinions in this case, correct? 4 A. Yes, I did. 5 Q. Do you see in paragraph 150 you have 6 reproduced Figure 1A of Lee? 7 A. I see that. Yes. 8 Q. And do you agree that Lee's Figure 1A 9 depicts a non-volatile memory cell? And if it 10 helps you at all, you can also look at the sentence 11 in paragraph 50 preceding the production in that 12 figure. 13 A. Yes. I'm bringing up Lee on my screen so I 14 can have it up at the same time, if you don't mind. 15 Q. Of course. 16 A. Yes. I -- please repeat the question. 17 Q. These -- Figure 1A depicts a non-volatile 18 memory cell, correct? 19 A. Yes. As I articulate in my paragraph 50, I 20 comment that Figure 1A is a non-volatile cell 21 formed in a vertical structure. And that's 22 consistent with the description of Figure 1A in 23 paragraphs 122 through 125 of the Lee reference. 24 Q. If you look at paragraph 38 of the Lee 25 reference, let me know when you're there. Page 63
1 when you're there. 2 A. I am looking at paragraph -- 3 MS. KAISER: I apologize. Can we go off 4 the record for one second? 5 MS. ARMOND: Sure. 6 THE VIDEOGRAPHER: Off the record at 7 11:15 a.m. 8 (A recess was held from 11:15 a.m. to 11:16 a.m.) 9 THE VIDEOGRAPHER: We're back on the 10 record at 11:16. 11 BY MS. KAISER: 12 Q. Apologies for the interruption. 13 Before we went off the record, I had asked 14 you to pull up your declaration, Exhibit 2029, and 15 go to paragraph 49. 16 Do you have that? 17 A. Yes, I do. 18 Q. And you're getting quiet again. Can you 19 raise your voice a bit? 20 A. I will scoot forward and try and speak up. 21 Q. Okay. Thank you. 22 A. My pleasure. 23 Q. So paragraph 49 starts your overview of the 24 Lee reference, which is Exhibit 1007. 25 Do you see that? Page 62	Page 64 1 A. 38? 2 Q. Yes. 3 A. I'm there. 4 Q. Figure 1A of Lee depicts a pillar, correct? 5 A. Lee characterizes it as a pillar memory. 6 MS. ARMOND: I'm confused. I don't have 7 paragraph numbers in my -- oh, never mind. Sorry. 8 Sorry. I'm looking at the wrong exhibit. Never 9 mind. 10 MS. KAISER: No worries. 11 Exhibit 1007. 12 MS. ARMOND: Yes. Okay. 13 BY MS. KAISER: 14 Q. In Lee's -- okay. Well, let me go back and 15 re-ask that question. 16 In paragraph 38 of Exhibit 1007, which is 17 Lee, Lee characterizes its Figure 1A as a pillar 18 memory, correct? 19 A. Yes. Literally, it says, Figure 1A is a an 20 illustration of a pillar memory in accordance with 21 an embodiment of the present invention. 22 Q. And if you -- earlier, you had referenced 23 paragraphs 122 to 125 of Lee Exhibit 1007. 24 Can you go there? 25 A. I'm looking at that page, page 8 of the

1 document. 2 Q. I just want to make -- you said page 8. I 3 just want to make sure we're in the same place 4 because I believe it's page 96 of the document. 5 A. Yes. It has page 8 at the top. It's 6 actually page 96 of the PDF. 7 Q. Okay. But you're at paragraph 122, 8 correct? 9 A. That is correct. I apologize for the 10 confusion. 11 Q. And if you look in paragraph 122 of Lee of 12 Exhibit 1007, you see towards the bottom of that 13 paragraph, there's a sentence that starts, The 14 first contact region, 102, the body 104, and the 15 second contact source drain region 106? 16 A. Yes, I see. 17 Q. And that sentence -- 18 A. Yes. 19 Q. Okay. And do you see that that sentence 20 says that those three parts 102, 104, and 106 21 quote, Are each vertically aligned with one another 22 to form pillar 108, close quote? 23 Do you see that? 24 A. Yes, I see that sentence. 25 Q. And so, in Figure 1A of Lee, do you agree	Page 65 1 that's describing Figure 1B of Lee? 2 A. Yes, I see that. 3 Q. And you see that paragraph 39 characterizes 4 Figure 1B as a pillar memory? 5 A. Specifically, it says that it, illustrates 6 an overhead view of a pillar memory in accordance 7 with the embodiment of the present invention. 8 So it's -- a POSITA, looking at Figure 1A 9 and 1B, would recognize that they are related in 10 that respect. 11 Q. Okay. So a POSITA would understand that 12 Figure 1A and 1B are related and that Figure 1B is 13 an overhead view, meaning it's looking from top 14 down, correct? 15 A. Let me pull up 1B so I'm actually looking 16 at what I'm talking about. There's so many 17 figures. So 1B is not literally an overhead view 18 of 1A, since 1A has the gate contact only on one of 19 the four faces of the square pillar; whereas 1B 20 shows a surrounding gate around a circular or 21 cylindrical, rather, pillar. So they are related, 22 but not views of the same thing. 23 Q. Okay. And if you -- and I'm fine, by the 24 way, if you -- I don't know if you have two 25 monitors or some way to look at things
Page 66 1 that the structure 108 is a pillar? 2 A. Certainly, the Lee reference characterizes 3 it as a pillar. Looking at Figure 1, the 4 collection of the two -- the -- the three regions, 5 102, 106, and 104, in the middle, is drawn with an 6 aspect ratio of such that it is taller than wide. 7 And so, it meets the plain and ordinary meaning of 8 the pillar as drawn. 9 Q. And Figure 1A has a transistor, correct, of 10 Lee -- sorry. Strike that. Let me ask a better 11 question. 12 Figure 1A of Lee, which is Exhibit 1007, 13 its memory cell has a transistor, correct? 14 A. I'm not seeing it characterized a 15 transistor in those paragraphs above, but a POSITA 16 would recognize this as a transistor. Yes. 17 Q. And then in Exhibit 107, which is Lee, if 18 you go to paragraph 39, let me know when you're 19 there. 20 A. I'm at 39. 139 or 39? 21 Q. 39. 22 A. Oh, sorry. I went the wrong direction. 23 Give me a sec. 24 I'm at paragraph 39. 25 Q. Okay. And you see that paragraph 39,	Page 68 1 side-by-side, but if you could keep Figure 1B handy 2 and then also go to paragraph 125 of Exhibit 1007, 3 which is Lee, let me know when you're at paragraph 4 125. 5 A. I don't have that capability, but 1B is 6 simple enough that I can keep it in my mind, even 7 though it's not -- I don't think it's reproduced in 8 my declaration, but I will -- I will just remember 9 what it looks like as I go back to -- I'm sorry, 10 which paragraph? 11 Q. 125, please. 12 A. Okay. 13 Q. Let me know when you're there. 14 A. I'm at 125; is that correct? 15 Q. Yes. 16 A. Okay. I'm there. 17 Q. Okay. And you see, in paragraph 125, that 18 Lee refers to element 108 as a pillar, correct? 19 A. Yes. Item 108 is referred to as a pillar 20 consistently through paragraphs 122 through 125, 21 relating to Figures 1A. 22 Q. And in paragraph 125, item 108 in Figure 1B 23 is referred to as a pillar, correct? 24 A. Figure 1B doesn't include the actual item 25 number 108, but in the text of 125, it describes

1 the surround gate of the pillar that is -- and that 2 that physical structure of the surround control 3 gate, line 12, is -- shown in figure 1B. 4 Q. Okay. Can you pull figure 1B back up, 5 please? 6 A. Oh, yes. 108 is addressed in the center, 7 so I apologize for that inaccuracy. 8 Q. Okay. So just -- just to be clear in 9 Figure 1B of Lee, the -- the 108 is labeling that 10 sort of center ring of the top view; is that 11 accurate? 12 A. Yes. Figure 1B is illustrating a pillar in 13 the middle surrounded by an oxide or insulator 110, 14 and then a surround gate 112. 15 Q. Okay. And just so the record is clear in 16 paragraph 125, 110 is identified as the charge 17 storage member. 18 Do you see that? 19 A. Charge storage medium 110 in the second 20 line of paragraph 125. Yes. 21 Q. Okay. And you would agree that a person of 22 ordinary skill in the art would understand that 23 Figure 1B also is a non-volatile memory cell, yes? 24 A. Yes. It's also referred to a pillar memory 25 device, and a POSITA would recognize it as a charge	Page 69 1 ordinary skill in the art would recognize that the 2 non-volatile memory cell in Lee's Figure 2 has a 3 transistor, correct? 4 A. Yes. 5 Q. And you mentioned paragraph 127. I want to 6 direct your attention to paragraph 126. Let me 7 know when you're there. 8 A. It crosses a page, but I'm on the second 9 half of it, first half of that paragraph. 10 Q. Yes. 11 A. Okay. I'm at the first half of that 12 paragraph 126. 13 Q. Do you see that, in paragraph 126 with Lee, 14 that Lee refers to element 207 in Figure 2 as a 15 pillar? 16 A. Yes. That is part of the first sentence of 17 paragraph 126 of Lee. 18 Q. And do you agree that 207 teaches a pillar, 19 as you have proposed to construe that term? 20 A. Similarly to Figure 1A, as we discussed 21 previously, Lee characterizes it as a pillar, and 22 it is drawn in Figure 2 as with the silicon regions 23 of that stack having a height greater than its 24 width. And so, it would meet my understanding of 25 the plain and ordinary meaning of a pillar.
Page 70 1 storage non-volatile memory device. 2 Q. And a person of ordinary skill in the art 3 would understand that Figure 1B as a transistor, 4 correct? 5 A. Similarly to what we talked about with 6 regard to Figure 1A, it doesn't show in 1B the 7 three regions of silica necessary to form a 8 transistor, but the juxtaposition of Figure 1A and 9 1B, with the description of paragraph 125, a POSITA 10 would recognize that the top and bottom regions of 11 the pillar are there, but not shown in 1B. 12 Q. Okay. And I have somewhat similar 13 questions about Figure 2. So let's look at Lee's 14 Figure 2 in Exhibit 1007 just to orient yourself. 15 Let me know when you have that. 16 A. I'm looking at Figure 2. 17 Q. And do you agree that a person of ordinary 18 skill in the art would understand that Figure 2 is 19 a non-volatile memory cell? 20 A. Yes. Based on, principally, the 21 description in paragraph 127 of Lee, a POSITA would 22 recognize that Figure 2 that was labeled a pillar 23 memory with a floating gate is a non-volatile 24 memory cell. 25 Q. And you'd also agree that a person of	Page 72 1 Q. Okay. And then I want to direct your 2 attention to Figure 7 of Lee, Exhibit 1007, as well 3 as paragraph 138 of Lee. 4 A. Okay. So I've looked at Figure 7, and now 5 I will turn to paragraph 100 and which? I'm sorry. 6 Q. '38. 7 A. 138. One second. I apologize. I'm not 8 able to look at two places at once. 9 138 referring to Figure 7, yes. 10 Q. And do you agree that Figure 7 of Lee also 11 shows a non-volatile memory cell? 12 A. Yes. In paragraph 138, it refers to memory 13 devices of the present as can -- one can use 14 trapping layer form in the dielectric stack. So in 15 two -- as shown in Figure 7. So the inference 16 there is that Lee recognizes and characterizes the 17 trans -- the memory device of Figure 7 as a charge 18 trapping device and that a POSITA would recognize 19 that as a non-volatile memory cell. 20 Q. Okay. And you'd also agree that a person 21 of ordinary skill in the art would recognize that 22 the memory cell in Figure 7 has a transistor? 23 A. Similar to our discussions of Figures 1 and 24 2, a POSITA would recognize that Figure 7 includes 25 a transistor.

1 Q. And even though I don't believe there's an 2 item number labeled as a pillar in Figure 7, you'd 3 agree that, like 1A, 1B, and 2, a person of 4 ordinary skill in the art would recognize that 5 Figure 7 also depicts a pillar? 6 A. So the items 202, 206, and 208 are drawn 7 with a combined aspect ratio such that their height 8 together is greater than their width. And so, that 9 meets the plain and ordinary meaning of a pillar. 10 Q. Okay. I want to switch gears, and I'm 11 going to give you a different exhibit. So give me 12 one second. 13 So you should have now in the chat 14 Exhibit 1031, which is excerpts of US Patent 15 Application No. 2002/0154556 A1 to Endoh. As we 16 talk about this reference, if you'd like the whole 17 thing, I'm happy to provide it, but it might take a 18 little while for it to download. 19 MS. ARMOND: And I would like to object 20 that this is 14 pages of a much longer document, so 21 it's incomplete. 22 MS. KAISER: If you have access to 23 Exhibit 1012, I'm happy to put the whole thing in 24 front of the witness, or if you have access to it 25 there, I'm happy for you to just download it there.	Page 73 1 and do that then. 2 MS. ARMOND: You want to do that? 3 MS. KAISER: Is that okay? 4 THE WITNESS: Absolutely. Give you time 5 to get your ducks lined up. 6 MS. KAISER: Let's go off the record then. 7 THE VIDEOGRAPHER: We're going off the 8 record. The time is 11:44 a.m. 9 (A recess was held from 11:44 a.m. to 12:48 p.m.) 10 THE VIDEOGRAPHER: We're now on the 11 record. The time is 12:48 p.m. 12 BY MS. KAISER: 13 Q. Welcome back, Dr. Przybylski. 14 A. Thank you. 15 Q. I want to direct your attention back to Lee 16 for a couple more minutes, which is Exhibit 1007. 17 A. Okay. 18 Q. And if you can speak up and be a little 19 closer to the microphone for our friend, the court 20 reporter, I'd appreciate it. 21 A. Absolutely. 22 Q. Okay. So in Exhibit 1007, which is the Lee 23 reference, if you could go back to Figure 2 again. 24 A. I'm looking at Figure 2. 25 Q. Okay. And you remember, before lunch, you
Page 74 1 Either way. 2 MS. ARMOND: Yeah. I mean, we can make 3 that happen. If you -- it will take a minute, but, 4 sure. Do you want the whole exhibit? 5 THE WITNESS: Let's see -- 6 MS. ARMOND: Let's see how it goes. 7 THE WITNESS: Let's see how it goes and 8 what the questions relate to. It may be that this 9 is adequate, or I may ask for the entire exhibit. 10 BY MS. KAISER: 11 Q. Okay. I just want to say for the record, 12 especially since Michelle has objected, that I'm 13 happy to give you the whole thing. So let me know 14 if you need any other portions of it. 15 A. I will. 16 Q. Okay. So in Exhibit 1031, if you could go 17 to paragraph 107, which is -- oh, never mind. You 18 know what, let me -- I'll -- I'll -- I'll do this 19 part after lunch because I'm going to get you the 20 whole exhibit, so we don't have this problem. 21 So let's go then -- I'm going to give you a 22 different exhibit. My apologies. 23 MS. ARMOND: Also, our lunch is here, so 24 we can break whenever, Jessica. Just FYI. 25 MS. KAISER: Okay. Why don't we go ahead	Page 76 1 had said that a person of ordinary skill in the art 2 would understand that the memory cell in Figure 2 3 has a transistor? 4 Do you remember that? 5 A. Yes, I remember that testimony. 6 Q. And do you agree that a person of ordinary 7 skill in the art would recognize that Figure 2's 8 transistor is vertical? 9 A. In paragraph 126 of Lee, it does describe 10 the regions as being vertically aligned, and a 11 POSITA would understand that the current flow would 12 similarly be vertical. 13 Q. And in Lee's Figure 2, item 214, is a 14 floating gate; is that correct? 15 A. Yes. It's described as a floating gate 16 214, at least in paragraph 127. 17 Q. And in Lee's Figure 2, item 218, is a 18 control gate? 19 A. Similarly in paragraph 127 of Lee, it's 20 described as control gate 218. 21 Q. And do you recall we talked before the 22 break about Lee describing structure 207 in Figure 23 2 as a pillar? 24 A. Yes. And, again, in paragraph 126 of Lee, 25 he does refer to pillar 207.

1 Q. And the structure that includes floating 2 gate 214 and control gate 218 is attached to pillar 3 207, correct? 4 A. I'm not sure attached is the right word, 5 but it is coincident with the floating gate and 6 control gate control the current flow through the 7 vertically aligned stack 202, 206, and 208. 8 Q. In Lee's Figure 2, the 202, 206, 208 9 structure is a doped silicon structure; is that 10 correct? 11 A. So, yes. In paragraph 126 of Lee, it 12 describes each -- each of those regions in terms of 13 the doping density that is present in that 14 embodiment of the disclosure. 15 Q. And Figure 2, item 201, is a substrate; is 16 that correct? 17 A. Yes. Similarly, in paragraph 126, Lee 18 describes substrate 201. 19 Q. And in Figure 2, the substrate 201 would be 20 insulating; is that correct? 21 A. With regard to Figure 2 and the description 22 thereof in paragraphs 126 through 131, it doesn't 23 actually describe the structure or components or 24 characteristics of the substrate. It's fairly a 25 mechanical substrate. It may have internal	Page 77 1 Do you remember that? 2 A. Yes, I remember that. 3 Q. Okay. And you said, if I recall 4 correctly -- and please correct me if I'm wrong -- 5 that a doped silicon structure above an insulating 6 layer would meet this -- that that's -- that 7 sentence of yours in paragraph 90; is that correct? 8 A. Again, I don't think I've rendered an 9 opinion specifically with regard to those figures 10 of Lee and whether -- if the substrate is 11 insulating, whether that constitutes an SOI 12 structure. It seems plausible that that's the 13 case, but, again, I haven't given that any specific 14 thought. It's likely that that's true. Yeah. 15 Q. Okay. And if you look at Figure 1A of 16 Lee -- 17 A. Yes. 18 Q. -- do you recall earlier we talked about 19 Figure 1 -- in Figure 1A of Lee, that the memory 20 cell has a transistor? 21 A. Yes. I remember we had that discussion. 22 Q. And that transistor in Figure 1A of Lee is 23 vertical, correct? 24 A. Yes. Figure in Figure 1A, item 114, shows 25 vertical current flow within that structure.
Page 78 1 structure. It -- the region show may or may not be 2 conductive, unless there's some reference in there 3 that I'm missing that you can point me to this 4 portion of the specification is silent on whether 5 201 is, in whole or in part, insulating. 6 Q. Okay. Well, assume with me that 201 is 7 insulating. Under that assumption, then, would you 8 agree that pillar 207 would meet your construction 9 of an SOI structure? 10 A. I wrote an opinion to that effect in my 11 declaration. I think that that's a plausible 12 conclusion, but I'd have to think about it more 13 before being definitive. And -- because that's a 14 claimed term, just to be absolutely sure that 15 there's nothing else going on there. 16 Q. Just to be clear, SOI structure isn't the 17 claimed term, correct? 18 A. That's -- 19 Q. SOI pillar, that's a claimed term? 20 A. That's correct. Yes. 21 Q. Okay. And so, I believe it's in paragraph 22 90 of your declaration, 2096, we talked about 23 earlier today with the semiconductor device 24 structure in which silicon structures are fabricate 25 on or above an insulating layer.	Page 80 1 Q. And we talked earlier about how Figure 1B 2 is related to Figure 1A but not the same. 3 Do you remember that? 4 A. Yes. I think that was the -- the gist of 5 our discussion earlier, that they are -- 1B is not 6 a top view of 1A. They both show similar things, 7 but they are not the same thing. 8 Q. And I recall that you testified earlier 9 that Figure 1B's memory cell includes a transistor; 10 is that correct? 11 A. I believe my testimony was of the form that 12 Figure 1B doesn't show a transistor, but that, in 13 connection with Figure 1A and the description of 14 Figure 1B in paragraph 125, that a POSITA would 15 assume that there is a transistor there. 16 Q. And in Figure 1B, a person of ordinary 17 skill in the art, would have understood that that 18 transistor is vertical, correct? 19 A. Yes. It doesn't actually describe that 20 within the specification. But, again, a POSITA, in 21 conjunction with the entire description of 1A, 1B, 22 and 1C, would understand that what's being 23 disclosed there is vertically oriented transistor. 24 Q. Okay. And then if you go to Lee 25 Exhibit 1007, Figure 7, let me know when you have

