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Transcript of Alfred D. Ducharme, Ph.D.

Date: January 16, 2024

Case: Home Depot U.S.A., Inc. -v- Lynk Labs, Inc. (PTAB)

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Conducted on January 16, 2024

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Conducted on January 16, 2024

5 1 BE IT REMEMBERED that, pursuant to Notice 2 of Taking Deposition, and on Tuesday, January 16, 3 2024, commencing at 6:03 a.m. PST thereof, via 4 remote video teleconference, before me, Burgundy B. 5 Ryan, a Certified Shorthand Reporter in and for the 6 State of California, personally appeared 7 ALFRED D. DUCHARME, Ph.D., 8 a witness called on behalf of PETITIONER, and who, 9 having been first duly sworn by me to testify to the 10 truth, was examined and testified as follows: 11 COURT REPORTER: Let's go on the record. 12 Counsel, would you please identify 13 yourselves for the record? 14 MS. DAHL: Mary Dahl of DLA Piper for 15 Petitioner, Home Depot. 16 MR. MCBRIDE: And Steve McBride of 17 Carmichael IP for patent owner Lynk Labs. 18 (Whereupon, the witness was sworn.) 19 COURT REPORTER: Thank you very much. 20 Counsel, you may proceed. 21 ALFRED D. DUCHARME, Ph.D., 22 having been first duly sworn to tell the whole 23 truth, testified as follows: 24 EXAMINATION 25 By MS. DAHL:	7 1 Q. Do you understand that you're testifying 2 regarding a post-grant review proceeding of U.S. 3 Patent Number 11,297,705? 4 A. Yes. 5 Q. What did you do to prepare for today's 6 deposition? 7 A. Over the last few days I read through my 8 declaration and some of the -- reviewed some of the 9 supporting exhibits. 10 Q. Anything else? 11 A. I met with counsel yesterday to go through 12 my declaration. 13 Q. Did you meet with counsel any other times 14 before yesterday? 15 A. Not to my recollection. 16 Q. Which counsel did you meet with 17 yesterday? 18 A. Steve McBride. 19 Q. Any other -- were there any others present 20 at your meeting or conversation with counsel? 21 A. No. 22 Q. How long did you meet with Mr. McBride 23 for? 24 A. I think it was approximately five or six 25 hours.
6 1 Q. Good morning. My name is Mary Dahl. I'll 2 be taking your deposition today. 3 Would you please state your full name and 4 address for the record? 5 A. It's Dr. Alfred D. Ducharme. Address is 6 308 Radisson, that's R-a-d-i-s-s-o-n, Place, Oviedo, 7 Florida. I don't know if you need a zip code. 8 Q. Do you have any notes or materials in front 9 of you today? 10 A. I have a clean copy of my declaration, and 11 I have a directory of clean copies of some of the 12 exhibits. 13 Q. Do you have anything else in front of 14 you? 15 A. Just a couple -- just a couple of notes on 16 some things I wanted to point out, corrections. 17 Q. Corrections to your declaration? 18 A. Yes, just -- yes, things to note. 19 Q. Okay. Please close out of all applications 20 besides Zoom on your computer and let me know when 21 you're done doing so. 22 A. Everything is closed but Zoom. Yep. 23 Q. Is there any reason why you can't give your 24 complete and accurate testimony today? 25 A. No.	8 1 Q. Yesterday was the only communication you 2 had with counsel in preparation for your deposition; 3 correct? 4 A. I believe -- yes, I believe so since -- 5 since submitting my declaration in October. 6 Q. Did you review any other documents besides 7 your declaration and supporting exhibits to prepare 8 for your deposition? 9 A. No. 10 Q. Did you do anything else to prepare for 11 your deposition that we haven't already discussed? 12 A. No. 13 Q. What is your regular hourly billing rate 14 for your services as an expert witness or 15 consultant? 16 A. It's -- I couldn't point you -- I can't 17 point you to a specific paragraph in my declaration, 18 but to the best of my recollection it's \$440 per 19 hour. And I can give you a paragraph number if I 20 can -- and I would like to look at my declaration at 21 some point, but I just closed the application. 22 Q. Okay. I'm dropping into the chat Exhibit 23 2045. It's your declaration. Yeah, okay. Chat. 24 (Whereupon, Ducharme Exhibit 2045 was marked for 25 identification.)

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 3

Conducted on January 16, 2024

9 1 By MS. DAHL: 2 Q. Let me know when you have Exhibit 2045 3 open. 4 A. Yeah. And just as a note, of course, the 5 chat wants me to download. So I'll make a clean -- 6 or I'll make a directory on my desktop for these 7 documents that you share. 8 Q. You have Exhibit 2045 open; correct? 9 A. It is now open, yes. 10 Q. Do you recognize Exhibit 2045? 11 A. It appears to be a clean copy of my 12 declaration. 13 Q. When I refer to your declaration today, we 14 will be referring -- I will be referring to Exhibit 15 2045 in this PGR. Is that okay with you? 16 A. Yes. 17 Q. Did you prepare Exhibit 2045? 18 A. Yes. 19 Q. About how many hours did you spend 20 preparing this report? 21 A. I don't recall -- it was back in October -- 22 the exact number. Probably something on the order 23 of 20 to 30 hours. 24 Q. Did anyone else help you prepare this 25 report?	11 1 represents my opinion in this case. 2 Q. Does this report set forth the full scope 3 of your opinions in this matter? 4 A. Yes. 5 Q. Earlier today you mentioned you wanted to 6 make some corrections. What are those corrections 7 that you wanted to make to your report? 8 A. My -- to the best of my recollection -- 9 yeah, paragraph 65 of my declaration. Paragraph 66 10 is -- was left in by accident, but it's essentially 11 a repeat of paragraph 65 other than the words "in my 12 opinion, comma." It's -- I -- it's not really a 13 correction. I just noted that I left that in and 14 didn't catch it before. 15 And then paragraph -- yeah, I'm having 16 trouble finding the other -- there's another -- 17 another instance of having left something in after 18 edits, a repeat. I believe that's -- yeah. I'm 19 sorry. I can't remember exactly which paragraph it 20 was, but nothing -- nothing that was in error that I 21 thought I needed to correct. Just typographical, 22 copy and paste. 23 Q. You're not aware of any factual 24 inaccuracies or misstatements in your declaration, 25 Exhibit 2045; correct?
10 1 A. It was an iterative process with counsel. 2 Q. Did you write this declaration in your own 3 words? 4 A. The -- can you clarify what you mean by my 5 own words? 6 Q. Did you draft this report in the first 7 instance? 8 A. No. A first draft was provided to me by 9 counsel, and then I edited it to align with my own 10 opinions. 11 Q. Are there any opinions in this Exhibit 2045 12 that were written by counsel to which you just 13 adopted? 14 A. There were -- there are opinions in here 15 that align with my opinions. There were opinions in 16 the first draft that aligned with my opinions. 17 Q. Are there any opinions in Exhibit 2045 that 18 do not currently align with your opinions? 19 A. No. As I stated in paragraph 186 in the 20 conclusions of my declaration, "I hereby declare 21 that all statements made herein of my knowledge are 22 true and all statements made herein on information 23 and belief were and are believed by me to be true." 24 So I believe all of these to be true and have -- 25 well, signed the document showing that this	12 1 A. No, I'm not aware. 2 Q. Does the name Eric Bretschneider sound 3 familiar to you? 4 A. Yes. I'm not -- I've -- I've heard the 5 name before. I've never worked with 6 Dr. Bretschneider, but he's in the same field, so 7 his name comes up often in these types of LED 8 cases. 9 Q. Have you ever talked to Dr. Bretschneider 10 before? 11 A. I -- I don't recall. I -- I don't believe 12 I have. 13 Q. Please go to page 10, paragraph 20 of your 14 declaration. You reviewed all of the exhibits 15 submitted to date in this proceeding, as well as the 16 Petition, Preliminary Response, and Institution 17 Decision; correct? 18 A. First of all, let me try to get to the 19 correct paragraph. Page 10, which paragraph was it? 20 Q. Page 10, paragraph 20. 21 A. Yes, I reviewed all of those documents as 22 specified in paragraph 20. 23 Q. Did you review anything else in conducting 24 your analysis in forming your opinions in this 25 PGR?