Page 81	Page 83
1 that. 2 A. I'm looking at Figure 7. 3 Q. And do you remember earlier that -- that 4 you testified that Figure 7's memory cell includes 5 a transistor? 6 MS. ARMOND: Objection. Form. 7 THE WITNESS: Yes. I remember our 8 discussion about Figure 7. 9 BY MS. KAISER: 10 Q. And the transistor in Figure 7, a person of 11 ordinary skill in the art would have understood 12 that as vertical, correct? 13 A. Again, it doesn't actually say that within 14 the specification, but a POSITA, in view of the 15 description of Figure 7, would come to that 16 conclusion. 17 Q. Okay. I want to direct your attention in 18 Lee to Figure 35. And let me know when you have 19 that. 20 A. I'm looking at Figure 35. 21 Q. And of course you can look at any other 22 part of Lee that you want, but I'll -- I'll direct 23 your attention, also, to paragraph 111 for purposes 24 of my questions. 25 A. Okay. Did you want me to look at 111 now	1 my testimony. 2 BY MS. KAISER: 3 Q. Okay. What's your understanding of devices 4 in the context of semiconductors? 5 A. The word "device" has many different 6 meanings, depending on context, all within the 7 general art of semiconductor integrated circuits. 8 In this -- in Lee, it's referring, principally, to 9 transistors or other active -- active or passive 10 circuit components, but that's not a usage that's 11 uniform across all references. 12 Q. Okay. And if you look back at paragraph 13 111 of Lee, there's a sentence that says, The 14 driver circuits 3103, such as cents, amps, and 15 charge pumps are disposed in monocrystalline -- I'm 16 sorry -- in the monocrystalline substrate 3105 as 17 CMOS or other transistors. 18 Do you see that? 19 A. Yes, I see that. 20 Q. And a person of ordinary skill in the art 21 would understand that driver circuits 103 -- or 22 sorry -- driver circuits 3103 are electrical 23 devices; is that fair? 24 A. Electrical devices generally refer to, 25 like, switches and light bulbs and things.
Page 82	Page 84
1 or still look at 135? Because I can only look at 2 one at a time. 3 Q. You'll probably have to go back and forth. 4 My apologies. 5 A. Okay. 6 Q. Focusing on Figure 35 of Lee -- sorry. I'm 7 also having to go back and forth -- is it your 8 understanding that item 3105 is a substrate? 9 A. In paragraph 111 that you've directed me 10 to, it does say that item 3105 is a monocrystalline 11 substrate. 12 Q. And do you see in Figure 35 item -- items 13 3103? 14 A. Yes. 15 Q. And in paragraph 111, Lee describes item 16 3103 as driver circuits? 17 A. Yes. It does describe 3103 as driver 18 circuits in paragraph 111. 19 Q. And are driver -- I think earlier today, 20 you testified about semiconductor device structures 21 as being integrated circuits. 22 Do you remember that? 23 MS. ARMOND: Objection. Form. 24 THE WITNESS: That's not exactly what I 25 testified. I think it's a mischaracterization of	1 Electronic devices might be a better 2 characterization -- 3 (Reporter clarification.) 4 THE WITNESS: -- and that electronic 5 devices might be a better characterization. 6 I think there was something else after 7 that, but I don't remember exactly what I said. 8 BY MS. KAISER: 9 Q. And then going back to -- if you go 35, do 10 you see the layer that's identified as 3102? 11 A. Yes. 12 Q. And do you agree that a person of ordinary 13 skill in the art would recognize that that's a 14 dielectric layer? 15 A. In paragraph 111 of Lee, it describes 3102 16 as an interlayer insulating layer, which is a -- a 17 dielectric is an insulating layer. 18 Q. Okay. Let's see if we can go to Endoh now. 19 And I think during the break, your counsel was 20 going to help get you a complete version of it. It 21 might help to go all -- have, also, your 22 declaration at paragraph 107, I believe, as well. 23 A. Okay. I have my declaration at 107 open, 24 and I have the cover page of Exhibit 1012 in front 25 of me on the screen.

Page 85 1 Q. If you look at -- let's see, in your 2 paragraph 107 of your declaration, let's start 3 there. 4 A. Is there a question? 5 Q. Yes. I was making sure you were there. 6 I'm sorry. 7 A. I said I was there. Yes. 8 Q. Do you see on the second-to-last sentence 9 of paragraph 107, you say, The NAND structures of 10 Endoh? 11 A. That's the very last few words of that 12 sentence, yes. 13 Q. Is it your understanding that Endoh 14 discloses NAND structures? 15 A. At least in part. 16 If you look at my paragraph 111 where I 17 reproduced Figure 65 of Endoh, it shows the circuit 18 diagram of a NAND flash, or a portion of the memory 19 array of a NAND flash memory device. 20 Q. Okay. And if you go to paragraph 108 of 21 your declaration, which is Exhibit 2029. 22 A. I'm looking at it. 23 Q. Do you see on the last sentence, you say, 24 Dr. Sechen admits that Endoh's Figures 1171 and 25 1172 use NAND architecture?	Page 87 1 A. Paper 2. Yes. I'm looking at petition for 2 interparty's review of the 702. 3 Q. Okay. And if you would go to page 44 of 4 the petition. 5 A. Page 40 of the PDF or numbered 44? 6 Q. Numbered 44, please. 7 A. Give me a second. 8 Here we are. Yes. I'm looking at page 44 9 of the petition. 10 Q. Okay. And, actually, if you don't mind 11 scrolling up one page to page 43. 12 A. I am looking at page 43. 13 Q. Do you see that page 43 includes an 14 annotated version of Figure 1 of Endoh? 15 A. Yes. I see that it is Figure 1 and that is 16 annotated. 17 Q. And just to orient us, Figure 1171 is -- is 18 one cross-section the AA prime cross-section of 19 Figure 1 and Figure 1172 is a different 20 cross-section at 90 degrees, the BB prime 21 cross-section. Is that consistent with your 22 understanding? 23 A. That is consistent with the last couple of 24 sentences of paragraph 1206 of Endoh. 25 Q. Okay. And then if you go to pages 44 and
Page 86 1 A. Yes, I see those words. 2 In the citation that follows, he actually 3 uses NAND memory configuration as part of the 4 question, and he replied yes. So it's a 5 configuration or architecture are not identical, 6 but they convey the same thing in this instance. 7 Q. And do you agree that Endoh's figures 1171 8 and 1172 use NAND architecture? 9 A. Let me see if I can manage to pull those 10 particular ones up because it's -- do you happen to 11 know which paragraphs in the text of Endoh describe 12 those figures? 13 Q. I believe at least 1206 and 1207 do, if 14 that helps you. 15 A. Thank you. I appreciate the assistance. 16 So based on paragraph 1206, describing the 17 serial connection of the memory cells in 1171 and 18 1172 and a brief consideration of those figures, it 19 does appear that those figures show NAND of 20 architecture EE prom memory cell slice. 21 Q. Okay. Earlier, I marked the petition in 22 this proceeding as an exhibit. 23 Do you still have that? 24 A. Yes. Is that paper 20 or a different one? 25 Q. Paper 2.	Page 88 1 45 of the petition, you'll see that there are 2 annotated versions of Figure 1171 and 1172 of 3 Endoh. 4 A. I see that you have annotated both of those 5 figures on those pages. 6 Q. Okay. And feel free to look at Endoh to 7 verify any of the annotations that you need to as 8 we go through my questions. 9 But do you see in Figure 1171 where there 10 is the annotations for first memory cell and a 11 second memory cell? 12 A. I see those words in blue. Yes. 13 Q. And that those two memory cells are made up 14 of an NPNPN stack? 15 A. I have not confirmed your annotations that, 16 for example, Item 100 -- 1112 is, in fact, a P 17 level in the specification and so on. It looks 18 that way. But, again, I have not confirmed that 19 your annotations are accurate. 20 Q. Okay. Well, let's assume that the 21 annotations are accurate. 22 Assuming that the annotations are accurate, 23 do you agree that that NPNPN stack teaches two 24 memory cells? 25 A. Well, I'm reluctant to assume that your

1 annotations are correct. I will acknowledge that, 2 if you had an NPNP vertically aligned stack of 3 doped silicon regions and had control gates 4 appropriately configured, that that would be a 5 showing two memory cells, if it was all connected 6 up properly. But, again, I haven't confirmed that 7 all of these annotations are accurate. 8 Q. Okay. And assuming that the annotations 9 are accurate, those two memory cells would be 10 connected in series, right? 11 A. Both paragraphs 1206 of Endoh, it says 12 that, towards the end, The transistors are 13 connected in series along the island-like 14 semiconductor layer as shown in Figure 1171 and 15 Figure 1172. So I think that that answers your 16 question. 17 Q. Okay. And the island-like semiconductor 18 region, I might have that language wrong, but I 19 apologize. 20 But that island-like region, that is what's 21 labeled as NPNPN in 1117, correct? 22 A. It's not so annotated in the figure. It's 23 annotated like that in the petition. So the -- 24 those characterizations are not in the figures as 25 they exist in Endoh.	Page 89 1 or is it consistent with your understanding that 2 that's referring to the portion of the annotated 3 1171 figure at petition page 44 that is labeled 4 NPNPN? 5 A. I'm sorry. Could you repeat the question, 6 please? 7 Q. Sure. 8 So in paragraph 1206 of Endoh where it 9 says, Two memory cells are arranged on each 10 island-like semiconductor layer, is it your 11 understanding that is referring to the portion of 12 annotated Figure 1171 at petition page 44 that is 13 labeled NPNPN? 14 A. So I do acknowledge in my declaration that 15 Figures 1171 and 1172 are disclosing NAND flash 16 memory array and that those are similarly connected 17 memory cells and that they would exist within that 18 vertical structure that you have annotated within 19 the petition, regardless of whether the annotations 20 are accurate or not. 21 Q. Okay. Thank you. 22 And that same structure -- so, again, I'm 23 referring to that -- the structure that's annotated 24 NPNPN, is that consistent with your understanding 25 of a pillar?
Page 90 1 Q. Okay. And -- and thank you for that 2 clarification. 3 In the annotated version of Endoh's Figure 4 1171, that's at petition page 44, the region that 5 is labeled NPNPN is the island-like region that's 6 referred to in paragraph 1206; is that correct? 7 And let me strike that and ask you a better 8 question because I asked the text of 1206 up in 9 front of me, if that's okay. 10 A. Certainly. 11 Q. So you mentioned that paragraph 1206 refers 12 to island-like semiconductor layers. 13 Do you see that in 1206? 14 A. It refers to singular layer, but, yes. 15 Q. If your paragraph 1206, and you look at 16 one, two, three, four, five lines down, it says, 17 "Island-like semiconductor layers." 18 Do you see that? 19 A. Yes. And then subsequent references to the 20 semiconductor -- island-like semiconductor layers 21 singular. So, yes. You're right in that first 22 instance plural, and the rest are singular. 23 Q. Okay. And where it says, Two memory cells 24 are arranged on each island-like semiconductor 25 layer, in paragraph 1206, is it your understanding	Page 92 1 A. Well, as I've explained, in the paragraphs 2 leading up to my construction of SOI pillar, that 3 the plain and ordinary meaning of pillar is a 4 structure that is narrower than it is tall. This 5 particular structure that you have annotated in 6 pages 44 and 45 of the petition is, in fact, drawn 7 in Endoh, narrower than it is tall, so that a 8 POSITA would recognize that structure as a pillar. 9 Q. And -- and that same structure in Figure 10 1171 of Endoh, the NPNPN structure, is a doped 11 silicon structure, correct? 12 A. Again, I'd have to go back and verify your 13 annotations, that they are accurate with regard to 14 the full disclosure of Endoh, and I don't have 15 search capability with -- at present. 16 So I presume they are doped semiconductor 17 structures, but I have not verified that, but 18 they're also not on an insulating layer, if that's 19 secondary from your question. 20 Q. Is silicon nitride an insulating layer? 21 A. Is there a place in Endoh where it's 22 characterized as such? 23 Q. I'm asking what your understanding is as a 24 person of ordinary skill. 25 A. I don't think either of my opinions in this

1 matter have -- relate to silicon nitride films. So 2 I haven't refreshed my memory, as far as its 3 electrical properties. 4 Q. If you look at paragraph 1207 of Endoh. 5 A. I'm looking at 1207. 6 Q. Do you see where it says, The silicon 7 nitride film 1320 is deposited as the 10th 8 insulated film? 9 A. Yes, I see that. 10 Q. And if you look earlier in that 11 paragraph -- oh, no. I'm sorry. Strike that. 12 Does that -- would you agree -- sorry. Let 13 me start over. 14 Based on that disclosure that is in 15 paragraph 1207 of Endoh, that it characterizes 16 silicon nitride film 1320 as an insulating film, 17 would you agree that silicon nitride is an 18 insulating layer in Endoh? 19 A. Certainly, I agree that Endoh is 20 characterizing silicon nitride layer, 1320 as an 21 insulating layer whether it -- that's the extent of 22 my understanding with regard to the disclosure 23 Endoh vis-a-vis silicon nitrides. 24 Q. Okay. And if you go back to Figure 1171, 25 do you see 1320 above the island-like semiconductor	Page 93 1 A. 1076, it will take me a second to get 2 there. 1076 characterizes 1840 as a fourth wiring 3 layer. 4 Q. And would you agree that a wiring layer, a 5 person of ordinary skill in the art -- sorry. 6 Strike that. 7 Would you agree that a person of ordinary 8 skill in the art would understand that a wiring 9 layer is an interconnect line? 10 A. Interconnect lines are formed, in part, on 11 wiring layers. 12 MS. ARMOND: It's been about an hour. 13 THE WITNESS: Are we getting close to 14 wrapping up on this 1071, 72 line of questioning? 15 BY MS. KAISER: 16 Q. Yeah. I probably just have a couple more 17 questions, if you want to let me do that and then 18 we can take a break, or we can take a break now, if 19 you want, either way. 20 A. If it's just a few more, let's finish with 21 these two figures and then take a break. 22 Q. Okay. 23 Okay. Looking at Figure 1172 with Endoh, 24 do you agree the pillar that is marked NPNPN is 25 connected by the wiring layer to an adjacent pillar
Page 94 1 layer? 2 A. So two different silicon nitride -- 3 actually, four -- let me restart, please. 4 So 1320 is characterized as a silicon 5 nitride layer, the petition has character -- has 6 annotated other layers as silicon nitride films 7 that have not confirmed. The 1320 film is shown at 8 the top of the integrated circuit layers below the 9 wiring -- the layer 1840 that's characterized as 10 wiring layer. 11 Q. Thank you for correcting me. Let me -- let 12 me ask a different question then. 13 A. Okay. 14 Q. Do you see -- let's go to Figure 1172. You 15 can either go to your regular version or the 16 annotated version, which is on petition 45. 17 A. It's easier for me to look at it in the 18 petition annotated. 19 Q. Okay. Do you see layer 1840 at the top as 20 top layer Figure 1172? 21 A. I see 1840. Yes. 22 Q. Okay. And is it your understanding that 23 1840 is a wiring layer? 24 And if helpful, I can direct you to 25 paragraph 1076 of Endoh.	Page 95 1 that is not annotated? 2 A. You don't happen to know where item 840 is 3 described within the specification of Endoh? 4 Q. 840 or 1840? 5 A. 840, as shown in Figure 1. 6 Q. I believe in paragraph 192. 7 A. Thank you for that. 8 Q. And perhaps also in paragraph 193. 9 A. Could you repeat the question, please? 10 Q. Sure. And let me ask it in, hopefully, a 11 slightly clearer way. 12 Looking at figure 1172 of Endoh, do you 13 agree that the pillar that is marked as NPNPN, on 14 page 44 of the petition, is connected by the wiring 15 layer to an adjacent pillar? 16 A. Yes. The Figure 1 of which Figures 1171 17 and 1172 are -- show cross-sections of, illustrates 18 wiring on a fourth-level wiring items 840 that 19 connect the tops of cylindrical pillars of cells. 20 MS. ARMOND: We've been going about 21 70 minutes. 22 MS. KAISER: Okay. Let's go ahead and 23 take a break. 24 THE VIDEOGRAPHER: Off the record at 11 -- 25 1:53 p.m.

1 (A recess was held from 1:53 p.m. to 2:03 p.m.) 2 THE VIDEOGRAPHER: We're back on the 3 record. The time is 2:03 p.m. 4 BY MS. KAISER: 5 Q. Welcome back, Dr. Przybylski. 6 A. Thank you. 7 Q. We're going to put into the chat 8 Exhibit 2030, which I understand is your CV. Let 9 me know when you have it. 10 A. I'm looking at my CV. 11 Q. And do you recognize this CV? 12 A. Yes, I do. 13 Q. Did you prepare it? 14 A. Yes, I did. 15 Q. Is it accurate? 16 A. To the best of my knowledge, yes. 17 Q. Do you have any updates or corrections to 18 it? 19 A. No. 20 Q. If you go to your declaration, which is 21 Exhibit 2029. 22 A. I'm looking at it. 23 Q. If you go to paragraph 3. 24 A. I'm looking at paragraph 3. 25 Q. In the first sentence of paragraph 3, you	Page 97 1 and how that relates to the effectiveness of the 2 integrated circuits used that are built with them 3 and the economics of the resulting integrated 4 circuits. 5 Q. Can you point me to any items in your CV 6 that relate to fabrication of semiconductor 7 devices? 8 A. Certainly. The -- for example, the new 9 DRAM architectures, tutorials, and writings that I 10 did all touch on semiconductor processes as part of 11 an exploration and education of -- to the audience, 12 how the nature of the semiconductor processing 13 constraints. So that's just one example. 14 Q. Okay. And I'm not sure I understood what 15 you are pointing to. Can you point me to where in 16 your CV you're talking about? 17 A. So, for example, the new DRAM Technologies, 18 which is the first of the books in the section of 19 the honors and publications section of the CV, that 20 book had a section on DRAM fabrication processes 21 and how DRAMS and DRAM memory cells are made with 22 semiconductor processes -- fabrication processes. 23 Sorry. 24 Q. And in that book, did it give a detailed 25 step-by-step fabrication process, or was it at a
Page 98 1 say, I have been retained BeSang, Inc. (BeSang or 2 patent owner) as an expert in the field of memory 3 devices and semiconductor design. 4 Do you see that? 5 A. Yes, I do. 6 Q. What do you mean by semiconductor design? 7 A. The design of semiconductor integrated 8 circuits. 9 Q. Are you an expert in designing fabrication 10 processes for semiconductors? 11 A. I am certainly fluent in the processes that 12 are used to create semiconductor integrated 13 circuits; although, I am not a process engineer, 14 per se. I do -- it has been very important for me 15 in my role as a generalist in the area of 16 semiconductor memories to understand how they are 17 built and what are the trade-offs in their 18 fabrication processes. 19 Q. Do you have practical experience with 20 designing fabrication processes for semiconductor 21 structures? 22 A. Again, I'm not a process engineer. I have 23 not developed semiconductor processes, but I am 24 well-versed in the nature of those processes and 25 the trade-offs that exist within their development	Page 99 1 higher level? 2 A. A combination. 3 So with regard to that book, in particular, 4 I don't remember the exact contents of the chapter 5 on fabrication processes. But the -- the end goal 6 of that book was to inform non-process engineers 7 about how DRAM cells are fabricated and how 8 different styles of DRAM memory cells are 9 fabricated. So I, in some respects, dealt with the 10 step-by-step aspects that were important, and in 11 other cases where there is -- the details of the 12 fabrication processes were not central to conveying 13 what I needed to teach, those steps were 14 enlightened or glossed over. So it's a 15 combination. 16 Q. Are you familiar with the term annealing in 17 semiconductor fabrication? 18 A. Generally speaking, yes. 19 Q. What does annealing mean? 20 A. Annealing, so, for example, in the context 21 of the Asbar references, and as explained in my 22 paragraph 148, the wafers are annealed at 100 23 and -- 1,100 degrees Celsius to remove defects. So 24 that is heating up of a silicon wafer in order to 25 allow the atoms to rearrange themselves and to
	Page 100