Conducted on January 16, 2024

13 1 A. Nothing that's not referenced within the 2 declaration. 3 Q. Have you reviewed any portion of the record 4 from PGR 2022-00009 regarding the '705 patent's 5 parent patent, U.S. Patent Number 10,932,341? 6 A. No. 7 Q. I am going to refer to PGR 2022-00009 as 8 the '341 PGR as shorthand. Do you understand? 9 A. Yes. 10 Q. Have you reviewed any of 11 Dr. Bretschneider's deposition testimony from the 12 '341 PGR? 13 A. Not -- no, not to my recollection. 14 Q. Have you reviewed any of 15 Dr. Bretschneider's opinions from the '341 PGR? 16 A. No, not that I can recall. 17 Q. Are you aware of any opinions or testimony 18 of Dr. Bretschneider from the '341 PGR that you 19 disagree with? 20 A. I would need to be aware of them to -- to 21 disagree with them, and I've already stated that I'm 22 not aware of them. 23 Q. Have you reviewed any declarations or 24 deposition testimony provided by Dr. Bretschneider 25 related to any other Lynk patents?	15 1 '705 PGR that you worked on a case for Lynk Labs? 2 A. I -- I don't recall exactly. Like I 3 answered a moment ago, I've worked on a few 4 different cases over the past couple of years. 5 Q. Was it within the last five years? 6 A. I believe so, yes. 7 Q. And your work was as a consulting expert 8 for Lynk Labs? 9 A. Yes. An expert witness, yes. 10 Q. In forming your opinions found in Exhibit 11 2045, did you consider any file histories besides 12 that of the '705 patent? 13 A. Yes. I reviewed very limited prosecution 14 histories of past patents for connected patents, 15 we'll say. Supporting patents. 16 Q. What patents were those? 17 A. In paragraph 87 of my declaration, it 18 states that -- we'll say the file history of the 19 grandparent '164 application, I reviewed that. 20 Q. Did you review any other file histories 21 besides that of the grandparent '164 application? 22 A. I don't recall a specific instance. I may 23 have looked at the file history of the '705; but as 24 I stated in paragraph 20, I've reviewed exhibits 25 submitted to date in the IPR. So during
14 1 A. I don't believe I have to the best of my 2 recollection. I -- I've worked on a few different 3 cases for Lynk Labs, and it's been over the past 4 couple of years, but I -- I couldn't remember 5 anything specifically. 6 Q. What cases have you worked on for Lynk Labs 7 previously? 8 A. I -- I wouldn't be able to recall that 9 specifically. 10 Q. You -- you can't remember a single case 11 that you've worked on for Lynk Labs, the name of 12 that -- the name of any cases? 13 A. No. I -- I would have to go back through 14 my records and -- and remember exactly what I had 15 worked on. The cases, as you know, are when -- 16 when -- the cases for Lynk Labs are -- are similar 17 LED cases, and I work on other LED cases for other 18 clients, so they're all pretty similar. So, no, I 19 can't remember specific details, certainly not 20 patent numbers or anything like that. 21 Q. Do you remember the opposing parties on the 22 cases that you worked on for Lynk Labs? 23 A. No. I -- I don't recall sitting here 24 today. 25 Q. Do you remember how recently besides the	16 1 preparation, I would have reviewed any -- any of 2 those exhibits. 3 Q. Did you consider the file history of the 4 '705 immediate parent '341 patent? 5 A. My recollection is that I did. 6 Q. There's a section entitled "Applicable 7 Legal Standards" in your -- in your declaration, 8 Exhibit 2045, paragraphs 21 through 34. 9 A. Yes. I'm looking at that. 10 Q. Were you instructed by counsel regarding 11 these applicable legal standards? 12 A. Can you repeat that question? 13 Q. Were you instructed by counsel regarding 14 the applicable legal standards, paragraphs 21 15 through 34 in Exhibit 2045? 16 A. I -- I'm not sure "instructed" would be the 17 word that I would use. I was advised and 18 informed. 19 Q. Were you advised or informed by counsel 20 regarding any other legal standards not described in 21 paragraphs 21 through 34 as part of this PGR? 22 MR. MCBRIDE: Objection. Form. 23 THE WITNESS: I'm not sure I understand the 24 question. 25 By MS. DAHL:

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 5

Conducted on January 16, 2024

17 1 Q. Did your counsel provide you with any other 2 legal standards not already described in paragraphs 3 21 through 34 as part of this PGR? 4 A. Not as I understand legal -- 5 Q. In -- I apologize. Sorry. 6 A. Not as I understand legal standards as you 7 referred to them. 8 Q. In forming your opinions for this PGR, did 9 you apply any legal standards other than the ones 10 listed in paragraphs 21 through 34? 11 A. I am -- I don't believe -- sorry. In 12 paragraph 162 of my declaration, I do discuss 35 13 U.S.C. 112, which I'm not sure is what you would 14 consider to be a legal standard for -- for forming 15 my opinions. But certainly in that paragraph, there 16 is a discussion of indefiniteness, written 17 description, and enablement. 18 Q. I'm dropping into the chat Exhibit 1018. 19 (Whereupon, Ducharme Exhibit 1018 was marked for 20 identification.) 21 By MS. DAHL: 22 Q. Please let me know when you have Exhibit 23 1018 open. 24 A. I have the exhibit open. 25 Q. Please go to paragraph 24 of Exhibit 1018	19 1 correct? 2 A. Yes, that is correct. 3 Q. Paragraph 24 of Exhibit 1018 describes a 4 multi-voltage LED device that comprises a plurality 5 of single-voltage LED circuits; correct? 6 MR. MCBRIDE: Objection. Form. 7 THE WITNESS: Can you repeat that question 8 so that I can make sure I answer it correctly? 9 By MS. DAHL: 10 Q. Paragraph 24 of Exhibit 1018 describes a 11 multi-voltage LED device that comprises a plurality 12 of single-voltage LED circuits; correct? 13 MR. MCBRIDE: Same objection. 14 THE WITNESS: I understand paragraph 24 15 as -- as written. 16 By MS. DAHL: 17 Q. Paragraph 24 of Exhibit 1014 (sic) 18 describes a multi-voltage LED device that comprises 19 a plurality of single-voltage LED circuits; 20 correct? 21 MR. MCBRIDE: Same objection. 22 THE WITNESS: You're rephrasing the 23 paragraph, but I understand and agree with how it's 24 written. You've added the word "plurality." I 25 don't see the word "plurality" in paragraph 24.
18 1 and let me know when you're there. 2 A. I'm there. 3 Q. Paragraph 24 of Exhibit 1018 does not 4 disclose a switch; correct? 5 A. The word "switch" is not used in paragraph 6 24 of Exhibit 1018. 7 Q. Is a switch described in paragraph 24 of 8 Exhibit 1018? 9 A. I believe I've answered that question. 10 Q. Can you please point me to where you've 11 previously answered that question? 12 A. My previous answer was the word "switch" 13 does not appear in paragraph 24 of Exhibit 1018. 14 Q. Would it be fair to say that a switch is 15 not described in paragraph 24 of Exhibit 1018; 16 correct? 17 MR. MCBRIDE: Objection. Form. 18 THE WITNESS: I believe I've answered that 19 question. 20 By MS. DAHL: 21 Q. Paragraph 24 of Exhibit 1018 refers to two 22 single-voltage series LED circuits; correct? 23 A. Yes, that is correct. 24 Q. Paragraph 24 of Exhibit 1018 refers to a 25 multi-voltage AC or DC operable LED device;	20 1 By MS. DAHL: 2 Q. Do you agree that paragraph 24 of Exhibit 3 1018 describes a multi-voltage LED device that 4 comprises at least two single-voltage LED 5 circuits? 6 MR. MCBRIDE: Objection. Form. 7 THE WITNESS: I understand paragraph 24 as 8 describing a multi-voltage AC or DC operable LED 9 device. 10 By MS. DAHL: 11 Q. Do you agree that paragraph 24 of Exhibit 12 1018 describes a multi-voltage LED device that 13 comprises at least two single-voltage LED 14 circuits? 15 MR. MCBRIDE: Same objection. 16 THE WITNESS: I understand that paragraph 17 24 is describing what it states in the first few 18 words, that according to another aspect of the 19 invention, I understand that paragraph 24 is doing 20 that. It's describing another aspect of the 21 invention, and that is a multi-voltage AC or DC 22 operable LED device. 23 By MS. DAHL: 24 Q. Does that multi-voltage AC or DC operable 25 LED device have at least two single-voltage series

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 6

Conducted on January 16, 2024

21 1 LED circuits in paragraph 24 of Exhibit 1018? 2 A. My understanding of paragraph 24 is as 3 written, "According to another aspect of the 4 invention, at least two single-voltage series LED 5 circuits, each of which having at least two serially 6 connected LEDs, are formed on a single chip or on a 7 substrate providing a multi-voltage AC or DC 8 operable LED device." 9 Q. Are you unable to answer my question of 10 whether paragraph 24 of Exhibit 1018 describes a 11 multi-voltage LED device that comprises at least two 12 single-voltage series LED circuits with a yes or 13 no? 14 MR. MCBRIDE: Objection. Form. 15 THE WITNESS: Yeah, I -- I do not believe 16 that your question can be answered with a yes or no, 17 because as it starts in the beginning of paragraph 18 24, that it is another aspect of the invention. 19 By MS. DAHL: 20 Q. Regarding the aspect of the invention that 21 is specifically discussed in paragraph 24 of Exhibit 22 1018, does that paragraph describe a multi-voltage 23 LED device that comprises a plurality of 24 single-voltage LED circuits? 25 A. Paragraph 24 describes a multi-voltage AC	23 1 correct? 2 A. I believe I just answered that. What I -- 3 my opinion of paragraph 25 is that it describes 4 multi-voltage LED circuits. 5 Q. Are you unable to answer the question of 6 whether paragraph 25 of Exhibit 1018 describes 7 single-voltage series LED circuits with a yes or 8 no? 9 MR. MCBRIDE: Objection. Form. 10 THE WITNESS: I believe I answered the 11 question. I did not use a single word answer of yes 12 or no. 13 By MS. DAHL: 14 Q. If you had to use a single word answer of 15 yes or no, how would you answer the question of 16 whether or not paragraph 25 of Exhibit 1018 17 describes single-voltage series LED circuits? 18 MR. MCBRIDE: Objection. Form. 19 THE WITNESS: I -- I don't believe I can 20 answer that with a yes or no the way it's phrased. 21 By MS. DAHL: 22 Q. How -- how would you need it to be phrased 23 in order to answer it with a yes or no? 24 MR. MCBRIDE: Objection. Form. 25 THE WITNESS: Yeah, I'm not going to make
22 1 or DC operable LED device that in this aspect of the 2 invention has at least two single-voltage series LED 3 circuits, each of which has at least two serially 4 connected LEDs. 5 Q. Paragraph 25 of Exhibit 1018, line 1. 6 A. Uh-huh. 7 Q. Does that describe single-voltage series 8 LED circuits? 9 A. Can you repeat the last part of your 10 question? Sorry. 11 Q. I'll rephrase. Paragraph 25, line 1 of 12 Exhibit 1018 also describes single-voltage series 13 LED circuits; correct? 14 A. I -- paragraph 25 of Exhibit 1018 describes 15 another aspect of the invention, and that aspect is, 16 "Single-voltage series LED circuit is designed to be 17 driven with a predetermined forward voltage of at 18 least 6 volts AC or DC and preferably each 19 single-voltage series LED circuit has a matching 20 forward voltage of 6 volts, 12 volts, 24 volts, 120 21 volts, or other AC or DC voltage levels," showing -- 22 I understand that these are examples of different 23 voltages or multiple voltages that can be used. 24 Q. So you agree that paragraph 25 of Exhibit 25 1018 describes a single-voltage series LED circuits;	24 1 the questions for you, Counsel. 2 By MS. DAHL: 3 Q. So you are unable to answer whether or not 4 paragraph 25 of Exhibit 1018 describes 5 single-voltage series LED circuits; correct? 6 MR. MCBRIDE: Objection. Form. 7 Mischaracterizes the testimony. 8 THE WITNESS: I believe I've answered that 9 question. 10 By MS. DAHL: 11 Q. You are unable to answer whether or not 12 paragraph 25 describes single-voltage series LED 13 circuits with a yes or no; correct? 14 MR. MCBRIDE: Objection. Form. Asked and 15 answered. 16 THE WITNESS: As I've said before, I 17 believe I've answered that question. 18 By MS. DAHL: 19 Q. Paragraph 25, lines 4 through 5 of Exhibit 20 1018 describes -- 21 A. Hold on, Counsel. I'm sorry. Let me get 22 there. Paragraph 25, lines 4 -- 23 Q. Through 5. 24 A. Okay. Sorry. 25 Q. Describes -- describes a multi-voltage AC