1 remove defects in the crystalline structure of the 2 wafer. 3 Q. Okay. So I think what I heard you say was 4 that annealing, in this context, is heating up of a 5 silicon wafer to allow the atoms to rearrange 6 themselves and remove defects in the crystalline 7 structure of the wafer; is that right? 8 A. That is -- that's both the process and the 9 desired effect of -- in Asbar, in particular, there 10 is also an earlier annealing step, which is not for 11 the purposes of removing defects, but for the 12 development of blisters that facilitate the 13 cleaning of the wafer. 14 Q. Okay. 15 A. That is also called an annealing step. 16 Q. And in terms of the parameters for an 17 annealing step for a semiconductor fabrication 18 process, it would have a temperature and a length 19 of time, correct? 20 A. In general, it also includes the -- the 21 temperature ramp up and then down. So you can, in 22 different contexts, have additional variables in 23 addition to the -- the temperature, the time at the 24 high temperature, and the temperature at the high 25 temperature. And also in more sophisticated	Page 101 1 A. Well, in general, there's -- annealing 2 steps are one of many tools in the tool bag for 3 creating the end result that's desired. So 4 depending on what's gone before in the process and 5 what's gone after -- what's coming after in the 6 process and the end result that's desired, you 7 would insert or not an annealing step into the flow 8 and design its parameters accordingly. 9 Q. And so, would it be fair to say that -- 10 well, strike that. 11 When a person of skill is developing a 12 fabrication process, what factors would they 13 consider when deciding the temperature for the 14 annealing step in that process? 15 A. In general, if the -- the temperature would 16 be in conjunction with the duration, would be 17 designed in order to effect the change that the 18 annealing step is supposed to do. So in this case, 19 with regard to Asbar, this -- this -- the 20 1,100-degree step, the purpose of it is to remove 21 defects. So you want to remove defects without 22 introducing additional complications or have 23 negative impacts of the annealing step. So you 24 have -- those trade-offs, always, are present 25 within the design of a fabrication process.
Page 102 1 context, you could have variations of the 2 temperature over time during the high temperature 3 domain. And -- 4 Q. I'm sorry. I just wanted to make sure you 5 finished your answer. 6 A. I'm sorry. I did say a word, but I didn't 7 intend to. 8 Q. Okay. So would it be fair to say that an 9 annealing step, you would have a designed 10 temperature versus time profile, or you could have 11 a ramp-up time in speed and temperature; you could 12 have a hold time at a high temperature; you could 13 vary that; and then you, potentially, would have a 14 ramp down in speed and temperature? 15 A. In the most general characterization of 16 annealing, that's accurate. I think that in -- 17 in -- for most circumstances, it's just the high 18 temperature value and the duration are the 19 principle variables that are under consideration. 20 Q. Okay. That's helpful. Thank you. 21 And in -- well, strike that. 22 A person who is developing a fabrication 23 process, what factors would they consider in 24 deciding whether to include an annealing step in 25 the process?	Page 104 1 Q. So I just want to make sure -- there was a 2 lot packed into that. I want to make sure I 3 understand. 4 So someone designing an annealing step for 5 a semiconductor fabrication process would look at 6 the desired result and design that process with the 7 appropriate temperature to achieve that result 8 while minimizing the negative impacts of it; is 9 that fair? 10 MS. ARMOND: Objection. Form. 11 THE WITNESS: Ultimately, the results has 12 to be functional and manufacturable. So 13 everything -- the entire process is designed with 14 that goal in -- in mind. So, you know, for 15 example, the -- as I've articulated within 16 paragraph 184, talking about thermo budgets, which 17 are an essential aspect of process design, the 18 annealing effects are critical to make sure that 19 you haven't done damage to some layers while you're 20 improving others. 21 BY MS. KAISER: 22 Q. Would it be fair that -- that the type of 23 material in your semiconductor structure would be 24 something that you would take into consideration 25 when you're designing an annealing step?

Page 105 1 A. That's not something I've had reason to 2 opine upon in my declaration. There are -- the 3 whole topic of annealing steps is a large one. 4 With regard to this matter, it would -- came up 5 with regard to the consequences of the Asbar 6 annealing steps and the impact that that would have 7 and the fact that the -- Dr. Sechen and the 8 petition is completely ignored that aspect in 9 their, you know, summary statements regarding the 10 combination of Asbar with, for example, Lee. 11 So I have not opined about the details of 12 annealing steps, and that's not something that has 13 been -- that I've had to do in order to form my 14 opinions. 15 MS. KAISER: Sure. And I guess I'll just 16 object to that answer as non-responsive and ask my 17 question again. 18 BY MS. KAISER: 19 Q. Would it be fair to say that the type of 20 material in the semiconductor structure would be 21 something that a person of ordinary skill in the 22 art would take into consideration when designing an 23 annealing step? 24 MS. ARMOND: Objection. Form. 25 THE WITNESS: I believe I answered your	Page 107 1 Would it be fair to say that the type of 2 material in a semiconductor structure would be 3 something that a person of ordinary skill in the 4 art would take into consideration when designing an 5 annealing step? 6 MS. ARMOND: Objection. Form. 7 THE WITNESS: As I've opined in response 8 to your question -- your questions, the annealing 9 steps are a complicated subject in its own right. 10 I have not opined in this matter about the details 11 of annealing steps, did not find it necessary to do 12 so in order to critique the opinions offered by 13 Dr. Sechen in the petition. So I don't have an 14 opinion in this matter with regard to different 15 materials and the consequences on annealing steps. 16 MS. KAISER: Thank you. I appreciate you 17 answering my question. 18 Would it be okay for us to take, like, a 19 five-minute break? I think I'm getting close to 20 done. 21 THE WITNESS: Okay. 22 MS. KAISER: Okay. Let's go off the 23 record. 24 THE VIDEOGRAPHER: Off the record at 25 2:24 p.m.
Page 106 1 question. I will repeat my answer, if you so 2 choose. 3 BY MS. KAISER: 4 Q. So is your answer that you don't have an 5 opinion on that? 6 MS. ARMOND: Objection. Form. 7 THE WITNESS: My opinions -- let me 8 restart that again. 9 My opinions in this matter, with regard to 10 annealing, are limited to the fact that annealing 11 steps are significant especially with regard to 12 thermo budgets of processes and Dr. Sechen, and the 13 petition completely ignored that important aspect 14 in coming to their conclusions about the 15 combination of Asbar and -- and, for example, Lee. 16 BY MS. KAISER: 17 Q. So I understand, Doctor, that you have a 18 lot of things that you want to say that have 19 nothing to do with my question, but I ask that you 20 listen to what I'm actually asking. And if the 21 answer is that it's not fair to say, then you can 22 just say that. But you're talking about references 23 and combinations and petitions and Dr. Sechen that 24 are nowhere in my question. So let me ask my 25 question again.	Page 108 1 (A recess was held from 2:24 p.m. to 2:30 p.m.) 2 THE VIDEOGRAPHER: We're on the record. 3 The time is 2:30 p.m. 4 BY MS. KAISER: 5 Q. All right. I'm going to put in the chat an 6 exhibit in two parts. This exhibit was marked as 7 Exhibit 1040 in your deposition in IPR 2023-00900. 8 We'll keep the same designation here, Exhibit 1040. 9 Let me know when you -- 10 MS. ARMOND: Will that overlap with your 11 stuff? I don't think it does, does it? 12 MS. KAISER: It doesn't. 13 MS. ARMOND: I will object on grounds of 14 relevance. So FRE, like, 401, 403, and hearsay. 15 Okay. Go ahead. 16 MS. KAISER: As far as I understand, all 17 that's for later, but okay. 18 MS. ARMOND: No. I'm supposed to object 19 when the exhibit's introduced. 20 MS. KAISER: Yeah. Anyway. 21 MS. ARMOND: Yeah. It's past that time. 22 MS. KAISER: I don't think people object 23 to relevance. But, okay. Anyway. 24 BY MS. KAISER: 25 Q. If we -- so, Doctor, can you let me know if

1 you have Exhibit 1040, both of its parts? 2 A. Both of its parts. I have -- 3 MS. ARMOND: Taking a while to download. 4 THE WITNESS: Yes. I have both parts up. 5 BY MS. KAISER: 6 Q. Okay. And this is an order from the 7 International Trade Commission in a case where you 8 appeared as a witness, correct? 9 A. It is the initial determination in that ITC 10 matter. 11 Q. And in that ITC matter, you appeared as a 12 witness, correct? 13 A. Yes, I did. 14 Q. You gave testimony in front of the ALJ? 15 A. Yes, I did. 16 Q. If you go to the second part, and do you 17 see at the bottom right-hand corner there are 18 exhibit page numbers? 19 A. Yes. 20 Q. If you go to page number 120 of the 21 exhibit. 22 A. All right. I'm on page 120. 23 Q. If you scroll towards the bottom of that, 24 do you see a heading that says, Rambus' witnesses 25 were dishonest and lacked credibility?	Page 109	1 THE WITNESS: I believe so, yes. 2 MS. KAISER: No further questions. 3 MS. ARMOND: No further questions. 4 MS. KAISER: We can go off the record. 5 THE VIDEOGRAPHER: We're going off the 6 record. The time is 2:35 p.m. 7 THE REPORTER: I believe there is a rough 8 draft order. Does both sides want the rough draft? 9 MS. KAISER: We do. 10 MS. ARMOND: We would like the rough 11 draft. 12 MS. KAISER: So, yes. 13 (Whereupon proceedings concluded at 2:36 p.m.)	Page 111
1 A. I see that heading. 2 Q. And you -- in this matter, you are a 3 witness on behalf of Rambus, correct? 4 A. I was an expert witness in this matter, 5 yes. 6 Q. And you were an expert witness retained by 7 Rambus? 8 A. I was retained by Counsel to help with 9 their representation of Rambus. Yes. 10 Q. If you go to page 144 of the exhibit. 11 A. I am on page 144. 12 Q. Do you see there, about the middle of the 13 page, there's a subheading that says "F." And then 14 Dr. Steven -- now I'm going to get your name wrong 15 after all day. Remind me. I'm sorry. 16 A. Przybylski. 17 Q. Dr. Steven Przybylski. 18 Do you see that? 19 A. I do. 20 Q. And that's you, correct? 21 A. That is me. 22 Q. And in the paragraphs under the Subsection 23 F where it refers to Przybylski, that refers to 24 you, correct? 25 MS. ARMOND: Objection. Form.	Page 110	1 SIGNATURE OF DEPONENT 2 3 I, the undersigned, STEVEN PRZYBYLSKI, 4 PH.D., do hereby certify that I have read the 5 foregoing deposition and find it to be a true and 6 accurate transcription of my testimony, with the 7 following corrections, if any: 8 9 PAGE LINE CHANGE 10 _____ 11 _____ 12 _____ 13 _____ 14 _____ 15 _____ 16 _____ 17 _____ 18 _____ 19 _____ 20 _____ 21 _____ 22 _____ 23 _____ 24 _____ 25 STEVEN PRZYBYLSKI, PH.D., Date	Page 112

REPORTER'S CERTIFICATE

I, NICOLE HATLER, a Shorthand Reporter,
State of California, do hereby certify:

That STEVEN PRZYBYLSKI, PH.D., in the
foregoing deposition named, was present and by me
sworn as a witness in the above-entitled action at
the time and place therein specified;

That said deposition was taken before me at
said time and place, and was taken down in
shorthand by me, a Certified Shorthand Reporter of
the State of California, and was thereafter
transcribed into typewriting, and that the
foregoing transcript constitutes a full, true and
correct report of said deposition and of the
proceedings that took place;

IN WITNESS WHEREOF, I have hereunder
subscribed my hand this 29th day of May 2024.

NICOLE HATLER, CSR NO. 13730
State of California

WORD INDEX

< 1 >

1 2:11 10:12, 20
 11:1 44:21 45:25
 46:7 47:22 48:13
 51:9, 18, 19 52:18
 59:21 66:3 72:23
 79:19 87:14, 15, 19
 96:5, 16
1,100 100:23
1,100-degree 103:20
1:53 96:25 97:1
10:11 34:3, 5
100 9:14 14:5, 13
 72:5 88:16 100:22
1001 6:7, 18 7:21
 8:3, 6 24:3, 12, 14
 25:6
1002 24:4, 17 25:7
1003 29:19
1004 29:24 31:4
1005 26:17, 20, 24
 27:1, 7, 9, 24 28:4, 8,
 15, 21, 24 29:10, 24
 31:4, 8, 9, 14 32:3
1006 29:24 31:4
1007 27:15, 16, 21
 28:4, 8, 15, 18 29:20
 62:24 64:11, 16, 23
 65:12 66:12 68:2
 70:14 72:2 75:16, 22
 80:25
1012 73:23 84:24
102 65:14, 20 66:5
1029 6:19, 23
103 83:21
1031 73:14 74:16
104 65:14, 20 66:5
1040 108:7, 8 109:1
106 65:15, 20 66:5
107 66:17 74:17
 84:22, 23 85:2, 9
1071 95:14
1076 94:25 95:1, 2
108 65:22 66:1
 68:18, 19, 22, 25 69:6,
 9 85:20
10th 93:7

11 20:16, 18, 19
 96:24
11:04 61:17, 18
11:15 61:18, 20 62:7,
 8
11:16 62:8, 10
11:44 75:8, 9
110 69:13, 16, 19
111 81:23, 25 82:9,
 15, 18 83:13 84:15
 85:16
1112 88:16
1117 89:21
112 69:14
114 79:24
1171 85:24 86:7, 17
 87:17 88:2, 9 89:14
 90:4 91:3, 12, 15
 92:10 93:24 96:16
1172 85:25 86:8, 18
 87:19 88:2 89:15
 91:15 94:14, 20
 95:23 96:12, 17
12 23:22, 23, 24 24:2,
 20, 24, 25 25:4, 8, 20
 26:22 28:18 29:17,
 25 30:20, 25 33:10
 56:3, 5, 6 58:10 69:3
12:48 75:9, 11
120 109:20, 22
1206 86:13, 16 87:24
 89:11 90:6, 8, 11, 13,
 15, 25 91:8
1207 86:13 93:4, 5,
 15
122 63:23 64:23
 65:7, 11 68:20
125 63:23 64:23
 68:2, 4, 11, 14, 17, 20,
 22, 25 69:16, 20 70:9
 80:14
126 71:6, 12, 13, 17
 76:9, 24 77:11, 17, 22
127 70:21 71:5
 76:16, 19
13 52:18 59:22, 23,
 25
131 77:22
1320 93:7, 16, 20, 25

94:4, 7
135 82:1
13730 1:19 5:24
 113:21
138 72:3, 7, 9, 12
139 66:20
13B 52:19
14 22:2, 3, 6 34:17
 73:20
144 110:10, 11
148 100:22
15 9:1 16:18 22:18,
 19, 20 23:4, 11 59:22,
 23, 25
150 63:5
151 47:10, 24 48:15
 51:11
17 34:18
184 104:16
1840 94:9, 19, 21, 23
 95:2 96:4
1900 3:17
192 96:6
193 96:8
1997 20:20
1A 59:17, 20, 22, 24
 60:1 63:6, 8, 17, 20,
 22 64:4, 17, 19 65:25
 66:9, 12 67:8, 12, 18
 68:21 70:6, 8 71:20
 73:3 79:15, 19, 22, 24
 80:2, 6, 13, 21
1B 67:1, 4, 9, 12, 15,
 17, 19 68:1, 5, 22, 24
 69:3, 4, 9, 12, 23 70:3,
 6, 9, 11 73:3 80:1, 5,
 12, 14, 16, 21
1B's 80:9
1C 80:22

< 2 >

2 2:12 55:19, 21, 22
 70:13, 14, 16, 18, 22
 71:2, 14, 22 72:24
 73:3 75:23, 24 76:2,
 13, 17, 23 77:8, 15, 19,
 21 86:25 87:1
2:03 97:1, 3
2:24 107:25 108:1

2:30 108:1, 3
2:35 111:6
2:36 111:13
20 9:1 11:2 16:18
 26:13 86:24
2000 28:20
20005-3960 3:21
2002/0028541 27:4, 17
2002/0154556 73:15
201 77:15, 18, 19
 78:5, 6
202 3:21 73:6 77:7,
 8
2023-00900 14:9
 108:7
2023-00991 11:2
 55:16, 20
2023-00991.....55
 2:12
2023-0991 11:9
2024 1:20 3:6 5:6
 113:19
2025 5:25
2029 6:8, 23, 24 7:22
 8:10 11:21 13:23
 14:14 20:13 22:1, 18
 23:21 25:9 26:23
 28:19 29:18 34:9
 35:11 42:13 46:9
 59:12 61:25 62:14
 85:21 97:21
2030 97:8
206 73:6 77:7, 8
207 71:14, 18 76:22,
 25 77:3 78:8
208 73:6 77:7, 8
2096 78:22
20th 13:1
214 76:13, 16 77:2
218 76:17, 20 77:2
23rd 13:14
24 1:20
24th 3:6 5:5
29th 113:19
2's 76:7

< 3 >

3 23:25 31:15 97:23,
 24, 25

30 16:3, 5	7,052,9412 26:21	a.m 3:7 5:5 7:8, 9,	adjacent 95:25 96:15
303 3:18	7,378,702 1:7	11 34:2, 3, 5 61:17,	admits 85:24
3102 84:10, 15	70 96:21	18, 20 62:7, 8 75:8, 9	admonition 37:23
3103 82:13, 16, 17	700 3:20	A1 73:15	adopt 42:9
83:14, 22	702 8:3 12:5 24:3,	AA 87:18	agent 20:21, 23 21:1,
3105 82:8, 10 83:16	11, 13, 16 34:18, 21	abbreviate 45:22	5, 8, 13, 16, 19 22:11
35 81:18, 20 82:6, 12	35:12, 14, 18 40:1, 17,	ability 51:14	32:22
84:9	21 42:6, 17, 25 44:21	able 26:19 55:24	ago 26:13
38 63:24 64:1, 16	45:25 46:3, 8 47:23	72:8	agree 26:23 28:17
72:6	48:14, 19, 23 49:3, 7	above-entitled 113:8	29:6, 23 43:19 63:8
39 66:18, 20, 21, 24,	50:20 51:9, 20 52:12	Absolutely 9:19 75:4,	65:25 69:21 70:17,
25 67:3	54:2, 18 55:8 60:14,	21 78:14	25 71:18 72:10, 20
390 4:3	21 87:2	access 31:5 73:22, 24	73:3 76:6 78:8
< 4 >	72 95:14	accumulated 31:12	84:12 86:7 88:23
4 35:15	7's 81:4	accurate 21:18	93:12, 17, 19 95:4, 7,
40 26:2 87:5	< 8 >	28:11 29:12 36:2, 6	24 96:13
401 108:14	8 64:25 65:2, 5	57:10 59:10 69:11	ahead 6:2 39:6
403 108:14	800 3:20	88:19, 21, 22 89:7, 9	74:25 96:22 108:15
43 87:11, 12, 13	80202-5255 3:17	91:20 92:13 97:15	aligned 65:21 76:10
44 87:3, 5, 6, 8, 25	840 96:2, 4, 5, 18	102:16 112:6	77:7 89:2
90:4 91:3, 12 92:6	88 53:2, 4, 11	accurately 29:14	ALJ 109:14
96:14	89 34:10, 13	accused 54:1, 18	allegations 57:11
45 35:15 88:1 92:6	< 9 >	60:13	allow 9:8 100:25
94:16	9:03 3:6 5:5	accuses 55:7	101:5
454-2907 3:18	9:07 7:8, 9	accusing 54:25 60:20	allowed 37:24
46 35:15	9:08 7:9, 11	achieve 104:7	altered 42:20
4685 4:3	9:58 34:2, 3	acknowledge 89:1	Amended 10:22
48 44:20	90 35:3, 6, 10, 16, 25	91:14	11:3 21:11
48105 14:25	40:22, 25 41:6, 14	acronym 35:12	amps 83:14
49 61:25 62:15, 23	43:11 44:4, 18, 20	40:17, 20 42:15, 18	analyses 19:22
< 5 >	46:8 51:19 78:22	44:12	analysis 19:4, 9, 20
5 22:7, 15	79:7 87:20	acting 21:13	22:22 23:16 33:9
50 17:13, 14 63:11,	92660 4:3	action 3:10 113:8	53:9
19	93 40:5	active 83:9	Ann 14:24
51 46:19	932-0778 4:4	actual 20:6 68:24	annealed 100:22
54 52:1	94 34:20 36:7, 17, 19	added 33:19	annealing 100:16, 19,
5630 14:24	37:7, 10, 20 38:3	addition 20:20 24:5	20 101:4, 10, 15, 17
< 6 >	40:10, 19, 25 41:15,	26:8 30:25 47:12	102:9, 16, 24 103:1, 7,
65 85:17	17 42:13 44:14	101:23	14, 18, 23 104:4, 18,
654-3337 3:21	46:15	additional 33:19	25 105:3, 6, 12, 23
< 7 >	941 27:25	101:22 103:22	106:10 107:5, 8, 11,
7 57:1 72:2, 4, 9, 10,	949 4:4	additionally 24:4	15
15, 17, 22, 24 73:2, 5	96 65:4, 6	add-on 52:18, 20, 25	annotated 44:22
80:25 81:2, 8, 10, 15	97 59:13, 15, 16 60:2	53:6, 15 54:25 56:19	45:1 87:14, 16 88:2,
7,052,941 26:18	< A >	57:13, 19 58:4, 15	4 89:22, 23 90:3
		address 50:11	91:2, 12, 18, 23 92:5
		addressed 69:6	94:6, 16, 18 96:1
		adequate 74:9	annotations 8:7, 17
		adhered 56:21 58:17	88:7, 10, 15, 19, 21, 22

89:1, 7, 8 91:19 92:13 answer 9:9, 22, 23 10:6 15:2 30:9 37:4, 17, 24, 25 38:13 47:19 49:15 50:10 51:8 102:5 105:16 106:1, 4, 21 answered 30:6, 11 38:22 41:12 44:8 50:18 51:6, 13, 14 105:25 answering 39:1 50:17 51:3 107:17 answers 9:7 37:24 50:13 89:15 anyway 50:21 108:20, 23 anyways 12:20 apologies 48:5 62:12 74:22 82:4 apologize 7:15 13:12 54:10 62:3 65:9 69:7 72:7 89:19 apparently 28:13 APPEAL 1:2 11:10 16:14 appear 52:2 86:19 APPEARANCES 3:14 appeared 3:9 109:8, 11 appears 34:17 application 21:15 27:3, 17 73:15 applications 28:14 apply 22:15 53:8 appreciate 30:10 49:14 59:4 75:20 86:15 107:16 approach 17:18 appropriate 23:4 32:14 34:16 37:25 48:2 53:8 104:7 appropriately 89:4 Approximately 15:18 Arbor 14:25 architecture 85:25 86:5, 8, 20	architectures 99:9 area 98:15 argue 56:14, 19 57:2 arguments 48:25 49:8 59:20 ARMOND 4:2 5:19, 20 6:1, 3, 21 7:4, 23 10:14, 19 13:5, 20, 22 17:20 18:9 19:15 29:1 30:6, 12, 23 33:21 38:25 39:7 49:23 50:5, 17, 25 54:4, 8 62:5 64:6, 12 73:19 74:2, 6, 23 75:2 81:6 82:23 95:12 96:20 104:10 105:24 106:6 107:6 108:10, 13, 18, 21 109:3 110:25 111:3, 10 arranged 90:24 91:9 array 85:19 91:16 arrow 45:6 art 12:2, 6 22:25 23:5 35:19 57:17 58:11, 20 69:22 70:2, 18 71:1 72:21 73:4 76:1, 7 80:17 81:11 83:7, 20 84:13 95:5, 8 105:22 107:4 articulate 49:5 63:19 articulated 43:10 104:15 articulating 44:17 articulation 43:16, 20 Asbar 12:12 100:21 101:9 103:19 105:5, 10 106:15 asked 15:22 23:19 30:6, 11 37:2 41:12 49:11 53:5, 7, 12, 16, 21, 22 57:13, 18, 20, 25 58:5 59:24 60:3, 4, 7 62:13 90:8 asking 14:25 25:10 37:5 38:7, 9, 18 43:18 48:3, 4 49:15 51:24 92:23 106:20	aspect 46:22, 25 47:7 52:4 66:6 73:7 104:17 105:8 106:13 aspects 100:10 assessment 58:19 assign 10:15 assistance 86:15 assume 53:7 58:15 78:6 80:15 88:20, 25 assuming 28:10 88:22 89:8 assumption 58:18 78:7 atoms 100:25 101:5 attached 60:24 77:2, 4 attempt 54:24 attention 27:2 55:11 71:6 72:2 75:15 81:17, 23 attorney 21:12, 13 22:4 attorney-client 17:21 19:16 29:2 audience 99:11 aware 32:20 54:20 55:4 < B > back 7:10, 13 22:1 23:21 26:5 33:10 34:7 40:9, 22 44:4 50:21 59:12 61:19, 22, 24 62:9 64:14 68:9 69:4 75:13, 15, 23 82:3, 7 83:12 84:9 92:12 93:24 97:2, 5 background 20:7 54:5, 10 badgering 43:23 50:6, 25 51:4 bag 103:2 base 19:4, 8 based 25:11 36:18 37:6, 12, 19 41:14 70:20 86:16 93:14 basically 57:15	basis 25:6 31:18 32:7, 11 38:7, 18 39:20, 22 BB 87:20 Beach 4:3 began 19:5, 10 behalf 5:16 16:25 110:3 believe 12:25 16:8 27:12, 17 35:3 36:5 38:22 65:4 73:1 78:21 80:11 84:22 86:13 96:6 105:25 111:1, 7 BESANG 1:7 5:8, 20 54:1, 17, 24 55:7 60:9, 13, 20 98:1 best 9:12 28:23 51:14 97:16 better 66:10 84:1, 5 90:7 bit 18:25 47:19 50:8 53:13 62:19 blanking 13:21 blisters 101:12 blue 88:12 BOARD 1:2 11:10 16:14 18:4 body 65:14 bonded 56:20 book 99:20, 24 100:3, 6 books 99:18 bother 32:19 bottom 56:6 58:10 65:12 70:10 109:17, 23 break 10:1, 2, 7 33:22 47:1 61:14 74:24 76:22 84:19 95:18, 21 96:23 107:19 breakdown 17:12 brief 61:3 86:18 briefly 12:14 46:3 61:3, 9 bringing 63:13 budgets 104:16 106:12
---	--	--	---

built 47:6 98:17 99:2 bulbs 83:25 bulk 36:16 bunch 49:16, 18 < C > CA 4:3 California 1:19 3:9 5:23 113:5, 13, 22 call 10:11 55:21 called 101:15 calls 33:4 capability 68:5 92:15 carried 20:6 Case 1:6 16:8, 10 22:10, 14 23:15 50:15 52:9 53:25 54:16, 23 55:3 58:9 60:20 63:3 79:13 103:18 109:7 cases 16:6, 8, 12, 15 100:11 category 26:11 cause 3:12 caution 17:20 18:9 19:15 CCP 5:25 cell 63:9, 18, 20 66:13 69:23 70:19, 24 71:2 72:11, 19, 22 76:2 79:20 80:9 81:4 86:20 88:10, 11 cells 52:22 86:17 88:13, 24 89:5, 9 90:23 91:9, 17 96:19 99:21 100:7, 8 Celsius 100:23 center 69:6, 10 central 100:12 cents 83:14 certainly 17:4 20:7 21:9, 21 22:17 55:11 57:20 58:6 60:17, 23 66:2 90:10 93:19 98:11 99:8 CERTIFICATE 113:1 Certified 3:8 5:23	113:12 certify 112:4 113:5 challenged 50:15 change 28:7 42:2, 3, 7, 9 103:17 112:9 changes 33:17 changing 41:23 chapter 100:4 character 94:5 characteristics 77:24 characterization 44:1, 9 49:25 61:10 84:2, 5 102:15 characterizations 89:24 characterize 49:7 characterized 66:14 92:22 94:4, 9 characterizes 64:5, 17 66:2 67:3 71:21 72:16 93:15 95:2 characterizing 49:13 93:20 charge 69:16, 19, 25 72:17 83:15 chat 6:18 7:21 10:11 26:17 27:16 73:13 97:7 108:5 choose 106:2 CHRIS 3:18 5:17 ChrisMoulder@perkin scoie.com 3:22 circuit 35:9 83:10 85:17 94:8 circuits 26:4 82:16, 18, 21 83:7, 14, 21, 22 98:8, 13 99:2, 4 circular 67:20 circumstances 102:17 citation 86:2 citations 33:19 cite 31:13, 22 32:5, 19 cited 12:3 18:13 24:5 25:1, 8, 22 31:1, 19 32:1, 13 35:16 58:23 claim 22:22, 23, 24 23:7 34:17 claimed 78:14, 17, 19	claims 19:21 34:17 52:18 54:2, 18 59:22, 23, 25 60:14, 21 clarification 47:16 84:3 90:2 clarify 9:17 43:6 47:15 clarifying 6:2 47:19 clean 6:6 7:16 8:9, 18 cleaning 101:13 clear 9:13 38:15, 18 39:12 47:22 49:10 69:8, 15 78:16 clearer 96:11 clearly 19:23 43:10 close 65:22 95:13 107:19 closer 75:19 CMOS 83:17 co-director 15:14 Coie 3:16, 20 5:16, 18 coincident 77:5 collaborative 18:20 collection 48:8 61:1 66:4 Colorado 3:17 column 35:15 combination 100:2, 15 105:10 106:15 combinations 106:23 combined 73:7 come 81:15 comes 57:1 coming 103:5 106:14 commenced 17:25 commencing 3:6 comment 63:20 Commission 109:7 common 19:25 commonality 20:4 28:11, 12, 13 communications 19:17 community 25:13 company 15:4 comparable 16:22 46:23 52:14	compare 58:9 compared 22:24 comparison 59:8 complaint 55:7 57:6, 9 60:19, 25 61:6, 7 complete 9:9 51:16 84:20 completely 8:9, 18 105:8 106:13 completion 14:3 complicated 107:9 complications 103:22 components 77:23 83:10 concept 33:1, 2, 3 concepts 26:5 concluded 37:12 111:13 conclusion 59:2 78:12 81:16 conclusions 106:14 concrete 26:16 conductive 78:2 conference 5:9 6:6 CONFERENCING 1:13 3:1 configuration 86:3, 5 configured 89:4 confirm 7:25 25:5 confirmed 88:15, 18 89:6 94:7 confused 43:21 64:6 confusion 48:11 65:10 conjunction 80:21 103:16 connect 96:19 connected 89:5, 10, 13 91:16 95:25 96:14 connection 80:13 86:17 consequences 105:5 107:15 consider 25:24 30:4, 21 52:6 102:23 103:13 consideration 42:10 57:22 86:18 102:19 104:24 105:22 107:4
---	--	--	--

considered 23:25 24:11 26:25 28:20 31:16 33:12 43:2 55:12, 17 consistent 42:18 63:22 87:21, 23 91:1, 24 consistently 68:20 constitutes 79:11 113:15 constraints 99:13 constriction 53:6, 8 constructed 46:18 construction 34:11, 16 36:8, 11 37:11 38:4, 20 40:10, 14, 19, 24 41:16, 24 42:5, 12, 21 43:9 44:2, 15 46:1, 13, 14, 25 48:22 51:25 52:7, 15, 24 53:15 55:5 57:15 58:4, 9 78:8 92:2 construe 71:19 construed 22:23 contact 65:14, 15 67:18 contents 36:16 100:4 context 27:6 32:15 34:21 35:8, 12, 17 39:18, 25 83:4, 6 100:20 101:4 102:1 contexts 101:22 control 69:2 76:18, 20 77:2, 6 89:3 convenience 51:2 convey 35:5 86:6 conveying 100:12 co-owner 15:13 co-pending 60:8, 13 copies 6:6, 21 7:24 8:20 copy 8:2, 6, 9, 11, 15, 18 28:24 corner 109:17 CORPORATION 1:4 5:8 15:14 correct 8:4, 5, 13, 14 11:22 12:22 13:15 14:11, 12 15:16, 25 22:4, 5 24:12, 17	25:9 27:1 28:21, 22 34:18 35:13, 23 36:18 37:6, 19 40:12, 24 41:15 47:2, 10, 11, 25 48:16, 17 50:2 52:11, 18 53:8, 23, 24 58:4 59:18 60:1, 5, 6 63:3, 18 64:4, 18 65:8, 9 66:9, 13 67:14 68:14, 18, 23 70:4 71:3 76:14 77:3, 10, 16, 20 78:17, 20 79:4, 7, 23 80:10, 18 81:12 89:1, 21 90:6 92:11 101:19 109:8, 12 110:3, 20, 24 113:16 corrected 7:17 correcting 94:11 corrections 97:17 112:7 correctly 6:15 10:23 58:16 79:4 Counsel 5:12 9:20 10:2, 14 11:17 12:22 18:15 20:9 22:13 23:9, 10, 18 39:1 49:17 53:22 60:5 84:19 110:8 count 16:16 couple 57:14 75:16 87:23 95:16 course 33:17 63:15 81:21 Court 4:3 5:11, 13 9:4 29:14 54:3, 19, 21 55:1, 3, 6 57:6, 9 60:8, 20 75:19 cover 84:24 create 98:12 creating 103:3 credibility 109:25 critical 104:18 criticizing 50:7 critique 107:12 crosses 71:8 cross-examination 50:1 cross-section 87:18,	20, 21 cross-sections 96:17 crystalline 101:1, 6 CSR 1:19 113:21 current 76:11 77:6 79:25 currently 14:23 15:4, 6 CV 97:8, 10, 11 99:5, 16, 19 cylindrical 67:21 96:19 < D > damage 104:19 date 5:5 112:24 dates 28:14 day 3:6 37:15, 17 51:3 110:15 113:19 DC 3:21 deal 27:13 dealt 100:9 decided 33:10, 11 deciding 102:24 103:13 decision 33:13 declaration 6:8 8:12 11:14, 19 13:23, 25 14:3, 4, 15, 18 16:2 17:19 18:7, 12, 19, 21 19:7, 11, 12, 13 20:3, 13 22:16 24:7 25:23 28:19 29:17 30:5, 20, 22 31:3, 14, 16, 19, 20 32:5, 8, 11, 12, 15, 19 33:18 34:8, 15 39:21 44:21 46:9 48:25 49:6, 12 50:14, 19 52:10 55:13 59:3, 7, 8, 10 61:24 62:14 68:8 78:11, 22 84:22, 23 85:2, 21 91:14 97:20 105:2 declarations 14:15 20:8 dedicated 17:8 defects 100:23 101:1, 6, 11 103:21 Defendant 4:1	deficiencies 49:8 defines 40:17 42:18 definitions 36:25 definitive 78:13 degree 21:22, 25 32:1 degrees 87:20 100:23 Dennis 4:4 5:9 density 77:13 Denver 3:17 Dep 55:21 depending 83:6 103:4 depicted 47:4 depicts 63:9, 17 64:4 73:5 Depo 2:11 DEPONENT 112:1 deposed 8:23 16:19 deposited 93:7 DEPOSITION 1:13 3:1 5:6, 8, 24 6:15 10:12, 22 11:1, 4, 13 12:18 13:11 16:2 37:16 49:2 51:2 55:20 108:7 112:5 113:7, 10, 16 depositions 16:20 derived 33:16 derives 36:22 38:5 describe 76:9 77:23 80:19 82:17 86:11 described 76:15, 20 96:3 describes 68:25 77:12, 18 82:15 84:15 describing 67:1 76:22 86:16 description 63:22 70:9, 21 77:21 80:13, 21 81:15 design 98:3, 6, 7 103:8, 25 104:6, 17 designation 108:8 designed 102:9 103:17 104:13 designing 98:9, 20 104:4, 25 105:22 107:4
---	---	--	---

desired 101:9 103:3, 6 104:6 detail 18:12 detailed 99:24 details 100:11 105:11 107:10 determination 109:9 determine 54:24 57:10 determining 22:21 23:5, 13 developed 98:23 developing 102:22 103:11 development 98:25 101:12 developments 21:20, 25 device 34:25 35:7, 8, 21 41:2, 8, 19, 21 42:1, 21 43:13 44:5 45:7 47:13 69:25 70:1 72:17, 18 78:23 82:20 83:5 85:19 devices 45:2 72:13 83:3, 23, 24 84:1, 5 98:3 99:7 diagram 85:18 diametric 46:19 dictionaries 36:25 37:12 52:13 dielectric 72:14 84:14, 17 difference 38:10, 12 different 18:25 25:17 28:6 29:3, 7 41:13 43:1 53:13 73:11 74:22 83:5 86:24 87:19 94:2, 12 100:8 101:22 107:14 difficult 17:12 26:11 difficulties 7:17 direct 34:9 40:20 53:1 71:6 72:1 75:15 81:17, 22 94:24 directed 50:14, 19 82:9 direction 66:22	directly 42:24 56:21 disagree 30:12 discern 39:5 disclosed 80:23 discloses 85:14 disclosing 91:15 disclosure 77:14 92:14 93:14, 22 disclosures 32:23 disconcerting 50:16 discussed 71:20 discussing 52:9 discussion 79:21 80:5 81:8 discussions 18:15 72:23 dishonest 109:25 disposal 14:6 disposed 83:15 distinct 16:9 district 54:3, 19, 21 55:1, 3, 6 57:6, 9 60:8, 19 divorce 39:22 Doctor 106:17 108:25 document 10:10 11:5 24:5 26:12 33:4, 6 55:19 65:1, 4 73:20 documents 6:5, 17, 20 7:20, 23 8:21 11:15 12:17 21:7 24:25 25:7, 19 26:3, 6 31:1, 13, 21, 25 32:14, 17 33:14, 18 doing 9:3 30:10 57:24 61:4 domain 102:3 doped 47:18, 24 48:15 51:11 77:9 79:5 89:3 92:10, 16 doping 77:13 download 26:19 55:24 73:18, 25 109:3 downloaded 10:23 31:6 55:10 60:24 61:1, 8	Dr 5:17 6:5, 11 7:20 12:3 19:22 32:6 34:7 37:2 39:12 48:25 49:9 51:6 53:10 54:16 59:1 75:13 85:24 97:5 105:7 106:12, 23 107:13 110:14, 17 draft 18:19 19:6, 11 33:14, 15 111:8, 11 drafted 21:11 drafting 17:19 20:2 drain 65:15 DRAM 99:9, 17, 20, 21 100:7, 8 DRAMs 99:21 draw 27:2 drawn 20:4 46:19, 23 47:5 48:1 52:3 66:5, 8 71:22 73:6 92:6 drew 19:5, 10 driver 82:16, 17, 19 83:14, 21, 22 ducks 75:5 due 42:3, 10 duly 3:11 duration 102:18 103:16 < E > earlier 16:21 23:8 31:21 43:18 60:7 64:22 78:23 79:18 80:1, 5, 8 81:3 82:19 86:21 93:10 101:10 ease 45:16 easier 94:17 economics 99:3 education 99:11 EE 86:20 effect 78:10 101:9 103:17 effectiveness 99:1 effects 104:18 effort 18:20 19:2 42:4 53:18 58:1 Either 74:1 92:25 94:15 95:19 elaborate 37:25	electrical 83:22, 24 93:3 Electronic 84:1, 4 element 52:19 68:18 71:14 embodiment 64:21 67:7 77:14 employee 15:12, 13 employees 15:8 encompasses 56:20 58:16 endeavor 6:14 9:5 endeavored 19:19 22:17 23:14, 19 Endoh 73:15 84:18 85:10, 13, 17 86:11 87:14, 24 88:3, 6 89:11, 25 91:8 92:7, 10, 14, 21 93:4, 15, 18, 19, 23 94:25 95:23 96:3, 12 Endoh's 85:24 86:7 90:3 engagement 17:25 18:6 engagements 17:10, 11, 15 engaging 39:4 engineer 98:13, 22 engineers 100:6 enlightened 100:14 entire 18:1 33:6 74:9 80:21 104:13 entitled 32:7 enumerated 25:20 29:25 30:19 especially 74:12 106:11 essential 104:17 essentially 42:15 established 40:16 evidenced 19:22 exact 100:4 exactly 20:5 36:3 41:11 82:24 84:7 EXAMINATION 2:3 6:10 examined 3:11 52:12, 13
---	---	---	--

example 21:16 26:16
29:18, 23 88:16 99:8,
13, 17 100:20 104:15
105:10 106:15
excerpts 73:14
Exhibit 2:11, 12 6:7,
8, 18, 19 7:21, 22 8:3,
6, 10 10:12, 15, 20
11:1, 21 12:8 13:23
14:14 20:13 22:1, 18
23:21 24:3, 4, 12, 14,
17, 24 25:6, 7, 9, 21
26:17, 23, 24 27:1, 7,
9, 15, 16, 21, 24 28:4,
8, 18, 19, 20, 21, 24
29:10, 18, 19, 20 34:9
35:11 42:13 46:9
55:9, 21, 22 59:12
61:6, 25 62:14, 24
64:8, 11, 16, 23 65:12
66:12, 17 68:2 70:14
72:2 73:11, 14, 23
74:4, 9, 16, 20, 22
75:16, 22 80:25
84:24 85:21 86:22
97:8, 21 108:6, 7, 8
109:1, 18, 21 110:10
exhibits 11:15, 24
12:1 26:20 29:23
30:3, 18 31:4, 5
33:11 60:24 61:1
exhibit's 108:19
exist 89:25 91:17
98:25
Existing 56:7
expanded 42:15
expansion 40:20
44:11
expect 32:13
expediency 45:22
experience 26:2, 7
98:19
expert 6:7 15:15, 22
16:1, 2, 11, 13, 24, 25
17:8, 10, 14, 16 18:5
33:8 98:2, 9 110:4, 6
explained 51:15
92:1 100:21
explains 18:14

explicitly 40:4
exploration 99:11
exposition 48:21
extent 20:3 31:9, 24
44:18 93:21