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 7

Conducted on January 16, 2024

25 1 or DC LED device; correct? 2 Let me just state the question again for 3 the record. 4 Paragraph 25, lines 4 through 5 of Exhibit 5 1018 describes a multi-voltage AC or DC LED device; 6 correct? 7 A. Paragraph 25 of Exhibit 1018, line 5, 8 describes an example of, "Each multi-voltage AC or 9 DC LED device would be able to be driven with at 10 least two different AC or DC forward voltages." 11 Q. Do you agree that paragraph 25 of Exhibit 12 1018 describes a multi-voltage LED device that 13 comprises a plurality of single-voltage series LED 14 circuits? 15 A. I believe I've answered that question 16 previously, but I'll state again, paragraph 25 of 17 Exhibit 1018 describes another aspect of the 18 invention that describes multi-voltage LED 19 circuits. 20 Q. So do you agree or do you not agree that 21 paragraph 25 of Exhibit 1018 describes a 22 multi-voltage LED device that comprises a plurality 23 of single-voltage LED circuits? 24 A. I understand that paragraph 25 describes an 25 invention -- an aspect of the invention where	27 1 A. In paragraph 25, line -- line 4 through -- 2 through 8 describes what I just paraphrased, where a 3 multi-voltage LED circuit is formed by connecting 4 single-voltage LED circuits in either series or 5 parallel. 6 Q. I believe line 4 of paragraph 25 describes 7 a multi-voltage AC or DC LED device that is formed 8 by single-voltage series LED circuits; is that 9 correct? 10 A. Paragraph 25 describes an example of a 11 multi-voltage LED device that would consist of two 12 different arrangements of single-voltage LED 13 circuits, one in parallel and one in series 14 providing two drive voltages. 15 Q. The word "switch" does not appear in 16 paragraph 25 of Exhibit 1018; correct? 17 A. That's correct. The word "switch" does not 18 appear in paragraph 25 of Exhibit 1018. 19 Q. Please go to paragraph 28 of Exhibit 1018 20 and let me know when you're there. 21 A. I'm at paragraph 28 of Exhibit 1018. 22 Q. Paragraph 28 of Exhibit 1018 describes 23 single-voltage LED circuits; correct? 24 A. Sorry, I had to refamiliarize myself with 25 the paragraph. Please repeat your question.
26 1 single-voltage series LED circuits are designed to 2 be driven with predetermined forward voltage of at 3 least 6 volts and also provides a description that 4 the LED circuit has a matching forward voltage of 6 5 volts, 12 volts, 24 volts, 120 volts. 6 Q. I'm sorry, I don't think you're answering 7 my question directly because if you don't agree, I 8 want to know why you don't agree specifically. So 9 if you could tell me clearly yes or no whether or 10 not you agree that paragraph 25 of Exhibit 1018 11 describes a multi-voltage LED device that comprises 12 a plurality of single-voltage LED circuits. 13 MR. MCBRIDE: Objection. Form. 14 THE WITNESS: My understanding of paragraph 15 25 is that it describes in the second part of the 16 paragraph a multi-voltage LED circuit comprising a 17 parallel connection of single-voltage series LED 18 circuits and then describes a second forward voltage 19 drive level for a combination of single-voltage 20 level LED circuits connected in series. 21 By MS. DAHL: 22 Q. Can you please point me to where in 23 paragraph 25 a multi-voltage LED circuit comprising 24 a parallel connection of single-voltage series LED 25 circuits is described?	28 1 Q. Paragraph 28 of Exhibit 1018 describes 2 single-voltage LED circuits; correct? 3 A. Paragraph 28 describes another aspect of 4 the invention that has at least two single-voltage 5 LED circuits. 6 Q. Paragraph 28 of Exhibit 1018 describes 7 multi-voltage LED devices comprising at least two 8 single-voltage LED circuits; correct? 9 A. Paragraph 28 describes a multi-voltage LED 10 device that has two single-voltage LED circuits. 11 Q. The word "switch" does not appear in 12 paragraph 28 of Exhibit 1018; correct? 13 A. I believe that's correct. 14 Q. Please go to paragraph 30 of Exhibit 1018 15 and let me know when you're there. 16 A. I'm at paragraph 30. 17 Q. Paragraph 30, line 1 of Exhibit 1018 18 describes at least two single-voltage LED circuits; 19 correct? 20 A. Paragraph 30 describes another aspect of 21 the invention that has two single-voltage LED 22 circuits. 23 Q. Paragraph 30 of Exhibit 1018, line 8 -- 24 A. Okay. I'm there. 25 Q. -- refers to a multi-voltage or -- and/or

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 8

Conducted on January 16, 2024

29 1 multi-brightness LED device; correct? 2 A. Yes. The beginning of line 8 is, "Each 3 multi-voltage and/or multi-brightness LED device." 4 Q. Paragraph 30 of Exhibit 1018 also describes 5 a multi-voltage and/or multi-brightness LED device 6 comprising at least two single-voltage LED circuits; 7 correct? 8 A. Paragraph 30 starting at line 8 describes a 9 multi-voltage LED device where two single-voltage 10 LED circuits are connected in parallel in the first 11 instance and series in the second instance. 12 Q. Paragraph 14 -- please go to paragraph 14 13 of Exhibit 1018 and let me know when you're there. 14 A. I'm at paragraph 14. 15 Q. Paragraph 14 of Exhibit 1018 does not 16 describe a switch; correct? 17 A. In paragraph 14 of Exhibit 1018, the word 18 "switch" does not appear. 19 Q. In paragraph 15 of Exhibit 1018, please go 20 to the second sentence. 21 A. I'm there. 22 Q. Do you see the word "multi-voltage" is 23 written in quotation marks in the second sentence of 24 paragraph 15 of Exhibit 1018? 25 A. I do.	31 1 electrical connection can occur during the packaging 2 of the LED device; correct? 3 A. Can you point me to a specific -- 4 MR. MCBRIDE: Object to form. 5 THE WITNESS: -- place in the application 6 that you want me to look? 7 By MS. DAHL: 8 Q. I'm talking generally about the embodiments 9 in Exhibit 1018 where individual LED circuits may be 10 connected in series or parallel, for example, 11 paragraph 15. But you are the expert in this case, 12 so I'm asking generally about the embodiments 13 disclosed in Exhibit 1018 where the circuits may be 14 connected in series or parallel. 15 Can the connection occur during the 16 packaging -- does Exhibit 1018 disclose that the 17 electrical connection of these circuits in either 18 series or parallel, can that occur during the 19 packaging of the LED device? 20 MR. MCBRIDE: I'll object to form. 21 THE WITNESS: In paragraph 8 of Exhibit 22 1018, starting at line 2, "Therefore, it would be 23 advantageous to have a single chip LED or multi-chip 24 single LED packages that could be easily configured 25 to operate at multiple voltages by simply selecting
30 1 Q. Do you have an understanding on whether 2 this portion of paragraph 15 of Exhibit 1018 defines 3 the term "multi-voltage"? 4 MR. MCBRIDE: Objection. Form. 5 THE WITNESS: I have not formed an opinion 6 on that. 7 By MS. DAHL: 8 Q. Paragraph 15 of Exhibit 1018, three lines 9 from the bottom, do you see "multi-brightness" in 10 quotation marks? 11 A. Yes. 12 Q. Do you have an understanding or opinion on 13 whether this portion of the specification defines 14 the term "multi-brightness"? 15 A. I -- I have not formed an opinion on 16 that. 17 Q. Paragraph 15 of Exhibit 1018, the last 18 sentence, this sentence discloses that the desired 19 operating level may be achieved or completed during 20 the LED packaging stage; correct? 21 A. I believe that's a correct description of 22 what's written here. 23 Q. The embodiments in Exhibit 1018 where 24 individual LED circuits may be connected in either 25 series or parallel, Exhibit 1018 discloses that the	32 1 a voltage and/or current level when packaging the 2 multi-voltage and/or multi-current single chip LEDs 3 or by selecting a specific voltage and/or current 4 level when integrating the LED package onto a 5 printed circuit board or within a" -- 6 (Court Reporter clarification.) 7 THE WITNESS: -- "finished lighting 8 product." 9 MR. MCBRIDE: Mary, we've been going about 10 an hour. When it's a good time for a break, I would 11 appreciate one. 12 MS. DAHL: Sure. We can take a break right 13 now. Is ten minutes okay? 14 MR. MCBRIDE: Yeah, that's fine. Thank 15 you. 16 THE WITNESS: Okay. So be back at 10:20? 17 MR. MCBRIDE: Yeah, 10:20 sounds good to 18 me. 19 THE WITNESS: All right. 20 (Recess.) 21 COURT REPORTER: We're back on the record. 22 Please proceed. 23 THE WITNESS: During the break, I did go 24 through my declaration to find that other typo. I 25 just wanted to point that out on the record. It was