< F >
fabricate 78:24
fabricated 35:22
41:3, 9, 20 43:14
44:6 46:22 48:1
100:7, 9
fabrication 98:9, 18,
20 99:6, 20, 22, 25
100:5, 12, 17 101:17
102:22 103:12, 25
104:5
faced 42:20
faces 67:19
facilitate 101:12
fact 28:17 88:16
92:6 105:7 106:10
factors 102:23
103:12
fair 25:23 30:2, 17
31:18 42:16 44:1
55:15 59:7 61:10
83:23 102:8 103:9
104:9, 22 105:19
106:21 107:1
fairly 14:1 77:24
familiar 26:3 31:8
32:22, 25 35:19 36:1
43:12 100:16
familiarity 31:7
42:19
far 9:3 12:19 17:12
52:1 59:6 93:2
108:16
feel 6:16 9:6 10:3
88:6
field 98:2
Figure 44:21 45:9,
25 46:7 47:22 48:13
51:9, 18, 19 63:6, 8,
12, 17, 20, 22 64:4, 17,
19 65:25 66:3, 9, 12
67:1, 4, 8, 12 68:1, 22,
24 69:3, 4, 9, 12, 23
70:3, 6, 8, 13, 14, 16,

18, 22 71:2, 14, 20, 22
72:2, 4, 9, 10, 15, 17,
22, 24 73:2, 5 75:23,
24 76:2, 7, 13, 17, 22
77:8, 15, 19, 21 79:15,
19, 22, 24 80:1, 2, 9,
12, 13, 14, 16, 25 81:2,
4, 8, 10, 15, 18, 20
82:6, 12 85:17 87:14,
15, 17, 19 88:2, 9
89:14, 15, 22 90:3
91:3, 12 92:9 93:24
94:14, 20 95:23 96:5,
12, 16
figures 67:17 68:21
72:23 79:9 85:24
86:7, 12, 18, 19 88:5
89:24 91:15 95:21
96:16
file 10:16 24:4, 16, 18
filed 21:7, 15 31:6
film 93:7, 8, 16 94:7
films 93:1 94:6
final 33:20
finalize 18:20
find 33:9 107:11
112:5
fine 49:17 54:12
67:23
finish 95:20
finished 102:5
firm 16:4
first 3:11 12:24
18:19 22:23 27:22
33:15 56:7, 16 65:14
71:9, 11, 16 88:10
90:21 97:25 99:18
fit 38:14
five 17:7 90:16
five-minute 107:19
flash 85:18, 19 91:15
floating 70:23 76:14,
15 77:1, 5
flow 76:11 77:6
79:25 103:7
fluent 98:11
Focus 5:10 18:16
focused 14:2 25:14
focusing 16:12 82:6

follow 21:21 23:19
followed 18:23
following 24:6 31:2
112:7
follows 5:3 86:2
footnote 56:25 57:1,
4, 5
foregoing 112:5
113:7, 15
forgot 7:16
form 15:24 18:18
53:22 57:13, 18 58:5,
19 65:22 70:7 72:14
80:11 81:6 82:23
104:10 105:13, 24
106:6 107:6 110:25
formal 53:19
formally 53:16
formed 23:15 51:22
52:10, 23 63:21
95:10
forming 17:18 19:6,
10 22:14 24:10, 15
25:24 30:4, 22 31:9
32:18 53:18 55:14
58:8 63:3
forth 82:3, 7
forward 20:6 49:9
62:20
four 67:19 90:16
94:3
fourth 95:2
fourth-level 96:18
FRE 108:14
free 6:16 88:6
fresh 19:20
friend 9:3 75:19
front 7:24 8:11, 16
11:6, 10 16:13 20:12,
15 73:24 84:24 90:9
109:14
full 35:4 92:14
113:15
functional 104:12
further 111:2, 3
furthest 45:25 46:12
FYI 74:24

< G >

gate 67:18, 20 69:1, 3, 14 70:23 76:14, 15, 18, 20 77:2, 5, 6 gates 89:3 gears 73:10 general 17:18 18:8, 11 26:1, 10 31:10 83:7 101:20 102:15 103:1, 15 generalist 98:15 generally 11:16 18:17 21:24 23:17 32:25 36:5 83:24 100:18 generated 33:20 genuinely 43:23 getting 62:18 95:13 107:19 gist 80:4 give 14:20 17:17 26:15 27:6, 10 28:9 66:23 73:11 74:13, 21 75:4 87:7 99:24 given 42:23 79:13 glanced 55:10 61:11 glossed 100:14 Go 6:2 7:4 18:6, 17 20:16 22:1, 18 23:21 27:24 31:10 33:24 34:8 39:6 53:17 54:7 56:3 59:12, 13 61:15, 25 62:3, 15 64:14, 24 66:18 68:2, 9 74:16, 21, 25 75:6, 23 80:24 82:3, 7 84:9, 18, 21 85:20 87:3, 25 88:8 92:12 93:24 94:14, 15 96:22 97:20, 23 107:22 108:15 109:16, 20 110:10 111:4 goal 100:5 104:14 goes 74:6, 7 going 6:14 8:10 10:10 33:10 40:9, 22 44:3 47:15 55:18 61:13 73:11 74:19, 21 75:7 78:15 84:9,	20 96:20 97:7 108:5 110:14 111:5 Good 5:22 6:25 10:8 21:1 33:23 great 27:13 32:21 34:14 52:17 56:3 greater 71:23 73:8 Ground 59:17, 20, 22, 24 60:1 grounds 18:15 108:13 Group 15:6 17:6 guess 16:3 105:15 < H > half 71:9, 11 hand 113:19 handy 68:1 hang 54:8 happen 74:3 86:10 96:2 happening 49:25 happy 10:3 50:11 73:17, 23, 25 74:13 HATLER 1:18 3:8 5:11, 23 113:4, 21 heading 109:24 110:1 heard 101:3 hearing 7:2 16:2 hearsay 108:14 heating 100:24 101:4 height 71:23 73:7 held 5:9 7:9 34:3 61:18 62:8 75:9 97:1 108:1 help 9:3 84:20, 21 110:8 helped 26:7 helpful 94:24 102:20 helps 63:10 86:14 hereunder 113:18 hesitate 42:9 Hey 38:25 high 101:24 102:2, 12, 17 higher 100:1 history 24:4, 16, 18 25:15	Hold 54:4 102:12 honest 50:16 honors 99:19 hopefully 9:6 96:10 hour 3:6 33:21 61:13 95:12 hours 13:3, 17 14:5, 13 hundreds 31:12 < I > idea 32:23 identical 86:5 identification 10:20 55:22 identified 23:4 69:16 84:10 identify 24:25 ignored 105:8 106:13 illustrate 49:8 51:20 illustrated 36:24 Illustrates 67:5 96:17 illustrating 69:12 illustration 64:20 illustrative 48:21 imagine 20:9 immediately 19:1 23:25 impact 105:6 impacts 103:23 104:8 impediment 57:24 important 21:23 29:15 98:14 100:10 106:13 improving 104:20 inaccuracy 69:7 inaccurate 36:5 include 31:4 68:24 102:24 included 26:24 29:24 32:23 48:21 51:19 includes 38:4 59:10 72:24 77:1 80:9 81:4 87:13 101:20 including 12:4 18:13 incomplete 73:21 Incorporated 15:7 33:5	incorrect 6:16 indicate 28:19 indicated 6:21 7:23 23:8 37:10 49:24 57:12 60:22 indirectly 56:21 58:17 industry 25:15 inference 72:15 inform 100:6 information 17:22 informed 22:21 23:11, 12 26:14 infringement 55:1 infringing 54:2, 18 55:8 60:14, 21 initial 19:6, 11 109:9 insert 103:7 instance 86:6 90:22 instruct 50:9 instruction 39:14 instructions 23:18, 20 instructs 9:23 insulated 93:8 insulating 35:22 41:4, 9, 20 43:15 44:6 47:9, 24 48:15 51:11 77:20 78:5, 7, 25 79:5, 11 84:16, 17 92:18, 20 93:16, 18, 21 insulator 69:13 integrated 26:4 35:8 82:21 83:7 94:8 98:7, 12 99:2, 3 INTEL 1:4 5:7, 17 54:2, 18, 25 55:7 60:9 Intel's 53:7 55:15 intend 102:7 intensive 14:2 interaction 18:18 interactions 20:25 21:4, 9 interconnect 95:9, 10 interlayer 84:16 internal 77:25 International 109:7 interparty's 87:2
---	--	--	---

interpreting 54:24 interrupt 9:5 38:25 interrupted 9:7 39:8 interruption 48:10 62:12 introduce 5:12 introduced 108:19 introducing 103:22 invention 64:21 67:7 inventor 12:9 21:10 27:22, 25 inventorship 28:12 invoices 14:6 involvement 32:4 60:16 involves 14:10 IP 21:21 IPR 2:12 6:8 11:2, 9 14:4, 8, 9, 10 19:3, 13, 14 55:16, 19 56:2 60:23 61:6 108:7 IPR2023-00991 1:6 IPRs 16:16 is/being 56:20 island-like 89:13, 17, 20 90:5, 12, 17, 20, 24 91:10 93:25 issue 18:14 issues 55:5 ITC 109:9, 11 Item 27:3 29:18, 20 68:19, 22, 24 73:2 76:13, 17 77:15 79:24 82:8, 10, 12, 15 88:16 96:2 items 73:6 82:12 96:18 99:5 its 24:3 64:17 66:13 71:23 93:2 103:8 107:9 109:1, 2 < J > JESSICA 3:16 5:15 6:11 29:1 49:24 74:24 JKaiser@perkinscoie.com 3:18 Johnson 12:12 Joseph 13:21	Joseph's 13:21 jumped 36:4 juxtaposition 70:8 < K > KAISER 3:16 5:15, 16 6:1, 9, 10, 11 7:1, 6, 12, 15, 19 10:17, 24 18:2, 22 20:11 29:5, 8 30:7, 16 31:17 33:23 34:6 39:3, 9, 11 47:20 50:2, 9, 23 51:5 54:12, 13 55:23 61:21 62:3, 11 64:10, 13 73:22 74:10, 25 75:3, 6, 12 81:9 83:2 84:8 95:15 96:22 97:4 104:21 105:15, 18 106:3, 16 107:16, 22 108:4, 12, 16, 20, 22, 24 109:5 111:2, 4, 9, 12 KAISER.....6 2:3 keep 21:20, 24 30:13 50:8 68:1, 6 108:8 keeping 33:14 40:23 know 9:8, 13, 16 10:2, 12 16:18 18:5 20:1, 16, 24 21:2 23:22 26:19 27:18 30:8 32:7 34:11 36:3 48:9, 19 50:3, 6, 20 54:21 55:2, 24 56:14 59:6, 13 61:25 63:25 66:18 67:24 68:3, 13 70:15 71:7 74:13, 18 80:25 81:18 86:11 96:2 97:9 104:14 105:9 108:9, 25 knowledge 19:4, 9 25:12 26:2, 6, 11 28:23 31:11 97:16 < L > labeled 52:19 70:22 73:2 89:21 90:5 91:3, 13	labeling 69:9 lacked 109:25 Lane 14:24 language 30:24 38:4 42:3, 6, 7, 10, 24 44:4, 9 52:14 89:18 large 105:3 law 21:20, 21 22:7, 11, 12, 15 23:10 lay 36:25 layer 35:23 41:4, 10, 21 43:15 44:7 46:19 47:10, 24 48:15 51:11 52:18, 20, 25 53:6, 15 54:25 56:19, 20, 21 57:13, 19 58:15, 16, 17 72:14 78:25 79:6 84:10, 14, 16, 17 89:14 90:14, 25 91:10 92:18, 20 93:18, 20, 21 94:1, 5, 9, 10, 19, 20, 23 95:3, 4, 9, 25 96:15 layers 58:4 90:12, 17, 20 94:6, 8 95:11 104:19 leading 92:2 Lee 12:12 26:21 27:4, 18, 22 28:1 59:18 60:1 62:24 63:2, 6, 13, 23, 24 64:4, 5, 17, 23 65:11, 25 66:2, 10, 12, 17 67:1 68:3, 18 69:9 70:21 71:13, 14, 17, 21 72:2, 3, 10, 16 75:15, 22 76:9, 19, 22, 24 77:11, 17 79:10, 16, 19, 22 80:24 81:18, 22 82:6, 15 83:8, 13 84:15 105:10 106:15 Lee's 63:8 64:14 70:13 71:2 76:13, 17 77:8 left 45:25 46:12 left-most 45:5 legal 20:7 length 101:18 lengthy 39:4	level 19:4, 8 88:17 100:1 lifting 40:20 light 83:25 limitations 23:6 limited 106:10 line 26:13 69:3, 20 95:9, 14 112:9 lined 75:5 lines 35:15 56:16 59:4 90:16 95:10 link 26:5 list 24:19 27:2, 3 29:25 30:3, 19 31:3, 15 32:2 33:11, 14, 16, 20 listed 25:21 28:18 30:19 31:22, 24 55:12, 17 listen 37:3 49:14 106:20 Literally 64:19 67:17 Litigation 5:10 15:19 60:8, 13 little 7:1 18:25 47:19 50:8, 15 53:13 55:2 73:18 75:18 LLP 3:16, 20 4:2 5:16, 18 13:5, 20, 22 location 15:1 locations 3:7 long 13:2, 16, 24 25:14 longer 73:20 long-time 25:13 look 25:19 26:22 44:16, 19 52:5 63:10, 24 65:11 67:25 70:13 72:8 79:15 81:21, 25 82:1 83:12 85:1, 16 88:6 90:15 93:4, 10 94:17 104:5 looked 12:14 31:8, 25 72:4 looking 8:2 10:21 26:20 32:3 36:11 45:8 56:1, 16 62:2 64:8, 25 66:3 67:8, 13, 15 70:16 75:24 81:2, 20 85:22 87:1,
--	--	---	--

8,12 93:5 95:23 96:12 97:10, 22, 24 looks 68:9 88:17 lot 42:4 104:2 106:18 lunch 74:19, 23 75:25 < M > MacArthur 4:3 major 59:19 majority 16:7, 15 17:4 making 85:5 manage 86:9 manufacturable 104:12 marked 10:20 55:22 86:21 95:24 96:13 108:6 markings 8:8, 16 material 104:23 105:20 107:2 materials 23:25 24:6, 20 25:24 26:24 31:2, 15 33:12 55:12, 17 107:15 matter 5:7 11:16 14:16, 19 19:23 21:14 24:11 26:9 28:11, 25 31:6, 11 32:4 52:20, 24 55:9, 14 59:11 60:16 93:1 105:4 106:9 107:10, 14 109:10, 11 110:2, 4 matters 15:16, 18 16:19, 23 21:23 22:12 23:10 Meadow 14:24 mean 32:13 33:2 35:8 36:1 43:24 44:10, 13, 17 45:18 56:5 74:2 98:6 100:19 meaning 36:23 38:6 66:7 67:13 71:25 73:9 92:3 meanings 83:6	means 36:20 37:8, 21 40:5 43:9 44:3 mechanical 77:25 medium 69:19 meet 6:12 46:1, 12, 24 71:24 78:8 79:6 meeting 52:11 meets 51:25 66:7 73:9 member 25:13 69:17 memories 25:14 98:16 memory 28:3 45:2, 7 52:22 63:9, 18 64:5, 18, 20 66:13 67:4, 6 69:23, 24 70:1, 19, 23, 24 71:2 72:11, 12, 17, 19, 22 76:2 79:19 80:9 81:4 85:18, 19 86:3, 17, 20 88:10, 11, 13, 24 89:5, 9 90:23 91:9, 16, 17 93:2 98:2 99:21 100:8 mentioned 14:8 55:2 71:5 90:11 MICHELLE 4:2 5:19 13:5, 20 30:7 74:12 Michelle.armond@ar mondwilson.com 4:4 Michigan 14:25 micron 14:4, 8, 16, 19 19:1, 3, 12 60:14, 23 61:7 microns 60:20 microphone 75:19 middle 41:5, 6 66:5 69:13 110:12 mind 16:4 40:23 63:14 64:7, 9 68:6 74:17 87:10 104:14 minimizing 104:8 minus 14:7 minute 74:3 minutes 75:16 96:21 mischaracterization 82:25 mischaracterizing 50:21	misinterpreted 15:2 missing 30:3, 18 78:3 misunderstanding 48:5 moment 28:9 Monday 12:25 monitors 67:25 monocrystalline 82:10 83:15, 16 morning 5:22 MOULDER 3:18 5:17 multiple 40:3 < N > N.W 3:20 n+pn 45:21 48:8 name 5:9, 22 6:11, 14 13:22 110:14 named 27:22 113:7 names 12:9 NAND 85:9, 14, 18, 19, 25 86:3, 8, 19 91:15 narrower 92:4, 7 nature 98:24 99:12 necessarily 59:2 necessary 57:21 70:7 107:11 need 9:22 10:1, 4, 14 74:14 88:7 needed 100:13 negative 103:23 104:8 never 21:15 64:7, 8 74:17 new 99:8, 17 Newport 4:3 Nice 6:12 NICOLE 1:18 3:8 5:11, 23 113:4, 21 nitride 92:20 93:1, 7, 16, 17, 20 94:2, 5, 6 nitrides 93:23 noise 54:5 non-expert 17:15 non-patent 16:10 non-process 100:6 non-responsive 105:16	non-volatile 63:9, 17, 20 69:23 70:1, 19, 23 71:2 72:11, 19 Notice 3:5 10:22 11:3 notice.....1 0 2:11 NPN 45:17, 21, 24 46:10 47:1, 8, 22 48:13 49:22 51:10 NPNP 89:2 NPNPN 88:14, 23 89:21 90:5 91:4, 13, 24 92:10 95:24 96:13 nuances 42:25 number 10:15 16:4, 20 21:9, 17 68:25 73:2 109:20 numbered 24:20 87:5, 6 numbering 7:18 numbers 12:8 25:21 64:7 109:18 < O > object 9:20 73:19 105:16 108:13, 18, 22 objected 74:12 objection 30:23 81:6 82:23 104:10 105:24 106:6 107:6 110:25 objections 30:9 50:4 obvious 60:1 obviousness 59:17 offer 18:16 34:15 offered 19:22 51:17, 22 107:12 OFFICE 1:1 14:24 20:25 21:4, 10 oh 47:14 64:7 66:22 69:6 74:17 93:11 Okay 6:9 7:3 8:2, 10 9:20 10:10, 19 11:8, 18 12:17, 21 13:7 14:8 15:24 16:12, 23 20:15 23:24 24:10, 19 25:16 26:15, 22 27:6, 15, 21 28:3, 17 31:18
---	--	---	--