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 9

Conducted on January 16, 2024

33 1 paragraph 176. I repeated the first line twice. 2 MS. DAHL: Thank you. 3 By MS. DAHL: 4 Q. During the break, did you talk with your 5 counsel? 6 A. No. 7 Q. Paragraph 32 of Exhibit 1018 -- let me know 8 when you're there. 9 A. I'm at paragraph 32. 10 Q. Paragraph 32 of Exhibit 1018 discloses that 11 the LED packager can select whether to wire the LED 12 circuits in series or in parallel; correct? 13 MR. MCBRIDE: Objection. Form. 14 THE WITNESS: I understand the second 15 sentence of paragraph 32 describes a multi-voltage 16 LED device where the LED packager during the LED 17 packaging process has chosen a -- either series or 18 parallel configuration during the packaging process 19 to provide two forward drive options -- forward 20 voltage drive options. 21 By MS. DAHL: 22 Q. Can we go to paragraph 16 of Exhibit 1018? 23 A. I'm at paragraph 16. 24 Q. Paragraph 16 of Exhibit 1018 describes 25 selecting the forward voltage for an LED device	35 1 method of -- sorry. Strike that. 2 Paragraph 16 of Exhibit 1018 refers to the 3 method of selection of forward voltage as wire 4 bonding them into a circuit at the packaging level; 5 correct? 6 A. It describes the creation of a single LED 7 package when packaging or at the packaging level 8 with one or more multi-voltage level single chips. 9 Q. And the creation of the package is through 10 wire bonding; correct? Wire bonding at the 11 packaging level? 12 A. Paragraph 16 describes that the packaging 13 is wire bonding them into a circuit at the packaging 14 level or when packaging one or more multi-voltage 15 single chips within -- within an LED package. 16 Q. Okay. Let's go to paragraph 18 of Exhibit 17 1018. Let me know when you're there. 18 A. I'm there. 19 Q. Paragraph 18 of Exhibit 1018 describes LED 20 devices that comprise a first operating circuit and 21 additional circuits; correct? 22 A. Paragraph 18 describes an LED package that 23 provides multi-brightness by switching additional 24 circuits on or off in addition to a first operating 25 circuit.
34 1 during the packaging stage; correct? 2 A. I understand paragraph 16 is a continuation 3 onto paragraph 15 where it's suggesting that it 4 would be further advantageous to provide at least 5 two -- 6 (Court Reporter clarification.) 7 THE WITNESS: It would be further 8 advantageous to provide at least two integrated 9 circuits having a forward voltage of at least 12 10 volts AC or 12 volts DC or greater on a single chip 11 or within a single LED package by means of selecting 12 a forward voltage when packaging a multi-voltage 13 and/or multi-brightness circuit. 14 By MS. DAHL: 15 Q. So paragraph 16 of Exhibit 1018 describes 16 what you mentioned occurring at the packaging level; 17 correct? 18 MR. MCBRIDE: Objection. Form. 19 THE WITNESS: Paragraph 16 describes a -- a 20 process that's done at the packaging level, that's 21 correct. It also states that this is done when 22 packaging one or more multi-voltage level single 23 chips within an LED package. 24 By MS. DAHL: 25 Q. Paragraph 16 of Exhibit 1018 refers to the	36 1 Q. Paragraph 18 of Exhibit 1018 describes 2 there's a first operating circuit and then 3 additional circuits that may be switched on and off; 4 correct? 5 A. It describes the switching as additional 6 circuits on or off in addition to a first operating 7 circuit. 8 Q. So paragraph 18 of Exhibit 1018 does not 9 describe leaving on one of the additional circuits 10 while switching the first operating circuit off; 11 correct? 12 MR. MCBRIDE: Object to form. 13 THE WITNESS: I -- I read it as I see in 14 paragraph 18, the way it's written is that the 15 different levels of brightness can be obtained by 16 switching additional circuits on or off in addition 17 to a first operating circuit. That could be 18 interpreted as switching the first operating circuit 19 on or off as well as the additional circuits. 20 By MS. DAHL: 21 Q. Would a circuit be operating if it was 22 turned off? 23 A. In -- it depends on the context of the use 24 of first operating circuit. It may not necessarily 25 be describing its behavior but just describing that

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 10

Conducted on January 16, 2024

37 1 circuit as a first operating circuit. 2 Q. When you say that first operating circuit 3 may not be -- may not necessarily be describing its 4 behavior, you mean it might not necessarily be 5 describing if it's turned on or off? 6 A. I'm -- I'm looking at just paragraph 18, 7 and I'm -- I haven't formed an opinion on what first 8 operating circuit means in this paragraph. I would 9 need to review the rest of the context to know if in 10 this sentence first operating circuit would need to 11 be on or operating. 12 Q. You said you reviewed Exhibit 1018 to 13 prepare the opinions in your declaration and in 14 preparation for today's deposition; correct? 15 A. That's correct. 16 Q. But you don't have an opinion on what first 17 operating circuit means in the context of Exhibit 18 1018; correct? 19 A. I don't recall having made a specific 20 opinion on first operating circuit within this one 21 paragraph. In order to answer correctly, I would 22 need to review -- I would need to review more 23 context. 24 Q. What more context would you need to 25 review?	39 1 A. I'm there. Give me one moment just to do 2 some resizing so I can see the whole thing here. 3 Okay. I can see Figure 8. 4 Q. Figure 8 of Exhibit 1018, the bridge 5 rectifiers are 68; correct? 6 A. That's correct. In Exhibit 1018, Figure 8, 7 68 points to a connection of four LEDs which 8 represents the bridge rectifiers. I pointed this 9 out on -- in paragraph 120 of my declaration in the 10 last sentence, and Figure 8 is represented -- is 11 represented there with the section I am referring 12 to, 68, being highlighted. 13 Q. In Figure 8 of Exhibit 1018, AC voltage is 14 applied to the electrical contacts 72a, 72b, and 15 72c; correct? 16 A. In Figure 8 of Exhibit 1018, AC voltage can 17 be applied to the terminals 72a, 72b, and 72c. 18 Q. If you go to paragraph 58 of Exhibit 1018, 19 let me know when you're there. 20 A. That was paragraph 58? 21 Q. Correct. 22 A. I'm there. 23 Q. Paragraph 58 describes Figure 8. Do you 24 see that? 25 A. Yes.
38 1 A. Well, to begin with, I would need to read 2 the entire patent to refresh my recollection. 3 Q. By "entire patent," do you mean Exhibit 4 1018 or the '705 patent? 5 A. I misspoke when I said "patent," but the 6 Exhibit 1018, I would need to review that in full in 7 order to render an opinion on a specific couple of 8 words in paragraph 18. 9 Q. So sitting here right now, you're unable 10 to -- you have no opinion on what a first operating 11 circuit means in the context of Exhibit 1018; 12 correct? 13 A. When I answered that question initially, I 14 did not recall an opinion on first operating 15 circuit. As we have been discussing it and I read 16 that paragraph once again, I could understand that 17 paragraph to mean that the first operating circuit 18 would be on in this case, "in this case" being the 19 context of this paragraph. 20 Q. In the context of paragraph 18 of Exhibit 21 1018, you understand a first operating circuit to be 22 on; correct? 23 A. That's correct, yes. 24 Q. Please go to Figure 8 of Exhibit 1018. Let 25 me know when you're there.	40 1 Q. Paragraph 58 of Exhibit 1018 describes that 2 AC voltage is applied to 72a, 72b, and 72c. Do you 3 see that? 4 A. In paragraph 58, line 1, 2 -- I believe 5 it's line 6, it states that one side of the AC 6 voltage is applied to 72a, and the other side of an 7 AC line is applied to 72b and 72c individually. 8 Q. Figure 9 of Exhibit 1018 includes the 9 device of Figure 8; correct? 10 A. Yes, that's correct. Device 62 as shown in 11 Figure 8 is shown in Figure 9, as being included in 12 Figure 9. 13 Q. Figure 58 of Exhibit 1018 describes Figure 14 8 as disclosing an LED device 62 which includes LED 15 circuit 69; correct? 16 MR. MCBRIDE: Objection. Form. 17 THE WITNESS: I'll have to ask you to 18 repeat that because I think you started it with 19 Figure 58, and I don't think you meant to do that, 20 unless I misheard it. So please restate the 21 question. 22 By MS. DAHL: 23 Q. Yes, I meant to refer to figure -- sorry -- 24 paragraph 58, but I'll restate the question. 25 Paragraph 58 of Exhibit 1018 describes

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 11

Conducted on January 16, 2024

41 1 Figure 8 as disclosing an LED device 62 which 2 includes LED circuit 69; correct? 3 A. Figure 8 describes an LED circuit with two 4 series LED circuits as shown -- as denoted as 69 in 5 Figure 8. 6 Q. You said Figure 8 describes an LED circuit 7 with two series LED circuits. Did you mean to say 8 an LED device with two series LED circuits? 9 A. Yes. As it says -- 10 MR. MCBRIDE: Objection, form. 11 THE WITNESS: As it says in paragraph 58, 12 "Figure 8 discloses a schematic diagram a 13 multi-brightness LED lighting device 62 having at 14 least two bridge rectified 68 series LED circuits 15 69." 16 By MS. DAHL: 17 Q. So paragraph 58 of Exhibit 1018 describes 18 Figure 8 as disclosing an LED device 62 which 19 includes LED circuits 69; correct? 20 A. Paragraph 58 discloses something just a 21 tiny bit different than what you just stated or 22 questioned. It's a multi-brightness LED lighting 23 device 62 having at least two bridge rectified 68 24 series LED circuits 69. 25 Q. Can you please go to Figure 9 of Exhibit	43 1 Exhibit 1018 determines if the voltage supplied by 2 AC voltage source 78 is applied to one of the LED 3 circuits or both of the LED circuits in the LED 4 device 62; correct? 5 A. In Figure 9 with a -- with a simple 6 two-position switch, one mode of operation could be 7 that either the top LED circuit 69 in Figure 9 is on 8 or off and the bottom circuit 69 is on or off, or 9 there could be a multiple position or multi-way 10 switch that would enable either one or the other or 11 both of the circuits to be operated. 12 As it's stated in paragraph -- I don't 13 recall the paragraph, but it described a two-way or 14 three-way switch, to the best of my recollection. I 15 was referring to paragraph 18, the last sentence 16 where it describes a two-way or three-way switch. 17 And I do have to -- I need to take a break 18 at 11:00. I can wait a little bit longer if -- if 19 you want to -- I don't want to interrupt your flow, 20 but I do need to take a break. 21 Q. Okay. We can take a break now. 22 A. Okay. 23 Q. How long do you need a break for? 24 A. I just need five minutes, unless other -- 25 unless people would like longer.
42 1 1018? 2 A. I'm looking at Figure 9. 3 Q. Figure 9 of Exhibit 1018 illustrates LED 4 device 62 that comprises LED circuits that are 5 labeled 69 in Figure 8; correct? 6 A. Figure 9 describes LED lighting device 62 7 that includes LED circuits 69. 8 Q. In Figure 9 of Exhibit 1018, the voltage 9 applied to the LED device is the voltage supplied by 10 what's labeled 78; correct? 11 A. I want to make sure I heard you correctly, 12 so I'll ask you to repeat that. 13 Q. In Figure 9 of Exhibit 1018, the voltage 14 applied to the LED device is the voltage supplied by 15 what's labeled 78; correct? 16 A. Figure 9 describes an LED lighting device 17 62 with a power -- an AC power source 78 where a 18 two-way switch 74 is connected between the power 19 source 78 and the LED lighting device 62. 20 Q. Okay. What does the two-way switch 74 do 21 in Figure 9 of Exhibit 1018? 22 A. The two-way switch 74 switches the power 23 from the AC source 78 to either terminal 72b of 24 Figure 8 or 72c of Figure 8. 25 Q. So the two-way switch 74 in Figure 9 of	44 1 Q. Okay. We can take a 10-minute break. 2 A. Okay. I guess we're close enough. We'll 3 call it 11:10. 4 Q. Sounds good. 5 A. Okay. 6 (Recess.) 7 COURT REPORTER: We're back on the record. 8 Counsel, you may proceed. 9 By MS. DAHL: 10 Q. When both circuits in Figure 9 of Exhibit 11 1018 are powered, they are connected in parallel; 12 correct? 13 A. Both circuits 69 in Figure 9 are connected 14 to the source. They would be -- they're connected 15 in parallel. 16 Q. When both circuits in Figure 9 of Exhibit 17 1018 are connected in parallel, the same AC voltage 18 is applied to both circuits; correct? 19 A. Yes, that's correct. 20 Q. Can you scroll to Figure 4 of Exhibit 1018 21 and tell me when you're there? 22 A. I'm there. 23 Q. Figure 4 of Exhibit 1018 does not disclose 24 a switch; correct? 25 A. There does not appear to be a switch in

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 12

Conducted on January 16, 2024

45 1 Figure 4 of Exhibit 1018. 2 Q. In Figure 4 of Exhibit 1018, LED circuits 3 32 are connected in parallel; correct? 4 A. That's correct. 5 Q. In Figure 4 of Exhibit 1018, the same AC 6 voltage is applied to each LED circuit 32; 7 correct? 8 A. That's correct. 9 Q. Could you go to Figure 5 of Exhibit 1018? 10 A. Yes, I'm there. 11 Q. Figure 5 of Exhibit 1018 does not disclose 12 a switch; correct? 13 A. A switch does not appear in Figure 5 of 14 Exhibit 1018. 15 Q. Can you please go to Figure 7 on Exhibit 16 1018? 17 A. I'm looking at Figure 7. 18 Q. Figure 7 of Exhibit 1018 discloses a 12 19 volt AC voltage source; correct? 20 A. Yes, that's correct. 21 Q. In Figure 7 of Exhibit 1018, two-way switch 22 60 determines whether the 12 volt AC is applied to 23 one or both of the AC LED circuits; correct? 24 A. As to Figure 7 -- one moment. Start once 25 again. Figure 7 of Exhibit 1018 shows a symbol 60	47 1 disclosed in paragraph 57, the switch is used to 2 control the brightness level. 3 Q. In Figure 7 of Exhibit 1018, when an AC 4 voltage is applied to both LED circuits, it is the 5 same AC voltage; correct? 6 A. That is correct, according to what's 7 disclosed in Figure 7. 8 Q. Does Paragraph 27 -- actually, let me know 9 when you're at paragraph 27 of Exhibit 1018. 10 A. I'm there. 11 Q. Does paragraph 27 of Exhibit 1018 disclose 12 a driver? 13 A. Paragraph 27 of Exhibit 1018 uses the word 14 "driven" and forward voltage drive level. It 15 discloses that these circuits are driven by drive 16 circuits. 17 Q. Does paragraph 27 of Exhibit 1018 describe 18 the actual driver or drive circuit for the LED 19 circuits? 20 A. Paragraph 27 alludes to a driver and 21 describes and discloses the LED circuits that would 22 then be driven by a driver. 23 Q. Does paragraph 30 of Exhibit 1018 disclose 24 a driver? 25 Are you still thinking about your answer?
46 1 representing a two-way switch. I understand that 2 two-way switches can operate in multiple different 3 ways. This could be powered either, looking at the 4 circuit right side up, the right circuit or the left 5 circuit. But it is not possible to tell if another 6 combination for both circuits on or both circuits 7 off is also functional from switch 60. 8 As described in paragraph 57, it looks like 9 a typo J which I believe to be a bracket, but 10 paragraph 57 of Exhibit 1018, it describes the 11 switch as allowing this device to achieve multiple 12 brightnesses. 13 Q. What do you mean by it is not possible to 14 tell if another combination for both circuits on for 15 both circuits off is also functional from switch 16 60? 17 A. The figure shows a symbol with the words 18 two-way switch. What's disclosed in paragraph 57 is 19 this switch 60 used to control the brightness level 20 of the LED lighting device, and there are different 21 ways to achieve that with a two-way switch. One 22 case would be one circuit. Another case might be 23 both circuits. Another case might be the opposite 24 or the other circuit. Another case might be both 25 on, and another case might be both off. But as	48 1 A. Yes. Paragraph 30 describes at least one 2 bridge circuit made of LEDs that is formed on the 3 same single chip or substrate, which in my 4 declaration in paragraph 120, I describe -- the last 5 sentence of paragraph 120, "A POSITA would 6 understand --" or, "A POSITA understands that an LED 7 driver can compose a bridge rectifier. The bridge 8 rectifiers, i.e., LEDs, are highlighted in yellow 9 below," which is from Figure 8 of this document, 10 which is what paragraph 30 of Exhibit 1018 is 11 describing. 12 Q. Can you scroll to Figure 7 of Exhibit 1018 13 and let me know when you're there. 14 A. I'm looking at Figure 7. 15 Q. In Figure 7 of Exhibit 1018, when the LED 16 circuits are turned on, 12 volts is always applied; 17 correct? 18 A. I apologize. You dropped out. The what 19 volts? 20 Q. 12 volts. 21 A. I still couldn't hear. I'm sorry. 22 Q. 12. 12 volts. 23 A. Yes, 12 volts AC. 24 Q. Okay. Please go to paragraph 56 and let me 25 know when you're there.