32:10 33:2, 25 35:10, 17 37:14 38:7, 17, 18, 24 39:24 41:11 43:3, 18 44:19 45:5, 10, 16, 19, 23 47:1, 8, 21 48:10 49:10 52:8, 23 53:11 56:18 58:2, 8 59:12, 16, 23 61:5 62:21 64:12, 14 65:7, 19 66:25 67:11, 23 68:12, 16, 17 69:4, 8, 15, 21 70:12 71:11 72:1, 4, 20 73:10 74:11, 16, 25 75:3, 17, 22, 25 78:6, 21 79:3, 15 80:24 81:17, 25 82:5 83:3, 12 84:18, 23 85:20 86:21 87:3, 10, 25 88:6, 20 89:8, 17 90:1, 9, 23 91:21 93:24 94:13, 19, 22 95:22, 23 96:22 99:14 101:3, 14 102:8, 20 107:18, 21, 22 108:15, 17, 23 109:6 once 18:4 72:8 ones 12:13, 15 31:23 86:10 oOo 1:3 3:13 open 6:19 27:19, 20 84:23 opine 23:19 34:20 59:24 105:2 opined 58:22 105:11 107:7, 10 opinion 26:14 34:16, 22 35:11, 18 36:12, 19 37:7, 20 38:8, 9, 19, 20 39:21, 23, 24, 25 40:7 41:2 43:4, 8 45:14 47:8, 22 48:13 49:22 51:9, 18, 22 52:10, 23 53:5, 12, 14, 17, 19, 21, 23 57:13, 18 58:3, 5, 19 59:9 78:10 79:9 106:5 107:14 opinions 17:19 18:16 22:14 23:15	24:10, 15 25:6, 11, 25 26:7 30:4, 22 31:10, 19 32:8, 11, 15, 18 41:14 48:20, 23 49:3 53:10 55:14 57:22 58:8 59:1, 11 63:3 92:25 105:14 106:7, 9 107:12 opportunity 49:19, 20 order 14:5, 7 16:3 58:25 100:24 103:17 105:13 107:12 109:6 111:8 ordinary 35:19 36:23 38:6 57:17 66:7 69:22 70:2, 17 71:1, 25 72:21 73:4, 9 76:1, 6 80:16 81:11 83:20 84:12 92:3, 24 95:5, 7 105:21 107:3 organizational 15:1 orient 70:14 87:17 oriented 52:21 80:23 outside 54:11 outstanding 10:5 overhead 67:6, 13, 17 overlap 108:10 overview 62:23 Owner 1:8 5:20 98:2 owners 17:5 57:11 owner's 57:6 oxide 69:13 < P > p.m 75:9, 11 96:25 97:1, 3 107:25 108:1, 3 111:6, 13 packed 104:2 PAGE 2:2, 9 44:20 56:3, 5, 6, 7, 13 58:10 64:25 65:2, 4, 5, 6 71:8 84:24 87:3, 5, 8, 11, 12, 13 90:4 91:3, 12 96:14 109:18, 20, 22 110:10, 11, 13 112:9 pages 57:14 73:20 87:25 88:5 92:6	Paper 2:12 6:5, 21 7:24 8:2, 6, 11, 15, 20 11:2 55:19 86:24, 25 87:1 paragraph 20:16, 18, 19 22:2, 3, 6, 18, 19, 20 23:2, 4, 11, 21, 23, 24 24:2, 9, 20, 25 25:4, 8, 20 26:22 28:18 29:17, 25 30:20, 25 33:10 34:10, 13, 20 35:1, 3, 6, 10, 16, 25 36:7, 17, 19, 24 37:7, 10, 20 38:3 40:4, 9, 19, 22, 25 41:6, 14, 17 42:13 43:11 44:4, 14, 18, 20 46:8, 15 51:19 52:1 53:2, 4, 11 56:13, 17 59:13, 16 60:2 61:25 62:2, 15, 23 63:5, 11, 19, 24 64:7, 16 65:7, 11, 13 66:18, 24, 25 67:3 68:2, 3, 10, 17, 22 69:16, 20 70:9, 21 71:5, 6, 9, 12, 13, 17 72:3, 5, 12 74:17 76:9, 16, 19, 24 77:11, 17 78:21 79:7 80:14 81:23 82:9, 15, 18 83:12 84:15, 22 85:2, 9, 16, 20 86:16 87:24 90:6, 11, 15, 25 91:8 93:4, 11, 15 94:25 96:6, 8 97:23, 24, 25 100:22 104:16 paragraphs 20:6 63:23 64:23 66:15 68:20 77:22 86:11 89:11 92:1 110:22 parallel 14:4 54:20 55:3 parameters 101:16 103:8 paraphrases 29:13 paraphrasing 35:24 36:2 parse 39:13 part 12:2, 15 17:4 33:8 35:7 44:25	45:9 48:4 52:9 60:25 71:16 74:19 78:5 81:22 85:15 86:3 95:10 99:10 109:16 partial 56:13 particular 14:18 16:16 19:21 26:12 35:1 51:25 86:10 92:5 100:3 101:9 parts 65:20 108:6 109:1, 2, 4 passed 60:16 passing 61:11 passive 83:9 PATENT 1:1, 2, 7, 8 5:20 6:7 8:3 11:10 12:5 14:10 16:6, 8, 12, 14 17:5 18:13 20:20, 23, 25 21:4, 8, 10, 12, 15, 16, 19, 20 22:11, 22 23:6 24:3, 11, 14, 16 26:18, 20 27:3, 16, 25 32:22, 24 33:4, 7 34:18, 22 35:12, 15, 18 40:2, 21 42:6, 17, 25 44:22 46:1, 3, 8 47:23 48:14, 19 49:4, 7 50:15, 20 51:10, 20 52:12 54:2, 19 55:8 57:6, 11 60:14, 21 73:14 98:2 patents 21:11 pause 42:23 pay 55:11 PDF 56:6 65:6 87:5 pending 39:7 people 108:22 percent 9:14 17:13, 14 percentage 17:7 perfect 9:14 performed 23:16 performing 30:21 period 14:2 Perkins 3:16, 20 5:16, 18 person 35:18 57:17 69:21 70:2, 17, 25
--	---	---	--

72:20 73:3 76:1, 6 80:16 81:10 83:20 84:12 92:24 95:5, 7 102:22 103:11 105:21 107:3 personal 25:12 26:2, 6, 11 personally 3:9 petition 12:4 18:11 19:23 49:1, 9 55:15, 16 56:1, 4 57:16 58:10, 11, 20 60:25 86:21 87:1, 4, 9 88:1 89:23 90:4 91:3, 12, 19 92:6 94:5, 16, 18 96:14 105:8 106:13 107:13 Petitioner 1:5 3:15 5:17 17:1 PETITIONER'S 2:10 10:22 11:3 59:20 petitions 106:23 PH.D 1:14 3:2, 10, 18 5:1 112:4, 24 113:6 phrased 41:18 physical 15:1 35:6 69:2 pick 46:11 piece 40:10, 13 42:14 pillar 34:11, 17, 22 36:8, 12, 20, 23 37:1, 8, 21 38:4, 6, 20, 21 39:14, 17, 18 40:1, 2, 5, 11, 15 41:16 42:12, 14 43:9 44:2 46:2, 13, 14 48:2, 3 51:25 52:6, 11 64:4, 5, 17, 20 65:22 66:1, 3, 8 67:4, 6, 19, 21 68:18, 19, 23 69:1, 12, 24 70:11, 22 71:15, 18, 21, 25 73:2, 5, 9 76:23, 25 77:2 78:8, 19 91:25 92:2, 3, 8 95:24, 25 96:13, 15 pillars 51:21 96:19 place 65:3 92:21 113:9, 11, 17 places 72:8	plain 36:23 38:6 66:7 71:25 73:9 92:3 planing 10:16 plans 40:1 plausible 78:11 79:12 please 5:12 6:16 15:2 27:11 28:9 30:15 46:4 50:5, 8, 25 61:14 63:16 68:11 69:5 79:4 87:6 91:6 94:3 96:9 pleasure 6:13 62:22 plural 90:22 plurality 52:21 plus 14:7 pluses 45:22 PO 56:14, 19 57:1 point 10:5 18:17 19:13, 18 48:18 57:23 59:3 78:3 99:5, 15 pointed 36:7 pointing 45:6 59:5 99:15 portion 36:20 37:8, 21 78:4 85:18 91:2, 11 portions 74:14 POSITA 35:25 41:7 42:20 43:11, 16 44:10, 16 46:16, 21 47:5 48:7 52:5 66:15 67:8, 11 69:25 70:9, 21 72:18, 24 76:11 80:14, 20 81:14 92:8 POSITA's 42:19 position 49:2 possible 42:5 potential 42:20 potentially 102:13 practical 98:19 preceded 19:1 preceding 63:11 precise 17:13 precisely 47:7 preliminary 18:14	preparation 11:16 12:18, 19, 22, 24 13:8, 16 14:17 31:3 prepare 11:12 97:13 prepared 51:2 preparing 13:25 24:7 33:15 present 4:4 13:4, 18 34:21 52:20 56:1 64:21 67:7 72:13 77:13 92:15 103:24 113:7 presented 51:25 press 21:21 presume 14:25 21:1 92:16 pretty 37:16 preview 39:15 previous 7:14 20:2 36:24 previously 48:18 57:12 60:22 71:21 prime 87:18, 20 principally 33:16, 19 48:24 70:20 83:8 principle 12:13 58:6 102:19 prior 12:2, 6 22:25 23:5 58:11, 20 priority 28:14 privilege 29:2 privileged 17:22 19:17 probably 14:5 16:18, 19 26:5 33:23 55:10 82:3 95:16 problem 74:20 procedure 23:12 proceeding 8:12 13:24 17:17 18:24, 25 19:1, 5, 10 20:14 26:18 34:21 54:21 55:5 61:6 86:22 proceedings 111:13 113:17 process 18:6, 23 23:5 60:23 98:13, 22 99:25 101:8, 18 102:23, 25 103:4, 6,	12, 14, 25 104:5, 6, 13, 17 processes 98:10, 11, 18, 20, 23, 24 99:10, 20, 22 100:5, 12 106:12 processing 99:12 produced 3:10 product 29:3 production 63:11 professional 50:8 profile 102:10 prom 86:20 proper 23:12 52:24 properly 89:6 properly-construed 22:24 properties 93:3 proposed 38:3 39:13 40:19 41:15, 24 43:9 46:25 52:6, 15 53:7 71:19 provide 11:9 32:15 53:5, 12, 17, 21 73:17 provided 20:8 23:9 28:24 32:16 PRZYBYLSKI 1:14 3:2, 9 5:1, 7 6:5, 11 7:20 10:12 11:1 32:6 34:7 37:2 39:12 51:6 54:16 55:21 75:13 97:5 110:16, 17, 23 112:3, 24 113:6 PTAB 16:23 17:17 18:5 30:8 publications 99:19 published 27:16 pull 20:12 61:24 62:14 67:15 69:4 86:9 pumps 83:15 purple 44:25 45:2 purpose 49:6, 12 103:20 purposes 33:7 44:15 53:9 55:20 81:23 101:11 pursuant 3:5 5:25
--	--	---	---

put 6:17 7:20 10:10 26:17 27:15 42:4 49:8 57:21, 22, 25 73:23 97:7 108:5	ready 18:21 33:22 real 30:13 reality 46:21 really 39:3 42:1 rearrange 100:25 101:5 re-ask 64:15 reason 14:20 39:5 58:2, 7 105:1 reasonably 29:14 rebut 49:7 rebuttal 48:24 rebutting 49:13 recall 12:20 17:2 36:9 58:22, 25 60:19 76:21 79:3, 18 80:8 recess 7:9 34:3 61:18 62:8 75:9 97:1 108:1 recitation 41:5 recited 56:21 recognize 46:16, 21 47:6 48:7 49:16 66:16 67:9 69:25 70:10, 22 71:1 72:18, 21, 24 73:4 76:7 84:13 92:8 97:11 recognizes 72:16 recollection 14:1 61:4 record 5:4 6:4 7:4, 7, 11 11:2 21:13 33:24 34:1, 5 38:15 47:21 50:22, 23, 24 51:15 54:7 61:15, 16, 20 62:4, 6, 10, 13 69:15 74:11 75:6, 8, 11 96:24 97:3 107:23, 24 108:2 111:4, 6 recorded 5:6 refer 12:9 35:20 41:7 43:12, 17 45:17 46:3 76:25 83:24 reference 23:6 32:24 33:5 62:24 63:2, 23, 25 66:2 73:16 75:23 78:2 referenced 12:4 24:5 25:1, 9 31:1 64:22	references 12:6 18:13 19:25 28:15 52:14 58:11, 20, 23 83:11 90:19 100:21 106:22 referencing 35:10 referred 27:18 33:15 68:19, 23 69:24 90:6 referring 33:6 36:24 46:7, 11 53:21 59:17 60:4 72:9 83:8 91:2, 11, 23 refers 35:15 57:5 68:18 71:14 72:12 90:11, 14 110:23 refresh 28:3 refreshed 93:2 regard 9:15 19:3, 20 28:10 42:14 51:18, 23 60:22 70:6 77:21 79:9 92:13 93:22 100:3 103:19 105:4, 5 106:9, 11 107:14 regarding 105:9 regardless 91:19 region 65:14, 15 78:1 89:18, 20 90:4, 5 regions 66:4 70:7, 10 71:22 76:10 77:12 89:3 registered 20:20, 23 regular 94:15 relate 74:8 93:1 99:6 related 16:10 27:5 28:4, 8, 10 48:23, 24 49:3 67:9, 12, 21 80:2 relates 17:24 40:14 99:1 relating 42:21 59:22 68:21 relationship 18:1 relevance 108:14, 23 Relevant 22:7, 15 relied 22:12 23:9 25:12 31:9, 24 32:18 reluctant 88:25 rely 22:10	remember 12:6, 8 20:5 32:2 60:10, 11, 15 68:8 75:25 76:4, 5 79:1, 2, 21 80:3 81:3, 7 82:22 84:7 100:4 REMEMBERED 3:5 remind 6:16 110:15 REMOTE 1:13 3:1 5:6 REMOTELY 3:14 remove 100:23 101:1, 6 103:20, 21 removing 101:11 rendered 79:8 reorient 29:16 repeat 30:14 46:4 63:16 91:5 96:9 106:1 repeatedly 52:1 rephrase 58:13 replied 86:4 report 16:2 113:16 reported 1:18 5:25 Reporter 3:8 5:11, 14, 22, 24 9:4 29:15 47:16 75:20 84:3 111:7 113:4, 12 REPORTER'S 113:1 represent 5:13 14:9 61:5 representation 57:11 110:9 representing 5:20 reproduced 44:21 46:8 63:6 68:7 85:17 requires 22:22 rescheduled 51:1 resided 58:17 respect 67:10 respective 3:7 respects 100:9 respond 59:1 responding 53:9 response 17:22 37:23 107:7 rest 90:22 restart 94:3 106:8
--	---	---	--

result 103:3, 6 104:6, 7	scroll 44:20 56:12 109:23	52:21 78:23 82:20 83:7 89:14, 17 90:12, 17, 20, 24 91:10 92:16 93:25 98:3, 6, 7, 12, 16, 20, 23 99:6, 10, 12, 22 100:17 101:17 104:5, 23 105:20 107:2	42:2 106:11
resulting 99:3	scrolling 87:11	semiconductors 83:4 98:10	significantly 25:12
results 104:11	se 98:14	send 55:18	signing 21:8
retained 17:16 98:1 110:6, 8	search 92:15	sense 9:10, 18 17:18 58:12	silent 78:4
reveal 17:21 19:16	sec 7:5 54:7, 8 66:23	sentence 35:4, 6, 25 41:6 43:20 56:13, 18, 24 63:10 65:13, 17, 19, 24 71:16 79:7 83:13 85:8, 12, 23 97:25	silica 70:7
review 12:1 18:11, 12 24:18 28:24 31:12 37:12 57:9 87:2	Sechen 12:3 19:22 49:9 85:24 105:7 106:12, 23 107:13	sentences 87:24	silicon 35:21 41:3, 8, 19 43:14 44:5 47:13, 18, 24 48:15 51:11 71:22 77:9 78:24 79:5 89:3 92:11, 20 93:1, 6, 16, 17, 20, 23 94:2, 4, 6 100:24 101:5
reviewed 11:14, 18, 23 12:2, 7, 17 24:3, 6, 13, 16 26:8 27:9 31:2, 23, 25 55:15 61:2, 3, 9 63:2	Sechen's 48:25 53:10 59:1	separate 14:18	Silicon-on-Insulator 34:23 35:13 36:13 40:11, 13, 18, 23 41:1, 17, 25 42:7, 22 43:4, 8, 24 44:3, 11
reviewing 33:7 60:19	second 13:7 22:23 27:10 62:4 65:15 69:19 71:8 72:7 73:12 87:7 88:11 95:1 109:16	sequence 28:14	similar 20:9 70:12 72:23 80:6
revisions 33:18	secondary 92:19	serial 86:17	Similarly 70:5 71:20 76:12, 19 77:17 91:16
right 7:12 38:8 40:9 43:3, 7 50:4 54:9, 15 55:4, 18 60:18 77:4 89:10 90:21 101:7 107:9 108:5 109:22	second-to-last 85:8	series 89:10, 13	simple 39:4 42:5 68:6
right-hand 109:17	secret 16:8 32:17	served 15:15	single 50:18
ring 69:10	section 20:8 22:7, 15 23:8, 25 31:15 34:9, 20 57:16 59:19 99:18, 19, 20	serving 18:5	singular 90:14, 21, 22
role 98:15	see 20:19, 22 22:8, 9, 19, 20 23:1, 2, 24 24:1, 8, 9, 22 25:2 27:21, 23, 25 28:2, 16 29:18, 21, 22 30:1 36:15 44:23, 24, 25 45:3, 11 46:4 51:7 56:14, 18, 23, 24 57:3, 4, 7, 8, 23 59:16 62:25 63:5, 7 65:12, 16, 19, 23, 24 66:25 67:2, 3 68:17 69:18 71:13 74:5, 6, 7 82:12 83:18, 19 84:10, 18 85:1, 8, 23 86:1, 9 87:13, 15 88:1, 4, 9, 12 90:13, 18 93:6, 9, 25 94:14, 19, 21 98:4 109:17, 24 110:1, 12, 18	session 12:24 13:10, 16, 19	sit 43:3, 7 58:2 60:18
rough 111:7, 8, 10	seeing 66:14	sessions 11:17 12:22	sitting 55:4
roughly 46:23	seen 27:12 29:10 55:6	seven 24:13	Sixteenth 3:17
rubric 26:1	semiconductor 34:25 35:7, 21 41:2, 8, 19, 21, 25 42:21 43:13 44:5 46:18 47:12	seven-factor 25:14	skill 35:19 57:17 69:22 70:2, 18 71:1 72:21 73:4 76:1, 7 80:17 81:11 83:20 84:13 92:24 95:5, 8 103:11 105:21 107:3
rules 30:8		shape 48:2	skipped 57:15
< S >		short 30:13	slice 86:20
Saelee 4:4 5:10		Shorthand 3:8 5:23 113:4, 12	slight 41:23
Sang 28:1		show 31:15 50:23 70:6 78:1 80:6, 12 86:19 96:17	slightly 16:20 41:13 96:11
Sang-Yun 28:1		showing 89:5	SOI 34:11, 17, 22 35:12, 20 36:8, 12 37:8, 21 38:4, 20 39:14, 17 40:1, 10, 14, 17 41:16 42:12, 14 43:9, 16, 20 44:2, 10, 13 46:1, 13, 14, 15, 17 47:9, 14, 23 48:4, 8,
saw 38:14		shown 32:2 69:3 70:11 72:15 89:14 94:7 96:5	
saying 14:14 47:17		shows 50:24 67:20 72:11 79:24 85:17	
says 20:19 22:20 33:5 56:14, 18 64:19 65:20 67:5 83:13 89:11 90:16, 23 91:9 93:6 109:24 110:13		side-by-side 68:1	
scale 46:20		sides 111:8	
scoot 62:20		SIGNATURE 112:1	
scope 42:3, 25		signed 18:7	
scratch 19:24		significant 18:18	
screen 63:13 84:25			