Conducted on January 16, 2024

49 1 A. I'm at paragraph 56. 2 Q. Paragraph 56 of Exhibit 1018 discloses two 3 configurations, one in which the AC voltage is 4 applied to 56a and 56b, and a second one where the 5 AC voltage is applied to 56a, 56b, and 56c. Do you 6 see that? 7 MR. MCBRIDE: Objection. Form. 8 THE WITNESS: I see in paragraph 56 where 9 it states the AC voltage is applied to 56a and 56b 10 and the second brightness when an AC voltage is 11 applied to 56a, 56b, and 56c. 12 By MS. DAHL: 13 Q. None of the figures in Exhibit 1018 14 illustrates a switch connected between a DC voltage 15 and an LED circuit; correct? 16 MR. MCBRIDE: Objection. Form. 17 THE WITNESS: One moment. 18 I had to review my declaration. I 19 apologize to ask you to repeat the question. 20 By MS. DAHL: 21 Q. None of the figures at Exhibit 1018 22 illustrates a switch connected between a DC voltage 23 and an LED circuit; correct? 24 MR. MCBRIDE: Same objection. 25 THE WITNESS: The embodiments of the	51 1 I let everyone know that we had tornadoes and a 2 fast-moving storm moving in the area today. 3 MS. DAHL: Can we go off the record? 4 COURT REPORTER: We're off the record. 5 (Break in proceedings.) 6 COURT REPORTER: We're back on the 7 record. 8 By MS. DAHL: 9 Q. None of the figures in Exhibit 1018 10 illustrate a switch that is connected to a DC 11 voltage; correct? 12 A. None of the figures in Exhibit 1018 show a 13 symbol representing an AC voltage, a configuration 14 showing a DC voltage -- that would produce a DC 15 voltage with a then switch connected between that DC 16 output to a LED circuit. 17 Q. Sorry, I don't quite understand your 18 answer. You said none of the figures in Exhibit 19 1018 show a symbol representing an AC voltage, a 20 configuration showing a DC voltage that would 21 produce a DC voltage with a then switch connected 22 between that DC output to an LED circuit. I 23 understand the real-time isn't always word for word; 24 correct? 25 Can you -- can you just answer that
50 1 Exhibit 1018 disclose drivers as being part of LED 2 circuits and disclose switches. 3 By MS. DAHL: 4 Q. So my question is slightly different. It's 5 that, is it correct that none of the figures in 6 Exhibit 1018 illustrate a switch connected between a 7 DC voltage and an LED circuit? 8 MR. MCBRIDE: Same objection. 9 THE WITNESS: The figures in Exhibit 1018 10 show various embodiments, some of which include 11 bridge rectifiers which convert AC to DC and 12 switches. And there is not an illustration figure 13 where a switch in bridge rectifier is shown, but 14 clearly a POSITA would understand that these figures 15 do not represent all of the possible uses of the 16 invention. 17 Can I -- can I ask just one second? 18 There's tornado sirens going off here. I've just 19 got to open up my phone and check the weather. 20 MS. DAHL: Sure. 21 THE WITNESS: Are we off the record? 22 MS. DAHL: We can go off the record for 10 23 minutes, if you want, five minutes. 24 THE WITNESS: No, we can stay here. I 25 don't want to disrupt. Ms. Dahl, before you got on,	52 1 question again? I truly did not understand. 2 So my question was, none of the figures in 3 Exhibit 1018 illustrate a switch that is connected 4 to a DC voltage; correct? 5 A. That is correct. I do not see a figure in 6 Exhibit 1018 where there is a symbol representing DC 7 connected to a symbol denoted as a switch. 8 Q. The only figures in Exhibit 1018 that 9 illustrate the LED circuits being connected to a 10 voltage source are Figures 4, 5, 7, and 9; 11 correct? 12 A. That's correct. 13 Q. And the voltage sources illustrated in 14 Figures 4, 5, 7, and 9 in Exhibit 1018 are AC 15 voltage sources; correct? 16 A. That's correct. 17 Q. The only figures in Exhibit 1018 that 18 illustrate a switch are Figures 7 and 9; correct? 19 A. That's correct. 20 Q. In Figure 7 and 9 of Exhibit 1018, the 21 switch is connected to an AC voltage source; 22 correct? 23 A. That's correct. 24 Q. In Figure 7 of Exhibit 1018, the voltage 25 source is 12 volt AC; correct?

Conducted on January 16, 2024

53 1 A. That's correct. 2 Q. In Figure 9 of Exhibit 1018, 78 is the AC 3 voltage source; correct? 4 A. Yes, as defined in paragraph 59, the last 5 few words, "AC voltage source 78". 6 Q. In -- excuse me. In Figure 7 of Exhibit 7 1018, no bridge rectifier is identified; correct? 8 A. In Figure 7, there are two LED circuits, as 9 I understand it, to be representative of any LED 10 circuit that could be placed there. There are 11 disclosures as in Figure 8 -- sorry -- yes, Figure 8 12 showing a bridge rectifier. 13 Q. Figure 7 in Exhibit 1018 does not include a 14 bridge rectifier; correct? 15 A. The symbols that are drawn in Figure 7 do 16 not show an electrical connection representing a 17 bridge rectifier. 18 Q. In Figure 9, the bridge rectifiers are 19 located after the switch; correct? 20 A. That's correct. 21 Q. None of the figures in Exhibit 1018 22 illustrate a switch connected to the output of a 23 bridge rectifier; correct? 24 A. None of the figures show the symbology 25 indicating a switch connected after a bridge	55 1 A. A circuit where the LEDs are operating. 2 Q. What does it mean that the LEDs are 3 operating -- a circuit where the LEDs are 4 operating? 5 MR. MCBRIDE: Object to form. 6 By MS. DAHL: 7 Q. Let me rephrase my question. What does it 8 mean that a circuit has LEDs that are operating? 9 A. It means to emit light. 10 Q. So you understand "operating" in the 11 context of Claim 1 of the '705 patent to mean that 12 the LED circuit is emitting light; correct? 13 A. Yes. 14 Q. So if the LED circuit was off or -- off in 15 the sense of not emitting light, it would not be 16 operating; correct? 17 A. That's how I understand it, yes. 18 Q. Okay. Can you go to Figure 3 of the '705 19 patent and let me know when you're there. 20 A. I'm at Figure 3. 21 Q. Figure 3 of the '705 patent discloses an 22 LED lighting device 30; correct? 23 A. Yes, that's correct. 24 Q. LED device lighting 30 of Figure 3 of the 25 '705 patent comprises at least two AC LED circuits
54 1 rectifier. 2 Q. Okay. I'm going to drop into the chat a 3 new exhibit, Exhibit 1001, which is the '705 patent. 4 Please let me know when you have Exhibit 1001 open. 5 (Whereupon, Ducharme Exhibit 1001 was marked for 6 identification.) 7 THE WITNESS: Okay. I have it open. 8 By MS. DAHL: 9 Q. Can you scroll to Claim 1, that would be 10 Column 12, and let me know when you're there. 11 A. I'm at Claim 1. 12 Q. Do you see that Claim 1 of the '705 patent 13 recites a first operating LED circuit? 14 A. Yes. 15 Q. What do you understand "operating" in Claim 16 1 of the '705 patent to mean? 17 A. A circuit that's operating, emitting 18 light. 19 MR. MCBRIDE: Objection to form on that 20 question. 21 By MS. DAHL: 22 Q. You may answer. 23 A. I believe I did. 24 Q. Sorry, can you repeat that? I didn't get 25 it.	56 1 32; correct? 2 A. That's correct. 3 Q. Can you please go to Column 12, lines -- 4 starting at line 9 and let me know when you're 5 there. 6 A. I'm at line 9. 7 Q. How would a person of ordinary skill in the 8 art understand "wire" as seen in line 11 of Column 9 12 of the '705 patent? 10 MR. MCBRIDE: Objection. Form. Scope. 11 THE WITNESS: Yeah, I have not formed an 12 opinion on that. 13 By MS. DAHL: 14 Q. You have no opinion of what it means to 15 wire the at least two series LED circuits into a 16 series circuit; correct? 17 MR. MCBRIDE: Objection. Form. 18 THE WITNESS: I do not -- I did not form an 19 opinion on the word "wire." 20 By MS. DAHL: 21 Q. Have you formed an opinion on the meaning 22 of the larger phrase "wire the at least two series 23 LED circuit into a series circuit, a parallel 24 circuit, or an anti-parallel to form an AC LED 25 circuit all within a single LED package"?

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 15

Conducted on January 16, 2024

57 1 A. Yes. 2 Q. And what is that opinion? 3 A. Referring to my declaration, in paragraph 4 169, the third sentence, "In other words, a central 5 teaching of the '705 patent is that the LED circuits 6 can be connected in different combinations, for 7 example, series or parallel, and that these 8 different configurations may have different forward 9 voltages." 10 Q. Figure 12 of the '705 patent does not 11 disclose a switch; correct? 12 A. There's -- figure -- Figure 12 of Exhibit 13 1001 does not have a switch. 14 Q. As illustrated in Figure 12 of the '705 15 patent, the LED circuits 92 are not wired in any of 16 the series, parallel, or anti-parallel 17 configurations; correct? 18 A. The circuits 92 in Figure 12 are not 19 connected electrically as shown. 20 Q. There's no disclosure in the '705 patent of 21 circuits being wired into series, parallel, or 22 anti-parallel configurations and then subsequently 23 changed into a different kind of configuration; 24 correct? 25 MR. MCBRIDE: Objection. Form. Scope.	59 1 AC. 2 Q. Only Figures 7 and 9 of the '705 patent 3 illustrate a switch; correct? 4 A. Yes, only Figures 7 and 9 show a symbol 5 indicating -- indicated to be a switch. 6 Q. In Figures 7 and 9 of the '705 patent, the 7 switch is connected to an AC voltage source; 8 correct? 9 A. The symbology in Figures 7 and 9 shows an 10 AC source electrically connected to the switch. 11 Q. In Figure 7 of the '705 patent, the voltage 12 source is 12 volt AC; correct? 13 A. That's correct. That's what's shown in the 14 figure. 15 Q. Figure 7 of the '705 patent does not 16 illustrate a bridge rectifier; correct? 17 A. Figure 7 shows two LED circuits which I 18 understand to be representative of any LED circuit, 19 but the symbols in those circuits as shown in Figure 20 7 do not have the configuration of a bridge 21 rectifier. 22 Q. In Figure 9 of the '705 patent, the bridge 23 rectifiers are located after the switch; correct? 24 A. In Figure 9, the bridge rectifiers shown 25 with the configuration of LEDs is after the
58 1 THE WITNESS: I -- I have not read -- I 2 have not formed an opinion on that. 3 By MS. DAHL: 4 Q. Once an led packager wires the circuits 5 into series or parallel or anti-parallel 6 connections, the end-user would not change that 7 con -- that type of connection; correct? 8 A. The intent of the statement to wire certain 9 circuits in a particular way implies that the user 10 wouldn't be able to change that hardwired -- strike 11 hardwired -- that connection. 12 Q. None of the figures in the '705 patent 13 illustrates a switch connected between a DC voltage 14 and an LED circuit; correct? 15 A. In reviewing figures of the Exhibit 1001, I 16 do not see an illustration showing a switch 17 connected to a DC output. 18 Q. Only Figures 4, 5, 7, and 9 in the '705 19 patent illustrate the LED circuits being connected 20 to a voltage source; correct? 21 A. That's correct. 22 Q. The voltage source as illustrated in 23 Figures 4, 5, 7, and 9 of the '705 patent are AC 24 voltage sources; correct? 25 A. The voltage source in those figures are	60 1 switch. 2 Q. Figure 9 of the '705 patent, 78 is the AC 3 voltage source; correct? 4 A. That's correct. 5 Q. None of the figures in the '705 patent 6 illustrate a switch connected to the output of a 7 bridge rectifier; correct? 8 A. A switch being connected to the output of a 9 bridge rectifier is not illustrated in any of the 10 figures of Exhibit 1001. 11 Q. I'm going to drop into the chat another 12 exhibit. It's Exhibit 2051, excerpts from All About 13 Circuits. 14 (Whereupon, Ducharme Exhibit 2051 was marked for 15 identification.) 16 By MS. DAHL: 17 Q. Let me know when you have it open, please. 18 A. I have it open. 19 Q. Do you recognize Exhibit 2051? 20 A. Yes. 21 Q. What is it? What is exhibit -- sorry. 22 Strike that. 23 What is Exhibit 2051? 24 A. It's an excerpt from a document called, All 25 About -- wait. Sorry. Let me -- yeah, it's -- it's

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 16

Conducted on January 16, 2024

61 1 from a book All About Circuits -- All About -- yeah, 2 All About Circuits. 3 Q. You discuss Exhibit 2051 in your 4 declaration; correct? 5 A. Yes. 6 Q. You cite Exhibit 2051 with respect to the 7 term "forward voltage"; correct? 8 A. Yes, I discuss this exhibit in paragraph 79 9 of my -- of my declaration. 10 Q. Would a POSITA have been aware of Exhibit 11 2051? 12 MR. MCBRIDE: Object to form. 13 THE WITNESS: My understanding is that it 14 was publicly available and a POSITA would have 15 access to it. 16 By MS. DAHL: 17 Q. Would a POSITA have been aware of the 18 concepts discussed in Exhibit 2051? 19 A. Yes, I believe they would. 20 Q. Is there anything in Exhibit 2051 that you 21 disagree with? 22 MR. MCBRIDE: Object to form. 23 THE WITNESS: I don't recall having 24 disagreed with anything in particular sitting here 25 today.	63 1 A. I -- I see that passage, yes. 2 Q. Do you agree with that statement? 3 A. I have not formed an opinion on that. 4 Q. Can you scroll to page 9 of Exhibit 2051 5 and let me know when you're there. 6 A. I'm on page 9. 7 Q. Second sentence of page 9 of Exhibit 2051 8 it says, "Forward voltage for a diode varies only 9 slightly for changes in forward current and 10 temperature and is fixed by the chemical composition 11 of the P-N junction." 12 Do you see that? 13 A. I do see that. 14 Q. Do you agree with that statement? 15 A. I agree with that statement in the context 16 of diodes in general. 17 Q. LEDs are a type of diode; correct? 18 A. That's correct. 19 Q. Okay. I'm going to drop into the chat 20 another exhibit, Exhibit 2036. It's the Samsung 21 data sheet. Let me know when you have that open, 22 please. 23 (Whereupon, Ducharme Exhibit 2036 was marked for 24 identification.) 25 THE WITNESS: Okay. I have it open.
62 1 By MS. DAHL: 2 Q. For an individual diode at a constant 3 temperature, there's a single forward voltage; 4 correct? 5 MR. MCBRIDE: Objection. Form. Scope. 6 THE WITNESS: Referring to my declaration, 7 I didn't -- I have not -- I have not provided an 8 opinion on forward voltage with respect to 9 temperature. 10 By MS. DAHL: 11 Q. You do not have an opinion on whether there 12 is a single forward voltage for a given diode at a 13 constant temperature; correct? 14 A. I have not formed an opinion on that with 15 respect to the context of the patent. 16 Q. Can you scroll to page 6 of Exhibit 2051 17 and let me know when you're there. 18 A. I believe I'm on page 6. According to the 19 bottom right numbers in the exhibit you showed me, 20 I'm on page 6. 21 Q. In the middle of the second paragraph on 22 page 6 of Exhibit 2051, it says, "Forward voltage 23 drop remains approximately constant for a wide range 24 of diode currents." 25 Do you see that?	64 1 By MS. DAHL: 2 Q. Do you recognize Exhibit 2036? 3 A. Yes. 4 Q. What is it? 5 A. It's a specification sheet for a range of 6 high powered LED -- LEDs. 7 Q. You discuss Exhibit 2036 in your 8 declaration; correct? 9 A. Yes. 10 Q. You cite Exhibit 2036 in your discussion of 11 the term "forward voltage"; correct? 12 A. I discuss it starting in paragraph 81 of my 13 declaration which is, yes, part of -- in general, a 14 discussion of forward voltage. 15 Q. Would a POSITA have been aware of the 16 contents of Exhibit 2036? 17 A. Yeah, it -- Exhibit 2036 is a publicly 18 available document, so a POSITA would have access to 19 it. 20 Q. Is there -- strike that. 21 Are you aware of anything in Exhibit 2036 22 that you disagree with? 23 A. Sitting here today, I don't recall 24 disagreeing with anything in particular. 25 Q. For a particular unit of the -- strike

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 17

Conducted on January 16, 2024

65 1 that. 2 For a particular unit of the LED product 3 described in Exhibit 2036, at a constant current and 4 temperature there is only a single forward voltage; 5 correct? 6 MR. MCBRIDE: Objection. Form. 7 THE WITNESS: Referring in my declaration 8 to paragraph 82, it shows -- it states, "This 9 graph," which is shown in my declaration, 10 "illustrates that you can apply a whole range of 11 voltages in the forward direction." 12 By MS. DAHL: 13 Q. For a given current and temperature, there 14 is only one forward voltage; correct? 15 A. In the context of the patent which might 16 utilize the Samsung LED by configuring it in an LED 17 lighting device, there -- in the context of the 18 patent, there could be multiple forward voltages. 19 This graph shows a range of forward voltages and 20 associated currents. 21 Q. For a given current in temperature for a 22 single unit of the Samsung LED product, there is 23 only one forward voltage; correct? 24 A. Not according to this specification sheet. 25 On page 10 the graph denoted under B shows a range	67 1 lunchtime on the east coast? We can take a longer 2 break actually. That would be good too. 3 MR. MCBRIDE: Okay. It's up to Al, 4 whatever he wants to -- whatever he wants for lunch 5 or if he wants to do lunch now. 6 THE WITNESS: I'm home, so it's easy for 7 me, but I don't know if other people -- what it 8 takes for you to get lunch. 9 MS. DAHL: Let's go off the record -- can 10 we go off the record? 11 COURT REPORTER: We're off the record. 12 (Lunch recess.) 13 COURT REPORTER: We're back on the record. 14 Counsel, you may proceed. 15 By MS. DAHL: 16 Q. For a given temperature and given current, 17 there is a single forward voltage; correct? 18 MR. MCBRIDE: Objection. Form. 19 THE WITNESS: Referring to Exhibit 2036 to 20 the forward voltage versus forward current, for a 21 single -- there is a single-voltage. 22 By MS. DAHL: 23 Q. Sorry, I think you cut out there. Did you 24 say for a single -- what was the word that you said 25 after that?
66 1 of voltages for a single temperature. 2 Q. If you fix the current in the temperature 3 to a constant current, constant temperature, there 4 is only one forward voltage for a single unit of the 5 Samsung LED product; correct? 6 A. If you fix the current -- and once again, 7 I'm referring to this chart on page 10 denoting it's 8 forward voltage versus forward current. If we pick 9 a single current, it will give you a full voltage 10 from a range of forward voltages. 11 Q. There is only one forward voltage for a 12 given current for a single unit of the Samsung LED 13 product; correct? 14 A. This graph and graphs are used to show when 15 values change due to certain variables, the 16 dependent which would be on the X axis. So if we 17 pick a value for a current on the X axis, it will 18 correspond accordingly to a single forward voltage 19 of a range of voltages. 20 Q. So for a given forward current, there is 21 only one forward voltage; correct? 22 MR. MCBRIDE: Objection. Form. 23 Mary, can we go on a break when you get a 24 second? We've been going a little over an hour. 25 MS. DAHL: Yes. Actually, isn't it	68 1 A. For a single current, there is an 2 associated single-voltage. 3 Q. If you can go to page 5 of Exhibit 2036 and 4 let me know when you're there. 5 A. I -- I'm -- I'm not sure I understood you. 6 Go where? 7 Q. Page 5 of Exhibit 2036. 8 A. Okay. I'm on page 5. 9 Q. On page 5 of Exhibit 2036, there's a table 10 and on row 13, there's an entry called "Forward 11 Voltage (V)." 12 Do you see that? 13 A. I do, yes. 14 Q. There are two bin codes, A0 and A1. 15 Do you see that? 16 A. Yes. 17 Q. Page 5 of Exhibit 2036 indicates that bid 18 code A0 forward voltage may be between 5.9 and 6.1; 19 is that correct? 20 A. That's what's written here, yes. 21 Q. So for this Samsung LED product, bin code 22 A0, an example of a forward voltage would be 6; 23 correct? 24 A. That's an example number within that range 25 that's listed, yes.