14 51:10, 21 52:3, 6, 11 78:9, 16, 19 79:11 92:2 soliloquies 39:4 soliloquy 50:3 Solutions 5:11 somewhat 70:12 sophisticated 101:25 sorry 13:21 24:24 29:20 30:21 47:14 48:3, 6 49:22 58:12, 24 64:7, 8 66:10, 22 68:9 72:5 82:6 83:16, 22 85:6 91:5 93:11, 12 95:5 99:23 102:4, 6 110:15 sort 10:17 12:3 69:10 sound 10:8 source 65:15 sources 37:13 speak 62:20 75:18 speaking 23:17 36:4 50:3 100:18 specific 15:20 26:4 50:12 52:15 79:13 specifically 9:23 12:19 15:19 17:2 25:11, 20 26:8 30:24 31:13, 22, 23 32:1 33:4 35:14 46:20 60:15 67:5 79:9 specifically- enumerated 25:7 specification 78:4 80:20 81:14 88:17 96:3 specified 60:1 113:9 speed 102:11, 14 spend 13:24 27:10, 13 29:10 51:3 spent 12:13, 15 14:13, 19 32:3 square 67:19 stack 45:11, 17, 21, 24 46:10, 17 47:2, 8, 22 48:13 49:22 51:10, 23 71:23 72:14 77:7 88:14, 23 89:2	stackable 52:17, 20, 24 53:6, 15 54:25 56:19 57:13, 19 58:4, 15 standing 21:1 start 19:20, 24 48:12 58:23 85:2 93:13 started 6:4 starting 19:13, 18 34:10 starts 62:23 65:13 State 3:8 5:13 6:3 113:5, 13, 22 stated 46:14 statement 19:19 57:10 statements 105:9 STATES 1:1 stay 37:15 Stenographically 1:18 5:25 step 101:10, 15, 17 102:9, 24 103:7, 14, 18, 20, 23 104:4, 25 105:23 107:5 step-by-step 99:25 100:10 steps 100:13 103:2 105:3, 6, 12 106:11 107:9, 11, 15 Steve 5:7 STEVEN 1:14 3:2, 9 5:1 110:14, 17 112:3, 24 113:6 stop 50:25 51:4 storage 69:17, 19 70:1 straightforward 43:15 Street 3:17, 20 strike 33:9 45:14 66:10 90:7 93:11 95:6 102:21 103:10 strong 19:19 structure 34:23, 25 35:7, 21 36:13 40:5, 11, 13, 24 41:1, 2, 8, 17, 19, 21, 25 42:1, 22, 23 43:5, 8, 13, 20, 25 44:3, 5, 14 45:6 46:15, 17, 18 47:9, 13,	23 48:8, 14 51:10 52:3 63:21 66:1 69:2 76:22 77:1, 9, 23 78:1, 9, 16, 24 79:5, 12, 25 91:18, 22, 23 92:4, 5, 8, 9, 10, 11 101:1, 7 104:23 105:20 107:2 structures 35:22 41:3, 9, 20 43:14 44:6 45:1 78:24 82:20 85:9, 14 92:17 98:21 stuff 49:16, 18 108:11 styles 100:8 Sub 29:18, 20 59:21 subheading 110:13 subject 21:23 28:11 31:11 48:20 107:9 submission 18:21 subscribed 113:19 Subsection 59:21 110:22 subsequent 18:19 90:19 substantial 19:2 20:2 substrate 56:22 58:18 77:15, 18, 19, 24, 25 79:10 82:8, 11 83:16 successful 39:19 suggest 30:9 suggesting 41:23 Suite 3:20 4:3 summary 105:9 support 7:5 15:19 supporting 18:12 supposed 103:18 108:18 Sure 15:3, 21 29:5 38:14 39:14 41:11 46:6 47:21 52:12 58:14 61:15 62:5 65:3 74:4 77:4 78:14 85:5 91:7 96:10 99:14 102:4 104:1, 2, 18 105:15 surround 69:1, 2, 14	surrounded 69:13 surrounding 67:20 swear 5:14 switch 73:10 switches 83:25 sworn 3:11 5:2 11:9 113:8 < T > tail 40:4 take 10:7 32:9 45:5 61:14 73:17 74:3 95:1, 18, 21 96:23 104:24 105:22 107:4, 18 taken 113:10, 11 talk 9:4 73:16 talked 70:5 76:21 78:22 79:18 80:1 talking 13:12 14:11 52:16 67:16 99:16 104:16 106:22 tall 92:4, 7 taller 34:23 36:13, 20 37:8, 21 38:5, 21 40:2, 6 41:18, 22 46:15, 19, 24 47:2, 6 52:4 66:6 tangentially 48:23 teach 58:21 100:13 teaches 23:6 71:18 88:23 technical 7:5, 16 21:23 25:13 26:4 Technologies 99:17 technology 56:8 tells 50:13 temperature 101:18, 21, 23, 24, 25 102:2, 10, 11, 12, 14, 18 103:13, 15 104:7 temporarily 19:2 tenth 39:9 term 34:11, 17 35:2, 5, 20 36:20 40:1, 5, 14 42:19 43:12 44:10, 17 51:20 52:18 71:19 78:14, 17, 19 100:16 terminology 48:11
--	---	--	---

terms 14:17 77:12 101:16 testified 5:3 31:21 80:8 81:4 82:20, 25 testifying 15:15, 22, 24 16:1, 11, 17 testimony 11:9 14:21 29:9 76:5 80:11 83:1 109:14 112:6 text 68:25 86:11 90:8 Thank 5:15 6:9, 24 8:19 17:23 18:10 38:24 40:8 45:23 53:3 61:23 62:21 75:14 86:15 90:1 91:21 94:11 96:7 97:6 102:20 107:16 thereof 77:22 thermo 104:16 106:12 thing 67:22 73:17, 23 74:13 80:7 86:6 things 6:2 67:25 80:6 83:25 106:18 think 6:1, 23 10:17 19:18 26:1 29:1, 9, 13 30:12 42:1, 8, 23 43:10 44:15 49:25 50:23 51:6 54:9 68:7 78:11, 12 79:8 80:4 82:19, 25 84:6, 19 89:15 92:25 101:3 102:16 107:19 108:11, 22 thinking 14:17 16:23 42:4 53:18 third 35:3 Thirteenth 3:20 Thomas 27:22 thought 79:14 three 13:3, 17 56:16 65:20 66:4 70:7 90:16 three-to-four-week 14:2 Thursday 13:14 time 5:5 9:21 12:13 14:19 17:7, 12, 13, 14	27:10, 13, 14 29:11 31:13 32:3 33:23 34:5 39:10 42:4 50:7 57:21 63:14 75:4, 8, 11 82:2 97:3 101:19, 23 102:2, 10, 11, 12 108:3, 21 111:6 113:9, 11 times 8:25 9:14 12:16 16:3, 5, 25 40:3 44:9 titled 11:3 22:7 today 6:15 8:21 11:9, 13 12:18 14:11, 21 58:3 78:23 82:19 Today's 5:5 told 48:17 tool 103:2 tools 103:2 top 65:5 67:13 69:10 70:10 80:6 94:8, 19, 20 topic 105:3 tops 96:19 total 16:20 touch 99:10 touches 29:2 trade 16:8 21:21 109:7 TRADEMARK 1:1 trade-offs 98:17, 25 103:24 trans 72:17 transcribed 113:14 transcript 113:15 transcription 112:6 transistor 66:9, 13, 15, 16 70:3, 8 71:3 72:22, 25 76:3, 8 79:20, 22 80:9, 12, 15, 18, 23 81:5, 10 transistors 83:9, 17 89:12 trapping 72:14, 18 TRIAL 1:2 11:10 16:14 trouble 7:2 trucks 54:10 true 61:8 79:14	112:5 113:15 truthful 14:21 try 9:4 21:24 37:3, 5 62:20 trying 9:12 30:13 35:5 38:19 39:12, 13, 15, 18, 22, 23 43:21, 22, 23 49:5 turn 54:6 72:5 tutorials 99:9 two 6:5, 17, 20 7:20, 23 8:22 11:16 12:21 13:3, 17 15:10 17:3 20:10 28:15 38:11 43:1 66:4 67:24 72:8, 15 88:13, 23 89:5, 9 90:16, 23 91:9 94:2 95:21 108:6 two-step 22:22 23:16 type 104:22 105:19 107:1 typewriting 113:14 typically 17:10 < U > U.S 1:7 ultimately 26:14 33:13 34:19 104:11 undersigned 112:3 understand 9:2, 15, 24, 25 11:8, 11 12:10 22:21 25:16 32:6, 10, 12 35:20 36:1 38:10, 12, 19 39:13, 15, 16, 17, 20, 23 41:7 42:2 43:12, 16, 22, 24 44:10, 16 45:18 52:17 53:11 60:12 67:11 69:22 70:3, 18 76:2, 11 80:22 83:21 95:8 97:8 98:16 104:3 106:17 108:16 understandable 9:13 understanding 19:25 22:11 23:3 25:4 27:4 33:3 36:18 37:6, 19 40:12, 25 54:1, 17 71:24 82:8 83:3 85:13 87:22	90:25 91:1, 11, 24 92:23 93:22 94:22 understood 80:17 81:11 99:14 undertaken 19:3 uniform 83:11 UNITED 1:1 updates 97:17 usage 83:10 use 19:12 35:2 52:14 72:13 85:25 86:8 uses 86:3 < V > vague 31:7 valid 22:22 validity 23:13 value 102:18 variables 101:22 102:19 variations 102:1 varies 17:9 vary 102:13 vast 16:7 17:3 Verdande 15:6, 9 17:6 verified 92:17 verify 6:20 7:22 14:6 88:7 92:12 version 84:20 87:14 90:3 94:15, 16 versions 88:2 versus 5:8 102:10 vertical 45:2, 7, 11 63:21 76:8, 12 79:23, 25 80:18 81:12 91:18 vertically 52:21 65:21 76:10 77:7 80:23 89:2 video 5:6 videographer 4:4 5:4, 10 7:7, 10 34:1, 4 61:16, 19 62:6, 9 75:7, 10 96:24 97:2 107:24 108:2 111:5 VIDEOTAPED 1:13 3:1
--	---	---	--

view 28:7 67:6, 13,
17 69:10 80:6 81:14
views 67:22
vis-a-vis 93:23
vis-à-vis 19:24 23:18
voice 62:19
volume 54:7
vs 1:6

< W >

wafer 100:24 101:2,
5, 7, 13
wafers 100:22
want 25:5 30:7
34:8 39:6 42:8
48:18 49:10, 17
50:11 65:2, 3 71:5
72:1 73:10 74:4, 11
75:2, 15 81:17, 22, 25
95:17, 19 103:21
104:1, 2 106:18
111:8
wanted 6:3 32:10
38:15 102:4
wants 49:18
Washington 3:21
way 28:6 29:4, 7
41:13 47:4, 5 50:11
67:24, 25 74:1 88:18
95:19 96:11
web 5:9
Welcome 34:7 61:22
75:13 97:5
Well 25:17 27:7
38:17 44:25 45:14
49:10 58:6 59:6
61:7 64:14 72:2
78:6 84:22 88:20, 25
92:1 102:21 103:1,
10
well-versed 98:24
went 62:13 66:22
We're 7:1, 10 14:11
45:8 61:19 62:9
65:3 75:7, 10 97:2, 7
108:2 111:5
we've 9:2 40:16
52:8, 15 61:13 96:20
WHEREOF 113:18

wide 34:24 36:14, 21
37:9, 22 38:5, 21
40:2, 6 41:18, 22
46:16, 20, 25 47:2, 7
52:5 66:6
width 71:24 73:8
Wilson 4:2 5:20
13:5, 20, 22
wiring 94:9, 10, 23
95:2, 4, 8, 11, 25
96:14, 18
witness 3:10, 12 5:2,
14, 21 6:5 7:2, 3, 17
10:21 15:16, 23
16:17, 24, 25 17:8, 11,
14, 15, 17, 21, 23
18:10 19:16, 18 30:9,
14, 24 33:8, 25 39:1,
2 47:17 50:7, 10
51:1 54:6 73:24
74:5, 7 75:4 81:7
82:24 84:4 95:13
104:11 105:25 106:7
107:7, 21 109:4, 8, 12
110:3, 4, 6 111:1
113:8, 18
witnesses 109:24
wonder 6:19
Wonderful 56:11
word 32:9 36:23
37:1 38:6 77:4 83:5
102:6
wording 41:24
words 30:19 36:3
56:7 85:11 86:1
88:12
work 14:23 15:4, 6
17:6 19:5, 9 20:2
29:3 52:9 53:25
54:16, 23
working 21:14 25:15
worries 64:10
wrapping 95:14
writings 99:9
wrong 64:8 66:22
79:4 89:18 110:14
wrote 78:10

< Y >

Yeah 6:3 7:1, 15
13:6 23:13 74:2
79:14 95:16 108:20,
21
year 17:9
years 17:7 26:2, 13
yes-no 51:7
yes-or-no 37:2, 14, 17
50:12
yesterday 13:13

< Z >

Zoom 3:7, 14 6:17
7:21

WORD LIST

< 1 >	126 (9)	2029 (25)	< 6 >
1 (22)	127 (4)	2030 (1)	65 (1)
1,100 (1)	13 (4)	206 (3)	654-3337 (1)
1,100-degree (1)	131 (1)	207 (6)	< 7 >
1:53 (2)	1320 (6)	208 (3)	7 (17)
10:11 (2)	135 (1)	2096 (1)	7,052,941 (1)
100 (6)	13730 (3)	20th (1)	7,052,9412 (1)
1001 (9)	138 (4)	214 (3)	7,378,702 (1)
1002 (3)	139 (1)	218 (3)	70 (1)
1003 (1)	13B (1)	23rd (1)	700 (1)
1004 (2)	14 (5)	24 (1)	702 (37)
1005 (19)	144 (2)	24th (2)	72 (1)
1006 (2)	148 (1)	29th (1)	7's (1)
1007 (20)	15 (11)	2's (1)	< 8 >
1012 (2)	150 (1)	< 3 >	8 (3)
102 (3)	151 (4)	3 (5)	800 (1)
1029 (2)	17 (1)	30 (2)	80202-5255 (1)
103 (1)	184 (1)	303 (1)	840 (4)
1031 (2)	1840 (6)	3102 (2)	88 (3)
104 (3)	1900 (1)	3103 (5)	89 (2)
1040 (3)	192 (1)	3105 (3)	< 9 >
106 (3)	193 (1)	35 (5)	9:03 (2)
107 (6)	1997 (1)	38 (4)	9:07 (2)
1071 (1)	1A (33)	39 (7)	9:08 (2)
1076 (3)	1B (28)	390 (1)	9:58 (2)
108 (9)	1B's (1)	< 4 >	90 (18)
10th (1)	1C (1)	4 (1)	92660 (1)
11 (4)	< 2 >	40 (2)	93 (1)
11:04 (2)	2 (27)	401 (1)	932-0778 (1)
11:15 (4)	2:03 (2)	403 (1)	94 (16)
11:16 (2)	2:24 (2)	43 (3)	941 (1)
11:44 (2)	2:30 (2)	44 (10)	949 (1)
110 (3)	2:35 (1)	45 (4)	96 (2)
111 (8)	2:36 (1)	454-2907 (1)	97 (4)
112 (1)	20 (5)	46 (1)	< A >
1112 (1)	2000 (1)	4685 (1)	a.m (19)
1117 (1)	20005-3960 (1)	48 (1)	A1 (1)
112 (1)	2002/0028541 (2)	48105 (1)	AA (1)
114 (1)	2002/0154556 (1)	49 (3)	abbreviate (1)
1171 (14)	201 (5)	< 5 >	ability (1)
1172 (12)	202 (4)	5 (2)	able (3)
12 (23)	2023-00900 (2)	50 (4)	above-entitled (1)
12:48 (2)	2023-00991 (3)	51 (1)	Absolutely (4)
120 (2)	2023-00991.....55 (1)	54 (1)	access (3)
1206 (11)	2023-0991 (1)	5630 (1)	accumulated (1)
1207 (4)	2024 (4)		
122 (5)	2025 (1)		
125 (14)			

accurate (18)	anyways (1)	audience (1)	carried (1)
accurately (1)	apologies (4)	aware (3)	Case (18)
accused (3)	apologize (8)	< B >	cases (5)
accuses (1)	apparently (1)	back (30)	category (1)
accusing (2)	APPEAL (3)	background (3)	cause (1)
achieve (1)	appear (2)	badgering (4)	caution (3)
acknowledge (2)	APPEARANCES (1)	bag (1)	CCP (1)
acronym (7)	appeared (3)	base (2)	cell (18)
acting (1)	appears (1)	based (9)	cells (13)
action (2)	application (4)	basically (1)	Celsius (1)
active (2)	applications (1)	basis (8)	center (2)
actual (2)	apply (2)	BB (1)	central (1)
added (1)	appreciate (6)	Beach (1)	cents (1)
addition (6)	approach (1)	began (2)	certainly (15)
additional (3)	appropriate (7)	behalf (3)	CERTIFICATE (1)
additionally (1)	appropriately (1)	believe (17)	Certified (3)
add-on (11)	Approximately (1)	BESANG (12)	certify (2)
address (1)	Arbor (1)	best (4)	challenged (1)
addressed (1)	architecture (4)	better (4)	change (7)
adequate (1)	architectures (1)	bit (5)	changes (1)
adhered (2)	area (1)	blanking (1)	changing (1)
adjacent (2)	argue (3)	blisters (1)	chapter (1)
admits (1)	arguments (3)	blue (1)	character (1)
admonition (1)	ARMOND (57)	BOARD (4)	characteristics (1)
adopt (1)	arranged (2)	body (1)	characterization (7)
agent (11)	array (2)	bonded (1)	characterizations (1)
ago (1)	arrow (1)	book (4)	characterize (1)
agree (26)	art (25)	books (1)	characterized (4)
ahead (5)	articulate (2)	bother (1)	characterizes (8)
aligned (4)	articulated (2)	bottom (6)	characterizing (2)
ALJ (1)	articulating (1)	break (14)	charge (5)
allegations (1)	articulation (2)	breakdown (1)	chat (8)
allow (3)	Asbar (7)	brief (2)	choose (1)
allowed (1)	asked (24)	briefly (4)	CHRIS (2)
altered (1)	asking (13)	bringing (1)	ChrisMoulder@perkin
Amended (3)	aspect (9)	budgets (2)	scoeie.com (1)
amps (1)	aspects (1)	built (3)	circuit (4)
analyses (1)	assessment (1)	bulbs (1)	circuits (12)
analysis (7)	assign (1)	bulk (1)	circular (1)
Ann (1)	assistance (1)	bunch (2)	circumstances (1)
annealed (1)	assume (6)	< C >	citation (1)
annealing (28)	assuming (3)	CA (1)	citations (1)
annotated (18)	assumption (2)	California (6)	cite (4)
annotations (13)	atoms (2)	call (2)	cited (12)
answer (20)	attached (3)	called (1)	claim (5)
answered (10)	attempt (1)	calls (1)	claimed (3)
answering (4)	attention (7)	capability (2)	claims (10)
answers (4)	attorney (3)		clarification (3)
anyway (3)	attorney-client (3)		clarify (3)

clarifying (2)	CONFERENCING (2)	cover (1)	deposed (2)
clean (4)	configuration (2)	create (1)	deposited (1)
cleaning (1)	configured (1)	creating (1)	DEPOSITION (23)
clear (9)	confirm (2)	credibility (1)	depositions (1)
clearer (1)	confirmed (4)	critical (1)	derived (1)
clearly (2)	confused (2)	criticizing (1)	derives (2)
close (3)	confusion (2)	critique (1)	describe (5)
closer (1)	conjunction (2)	crosses (1)	described (3)
CMOS (1)	connect (1)	cross-examination (1)	describes (5)
co-director (1)	connected (6)	cross-section (4)	describing (3)
Coie (4)	connection (2)	cross-sections (1)	description (7)
coincident (1)	consequences (2)	crystalline (2)	design (7)
collaborative (1)	consider (6)	CSR (2)	designation (1)
collection (3)	consideration (7)	current (3)	designed (3)
Colorado (1)	considered (9)	currently (3)	designing (6)
column (1)	consistent (6)	CV (6)	desired (4)
combination (4)	consistently (1)	cylindrical (2)	detail (1)
combinations (1)	constitutes (2)	< D >	detailed (1)
combined (1)	constraints (1)	damage (1)	details (3)
come (1)	constriction (2)	date (2)	determination (1)
comes (1)	constructed (1)	dates (1)	determine (2)
coming (2)	construction (35)	day (6)	determining (3)
commenced (1)	construe (1)	DC (1)	developed (1)
commencing (1)	construed (1)	deal (1)	developing (2)
comment (1)	contact (3)	dealt (1)	development (2)
Commission (1)	contents (2)	decided (2)	developments (2)
common (1)	context (13)	deciding (2)	device (22)
commonality (4)	contexts (1)	decision (1)	devices (9)
communications (1)	control (7)	declaration (70)	diagram (1)
community (1)	convenience (1)	declarations (2)	diametric (1)
company (1)	convey (2)	dedicated (1)	dictionaries (3)
comparable (3)	conveying (1)	defects (6)	dielectric (3)
compare (1)	co-owner (1)	Defendant (1)	difference (2)
compared (1)	co-pending (2)	deficiencies (1)	different (18)
comparison (1)	copies (4)	defines (2)	difficult (2)
complaint (7)	copy (7)	definitions (1)	difficulties (1)
complete (3)	corner (1)	definitive (1)	direct (9)
completely (4)	CORPORATION (3)	degree (3)	directed (3)
completion (1)	correct (83)	degrees (2)	direction (1)
complicated (1)	corrected (1)	Dennis (2)	directly (2)
complications (1)	correcting (1)	density (1)	disagree (1)
components (2)	corrections (2)	Denver (1)	discern (1)
concept (3)	correctly (4)	Dep (1)	disclosed (1)
concepts (1)	Counsel (18)	depending (2)	discloses (1)
concluded (2)	count (1)	depicted (1)	disclosing (1)
conclusion (3)	couple (4)	depicts (4)	disclosure (4)
conclusions (1)	course (3)	Depo (1)	disclosures (1)
concrete (1)	Court (16)	DEPONENT (1)	disconcerting (1)
conductive (1)			discussed (1)
conference (2)			

discussing (1)	element (3)	fabricated (10)	forming (15)
discussion (3)	embodiment (3)	fabrication (15)	forth (2)
discussions (2)	employee (2)	faced (1)	forward (3)
dishonest (1)	employees (1)	faces (1)	four (3)
disposal (1)	encompasses (2)	facilitate (1)	fourth (1)
disposed (1)	endeavor (2)	fact (5)	fourth-level (1)
distinct (1)	endeavored (4)	factors (2)	FRE (1)
district (10)	Endoh (26)	fair (17)	free (2)
divorce (1)	Endoh's (3)	fairly (2)	fresh (1)
Doctor (2)	engagement (2)	familiar (8)	friend (2)
document (12)	engagements (3)	familiarity (2)	front (12)
documents (22)	engaging (1)	far (7)	full (3)
doing (4)	engineer (2)	feel (4)	functional (1)
domain (1)	engineers (1)	field (1)	further (2)
doped (9)	enlightened (1)	Figure (113)	furthest (2)
doping (1)	entire (5)	figures (14)	FYI (1)
download (5)	entitled (1)	file (4)	
downloaded (6)	enumerated (3)	filed (3)	< G >
Dr (25)	especially (2)	film (5)	gate (14)
draft (8)	essential (1)	films (2)	gates (1)
drafted (1)	essentially (1)	final (1)	gears (1)
drafting (2)	established (1)	finalize (1)	general (11)
drain (1)	evidenced (1)	find (3)	generalist (1)
DRAM (6)	exact (1)	fine (3)	generally (8)
DRAMs (1)	exactly (5)	finish (1)	generated (1)
draw (1)	EXAMINATION (2)	finished (1)	genuinely (1)
drawn (11)	examined (4)	firm (1)	getting (3)
drew (2)	example (12)	first (16)	gist (1)
driver (6)	excerpts (1)	fit (1)	give (14)
ducks (1)	Exhibit (102)	five (2)	given (2)
due (2)	exhibits (12)	five-minute (1)	glanced (2)
duly (1)	exhibit's (1)	flash (3)	glossed (1)
duration (2)	exist (3)	floating (5)	Go (56)
	Existing (1)	flow (4)	goal (2)
< E >	expanded (1)	fluent (1)	goes (2)
earlier (16)	expansion (2)	Focus (2)	going (22)
ease (1)	expect (1)	focused (2)	Good (5)
easier (1)	expediency (1)	focusing (2)	great (5)
economics (1)	experience (3)	follow (2)	greater (2)
education (1)	expert (19)	followed (1)	Ground (5)
EE (1)	explained (3)	following (3)	grounds (2)
effect (3)	explains (1)	follows (2)	Group (2)
effectiveness (1)	explicitly (1)	footnote (5)	guess (2)
effects (1)	exploration (1)	foregoing (3)	
effort (5)	exposition (1)	forgot (1)	< H >
Either (4)	extent (5)	form (19)	half (3)
elaborate (1)		formal (1)	hand (1)
electrical (3)	< F >	formally (1)	handy (1)
Electronic (2)	fabricate (1)	formed (6)	hang (1)

happen (3)	inaccuracy (1)	inventor (4)	Lee (60)
happening (1)	inaccurate (1)	inventorship (1)	Lee's (7)
happy (6)	include (3)	invoices (1)	left (2)
HATLER (6)	included (5)	involvement (2)	left-most (1)
heading (2)	includes (8)	involves (1)	legal (1)
heard (1)	including (2)	IP (1)	length (1)
hearing (2)	incomplete (1)	IPR (17)	lengthy (1)
hearsay (1)	Incorporated (2)	IPR2023-00991 (1)	level (4)
heating (2)	incorrect (1)	IPRs (1)	lifting (1)
height (2)	indicate (1)	is/being (1)	light (1)
held (8)	indicated (7)	island-like (10)	limitations (1)
help (4)	indirectly (2)	issue (1)	limited (1)
helped (1)	industry (1)	issues (1)	line (6)
helpful (2)	inference (1)	ITC (2)	lined (1)
helps (2)	inform (1)	Item (17)	lines (5)
hereunder (1)	information (1)	items (4)	link (1)
hesitate (1)	informed (4)	its (9)	list (15)
Hey (1)	infringement (1)	< J >	listed (7)
high (5)	infringing (5)	JESSICA (6)	listen (3)
higher (1)	initial (3)	JKaiser@perkinscoie.c	Literally (2)
history (4)	insert (1)	om (1)	Litigation (4)
Hold (2)	instance (2)	Johnson (1)	little (9)
honest (1)	instruct (1)	Joseph (1)	LLP (8)
honors (1)	instruction (1)	Joseph's (1)	location (1)
hopefully (2)	instructions (2)	jumped (1)	locations (1)
hour (4)	instructs (1)	juxtaposition (1)	long (4)
hours (4)	insulated (1)	< K >	longer (1)
hundreds (1)	insulating (23)	KAISER (70)	long-time (1)
< I >	insulator (1)	KAISER.....6	look (25)
idea (1)	integrated (9)	(1)	looked (4)
identical (1)	INTEL (8)	keep (7)	looking (29)
identification (2)	Intel's (2)	keeping (2)	looks (2)
identified (3)	intend (1)	know (48)	lot (3)
identify (1)	intensive (1)	knowledge (9)	lunch (3)
ignored (2)	interaction (2)	< L >	< M >
illustrate (2)	interactions (3)	labeled (7)	MacArthur (1)
illustrated (1)	interconnect (2)	labeling (1)	major (1)
Illustrates (2)	interlayer (1)	lacked (1)	majority (3)
illustrating (1)	internal (1)	Lane (1)	making (1)
illustration (1)	International (1)	language (11)	manage (1)
illustrative (1)	interparty's (1)	large (1)	manufacturable (1)
imagine (1)	interpreting (1)	law (7)	marked (6)
immediately (2)	interrupt (2)	lay (1)	markings (2)
impact (1)	interrupted (2)	layer (53)	material (3)
impacts (2)	interruption (2)	layers (8)	materials (11)
impediment (1)	introduce (1)	leading (1)	matter (29)
important (5)	introduced (1)		matters (7)
improving (1)	introducing (1)		Meadow (1)
	invention (2)		

mean (13)	necessarily (1)	opinions (34)	period (1)
meaning (7)	necessary (3)	opportunity (2)	Perkins (4)
meanings (1)	need (6)	order (10)	person (21)
means (6)	needed (1)	ordinary (25)	personal (4)
mechanical (1)	negative (2)	organizational (1)	personally (1)
medium (1)	never (4)	orient (2)	petition (32)
meet (7)	new (2)	oriented (2)	Petitioner (4)
meeting (1)	Newport (1)	outside (1)	PETITIONER'S (4)
meets (3)	Nice (1)	outstanding (1)	petitions (1)
member (2)	NICOLE (6)	overhead (3)	PH.D (8)
memories (2)	nitride (9)	overlap (1)	phrased (1)
memory (47)	nitrides (1)	overview (1)	physical (3)
mentioned (4)	noise (1)	Owner (3)	pick (1)
MICHELLE (6)	non-expert (1)	owners (2)	piece (3)
Michelle.armond@ar	non-patent (1)	owner's (1)	pillar (77)
mondwilson.com (1)	non-process (1)	oxide (1)	pillars (2)
Michigan (1)	non-responsive (1)	< P >	place (5)
micron (10)	non-volatile (10)	p.m (12)	places (1)
microns (1)	Notice (3)	packed (1)	plain (6)
microphone (1)	notice.....1	PAGE (36)	planing (1)
middle (5)	0 (1)	pages (5)	plans (1)
mind (9)	NPN (10)	Paper (14)	plausible (2)
minimizing (1)	NPNP (1)	paragraph (147)	please (19)
minus (1)	NPNPN (10)	paragraphs (10)	pleasure (2)
minute (1)	nuances (1)	parallel (3)	plural (1)
minutes (2)	number (8)	parameters (2)	plurality (1)
mischaracterization	numbered (3)	paraphrases (1)	plus (1)
(1)	numbering (1)	paraphrasing (2)	pluses (1)
mischaracterizing (1)	numbers (4)	parse (1)	PO (3)
misinterpreted (1)	< O >	part (20)	point (10)
missing (3)	object (6)	partial (1)	pointed (1)
misunderstanding (1)	objected (1)	particular (11)	pointing (3)
moment (1)	objection (8)	parts (5)	portion (7)
Monday (1)	objections (2)	passed (1)	portions (1)
monitors (1)	obvious (1)	passing (1)	POSITA (25)
monocrystalline (3)	obviousness (1)	passive (1)	POSITA's (1)
morning (1)	offer (2)	PATENT (80)	position (1)
MOULDER (2)	offered (4)	pause (1)	possible (1)
multiple (1)	OFFICE (5)	pay (1)	potential (1)
< N >	oh (6)	PDF (3)	potentially (1)
N.W (1)	Okay (137)	pending (1)	practical (1)
n+pn (2)	once (2)	people (1)	preceded (1)
name (6)	ones (4)	percent (3)	preceding (1)
named (2)	oOo (2)	percentage (1)	precise (1)
names (1)	open (4)	perfect (1)	precisely (1)
NAND (9)	opine (4)	performed (1)	preliminary (1)
narrower (2)	opined (4)	performing (1)	preparation (9)
nature (2)	opinion (50)		prepare (2)
			prepared (1)

preparing (3) present (13) presented (1) press (1) presume (3) pretty (1) preview (1) previous (3) previously (4) prime (2) principally (5) principle (3) prior (6) priority (1) privilege (1) privileged (2) probably (8) problem (1) procedure (1) proceeding (15) proceedings (2) process (20) processes (13) processing (1) produced (1) product (1) production (1) professional (1) profile (1) prom (1) proper (2) properly (1) properly-construed (1) properties (1) proposed (11) provide (7) provided (4) PRZYBYLSKI (25) PTAB (4) publications (1) published (1) pull (6) pumps (1) purple (2) purpose (3) purposes (6) pursuant (2) put (13)	< Q > qualified (3) qualify (1) question (59) questioning (1) questions (21) quickly (1) quiet (1) quote (2) < R > raise (1) Rambus (4) ramp (2) ramp-up (1) range (1) ratio (5) reach (2) read (5) reading (2) ready (2) real (1) reality (1) really (2) rearrange (2) re-ask (1) reason (5) reasonably (1) rebut (1) rebuttal (1) rebutting (1) recall (10) recess (7) recitation (1) recited (1) recognize (19) recognizes (1) recollection (2) record (36) recorded (1) refer (9) reference (11) referenced (6) references (12) referencing (1) referred (6) referring (12) refers (9)	refresh (1) refreshed (1) regard (20) regarding (1) regardless (1) region (7) regions (7) registered (2) regular (1) relate (3) related (12) relates (3) relating (3) relationship (1) relevance (2) Relevant (2) relied (6) reluctant (1) rely (1) remember (20) REMEMBERED (1) remind (2) REMOTE (3) REMOTELY (1) remove (5) removing (1) rendered (1) reorient (1) repeat (6) repeatedly (1) rephrase (1) replied (1) report (2) reported (2) Reporter (13) REPORTER'S (1) represent (3) representation (2) representing (1) reproduced (5) requires (1) rescheduled (1) resided (1) respect (1) respective (1) respects (1) respond (1) responding (1) response (3)	rest (1) restart (2) result (4) resulting (1) results (1) retained (4) reveal (2) review (9) reviewed (21) reviewing (2) revisions (1) right (19) right-hand (1) ring (1) role (1) room (2) rough (3) roughly (1) rubric (1) rules (1) < S > Saelee (2) Sang (1) Sang-Yun (1) saw (1) saying (2) says (16) scale (1) scoot (1) scope (2) scratch (1) screen (2) scroll (3) scrolling (1) se (1) search (1) sec (4) Sechen (8) Sechen's (3) second (13) secondary (1) second-to-last (1) secret (2) section (13) see (88) seeing (1) seen (3) semiconductor (44)
---	--	---	---

semiconductors (2)	soliloquy (1)	styles (1)	testified (6)
send (1)	Solutions (1)	Sub (3)	testifying (6)
sense (4)	somewhat (1)	subheading (1)	testimony (8)
sentence (20)	sophisticated (1)	subject (5)	text (3)
sentences (1)	sorry (28)	submission (1)	Thank (21)
separate (1)	sort (3)	subscribed (1)	thereof (1)
sequence (1)	sound (1)	Subsection (3)	thermo (2)
serial (1)	source (1)	subsequent (2)	thing (6)
series (2)	sources (1)	substantial (2)	things (5)
served (1)	speak (2)	substrate (11)	think (34)
serving (1)	speaking (4)	successful (1)	thinking (4)
session (4)	specific (5)	suggest (1)	third (1)
sessions (2)	specifically (18)	suggesting (1)	Thirteenth (1)
seven (1)	specifically-	Suite (2)	Thomas (1)
seven-factor (1)	enumerated (1)	summary (1)	thought (1)
shape (1)	specification (5)	support (2)	three (7)
short (1)	specified (2)	supporting (1)	three-to-four-week
Shorthand (5)	speed (2)	supposed (2)	(1)
show (8)	spend (5)	Sure (25)	Thursday (1)
showing (1)	spent (5)	surround (3)	time (38)
shown (7)	square (1)	surrounded (1)	times (8)
shows (5)	stack (20)	surrounding (1)	titled (2)
side-by-side (1)	stackable (11)	swear (1)	today (10)
sides (1)	standing (1)	switch (1)	Today's (1)
SIGNATURE (1)	start (6)	switches (1)	told (1)
signed (1)	started (1)	sworn (4)	tool (1)
significant (3)	starting (3)		tools (1)
significantly (1)	starts (2)	< T >	top (8)
signing (1)	State (6)	tail (1)	topic (1)
silent (1)	stated (1)	take (15)	tops (1)
silica (1)	statement (2)	taken (2)	total (1)
silicon (30)	statements (1)	talk (2)	touch (1)
Silicon-on-Insulator	STATES (1)	talked (5)	touches (1)
(17)	stay (1)	talking (7)	trade (3)
similar (4)	Stenographically (2)	tall (2)	TRADEMARK (1)
Similarly (6)	step (14)	taller (18)	trade-offs (3)
simple (3)	step-by-step (2)	tangentially (1)	trans (1)
single (1)	steps (9)	teach (2)	transcribed (1)
singular (3)	Steve (1)	teaches (3)	transcript (1)
sit (4)	STEVEN (9)	technical (5)	transcription (1)
sitting (1)	stop (2)	Technologies (1)	transistor (20)
Sixteenth (1)	storage (3)	technology (1)	transistors (3)
skill (20)	straightforward (1)	tells (1)	trapping (2)
skipped (1)	Street (2)	temperature (16)	TRIAL (3)
slice (1)	strike (8)	temporarily (1)	trouble (1)
slight (1)	strong (1)	tenth (1)	trucks (1)
slightly (3)	structure (67)	term (20)	true (4)
SOI (50)	structures (13)	terminology (1)	truthful (1)
soliloquies (1)	stuff (3)	terms (3)	try (5)

trying (14)	vis-à-vis (2)	Zoom (4)
turn (2)	voice (1)	
tutorials (1)	volume (1)	
two (30)	vs (1)	
two-step (2)		
type (3)	< W >	
typewriting (1)	wafer (5)	
typically (1)	wafers (1)	
	want (28)	
< U >	wanted (4)	
U.S (1)	wants (1)	
ultimately (4)	Washington (1)	
undersigned (1)	way (13)	
understand (50)	web (1)	
understandable (1)	Welcome (4)	
understanding (25)	Well (19)	
understood (3)	well-versed (1)	
undertaken (1)	went (2)	
uniform (1)	We're (13)	
UNITED (1)	we've (6)	
updates (1)	WHEREOF (1)	
usage (1)	wide (18)	
use (6)	width (2)	
uses (1)	Wilson (5)	
	wiring (11)	
< V >	witness (59)	
vague (1)	witnesses (1)	
valid (1)	wonder (1)	
validity (2)	Wonderful (1)	
value (1)	word (7)	
variables (2)	wording (1)	
variations (1)	words (6)	
varies (1)	work (12)	
vary (1)	working (2)	
vast (2)	worries (1)	
Verdande (3)	wrapping (1)	
verified (1)	writings (1)	
verify (5)	wrong (5)	
version (5)	wrote (1)	
versions (1)		
versus (2)	< Y >	
vertical (11)	Yeah (10)	
vertically (6)	year (2)	
video (1)	years (3)	
videographer (18)	yes-no (1)	
VIDEOTAPED (2)	yes-or-no (4)	
view (7)	yesterday (1)	
views (1)		
vis-a-vis (1)	< Z >	