Conducted on January 16, 2024

69 1 Q. Would a voltage of 3 volts be a forward 2 voltage for the Samsung LED product described in 3 Exhibit 2036? 4 A. Not according to the ranges shown. 5 Q. Would 12 volts be a forward voltage for the 6 Samsung LED product described in Exhibit 2036? 7 A. No. 8 Q. Would 24 volts be a forward voltage for the 9 Samsung LED product described in Exhibit 2036? 10 A. It is not one of the listed -- it's not 11 within the listed ranges. 12 Q. Would the Samsung LED product described in 13 Exhibit 2036 be turned on as an emitting light at 3 14 volts? 15 A. Since 3 volts is outside of the range 16 listed in the table, then no. 17 Q. Would the Samsung LED product described in 18 Exhibit 2036 be turned on as an emitting light at 12 19 volts? 20 A. No. 21 Q. Would the Samsung LED product described in 22 Exhibit 2036 be turned on as an emitting light at 24 23 volts? 24 A. Not according to these ranges, no. 25 Q. Would the Samsung LED product described in	71 1 that you disagree with? 2 A. Sitting here today, I can't think of 3 anything in particular that I disagree with. 4 Q. Can you please go to page 4 of Exhibit 2052 5 and let me know when you're there. 6 A. I'm there. 7 Q. Do you see the equation in the middle of 8 page 4 of Exhibit 2052? 9 A. Yes. 10 Q. Can you please explain this equation -- 11 strike that. 12 Can you please explain the equation shown 13 on page 4 of Exhibit 2052? 14 A. The equation is an explanation -- well, 15 I'll read from the reference itself. "In fact, in 16 Chapter 1 of this book, we examined how this was 17 accomplished by using resistor and Ohms law to 18 determine the current that would flow through an 19 LED. That is," the equation that's shown where the 20 current is equal to the difference between the 21 voltage at the source and the forward voltage over 22 R, resistance, in this -- there's some kind of 23 resistance in the circuit. 24 Q. So "I" in that equation stands for current; 25 correct?
70 1 Exhibit 2036 be turned on as an emitting light at 2 120 volts? 3 A. No, not according to this table for a 4 single LED. No. 5 Q. I'm going to drop into the chat another 6 exhibit, Exhibit 2052. Let me know when you have 7 that open. 8 (Whereupon, Ducharme Exhibit 2052 was marked for 9 identification.) 10 THE WITNESS: I have it open. 11 By MS. DAHL: 12 Q. Do you recognize Exhibit 2052? 13 A. Yes. 14 Q. What is it? 15 A. It's an excerpt of a book entitled 16 Introduction to Light Emitting Diode Technology and 17 Applications. 18 Q. You discuss Exhibit 2052 in your 19 declaration; correct? 20 A. It's referenced in my declaration in 21 paragraph 92. 22 Q. Would a POSITA have been aware of the 23 content discussed in Exhibit 2052? 24 A. I believe so, yes. 25 Q. Are you aware of anything in Exhibit 2052	72 1 A. That's correct. 2 Q. What does "VS, voltage at source" mean? 3 A. That would be as shown in Figure 3.9 of the 4 Exhibit 2052. It is the voltage source, in this 5 case a DC voltage source, that is supplying the rest 6 of the circuit. 7 Q. Voltage at source and forward voltage do 8 not refer to the same thing; correct? 9 A. No. Yes, that's correct. 10 Q. I'll drop into the chat another exhibit. 11 It's Exhibit 2053. Let me know when you have that 12 open, please. 13 (Whereupon, Ducharme Exhibit 2053 was marked for 14 identification.) 15 THE WITNESS: I have it open. 16 By MS. DAHL: 17 Q. Do you recognize Exhibit 2053? 18 A. I do. 19 Q. What is it? 20 A. It's an excerpt from a book entitled 21 Fundamentals of Solid-State Lighting. 22 Q. You discuss Exhibit 2053; correct? Sorry, 23 strike that. 24 You discuss Exhibit 2053 in your 25 declaration; correct?

Conducted on January 16, 2024

73 1 A. It's referenced in paragraph 92 of my 2 declaration. 3 Q. And you cite this Exhibit 2053 with respect 4 to the term "forward voltage"; correct? 5 A. That's correct. 6 Q. Would a POSITA have been aware of the 7 contents of Exhibit 2053? 8 A. Yes, I believe they would. 9 Q. Are you aware of anything in Exhibit 2053 10 that you disagree with? 11 A. Sitting here today, I don't recall anything 12 that I specifically disagree with. 13 Q. Can you please go to page 4 of Exhibit 14 2053, second paragraph, and let me know when you're 15 there. 16 A. I'm there. 17 Q. Page 4 of Exhibit 2053, second paragraph, 18 towards the middle it talks about, "The following 19 three cases: one, the supply voltage is always 20 greater than LED forward voltage; 2, the supply 21 voltage is always less than the LED forward voltage; 22 and 3, the supply voltage is sometimes less and 23 occasionally greater than the LED forward voltage." 24 Do you see that? 25 A. I do.	75 1 By MS. DAHL: 2 Q. You do not have an opinion as to whether 3 conventional dimmer switches can change the 4 connection of LED circuits from series to parallel; 5 correct? 6 A. My opinion contained in my declaration is 7 that a dimmer switch is used to regulate voltage or 8 for adjustability of the otherwise relative fixed 9 voltage output of LED circuit driver. 10 Q. So you do not have an opinion as to whether 11 conventional dimmer switches can change the 12 connection of LED circuits from series to parallel; 13 correct? 14 MR. MCBRIDE: Objection. Form. 15 THE WITNESS: My opinion isn't -- isn't 16 related to changing configurations in series and 17 parallel. My opinion is that a dimmer switch is 18 used to regulate voltage. 19 By MS. DAHL: 20 Q. So in your declaration, Exhibit 2045, you 21 don't provide an opinion as to whether conventional 22 dimmer switches are able to change the connection of 23 LED circuits from series to parallel; correct? 24 A. That's correct. 25 Q. Do you have an opinion as to whether
74 1 Q. The supply voltage and the LED forward 2 voltage do not refer to the same thing; correct? 3 A. They are referring to different things. 4 Q. For example, the supply voltage can be a 5 different value than the LED forward voltage; 6 correct? 7 A. It's listing different cases where the 8 supply voltage would be different than the forward 9 voltage. 10 Q. Okay. You can close that exhibit. 11 How do dimmer switches for LED circuits 12 generally work? 13 MR. MCBRIDE: Object to form. 14 THE WITNESS: In paragraph 110 of my 15 declaration, I refer to the '215 Provisional that 16 says, "Specifically, the '215 Provisional discloses 17 an embodiment where a dimmer switch regulates 18 voltage." 19 By MS. DAHL: 20 Q. Conventional dimmer switches do not change 21 the connection of LED circuits from series to 22 parallel; correct? 23 MR. MCBRIDE: Objection to form. 24 THE WITNESS: I did not form an opinion on 25 that.	76 1 conventional dimmer switches can connect or 2 disconnect an LED circuit to or from -- okay. 3 Strike that. 4 Do you have an opinion as to whether 5 conventional dimmer switches are able to connect or 6 disconnect an LED circuit to or from another LED 7 circuit? 8 A. I have not formed an opinion on that. 9 Q. Okay. I'm dropping into the chat Exhibit 10 1014. It's the '215 Provisional. And let me know 11 when you have that open, please. 12 (Whereupon, Ducharme Exhibit 1014 was marked for 13 identification.) 14 THE WITNESS: That's 1014; right? 15 By MS. DAHL: 16 Q. Correct. 17 A. Okay. I have it open. 18 Q. Can you please go to paragraph 22 of 19 Exhibit 1014 and let me know when you're there. 20 A. I'm there. 21 Q. Paragraph 22 of Exhibit 1014 discloses that 22 the dimmer switch adjusts the output of the LED 23 circuit driver; correct? 24 A. Yes, paragraph 24 describes an aspect of 25 the invention where the LED circuit driver may be

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 20

Conducted on January 16, 2024

77 1 coupled to a dimmer switch that regulates voltage. 2 I'm not sure that answers your question. 3 Q. So my question was slightly different, 4 although related. I'll ask my question again. 5 Paragraph 22 of Exhibit 1014 discloses that 6 the dimmer switch adjusts the output of the LED 7 circuit driver; correct? 8 A. Paragraph 22 discloses that the dimmer 9 switch may be used to change the relatively fixed 10 voltage of the LED circuit driver. 11 Q. So what -- how does the dimmer switch 12 adjust the relatively fixed voltage of the LED 13 circuit driver? 14 A. It changes the voltage out -- driving the 15 LED circuit. 16 Q. How does the dimmer switch change the 17 voltage driving the LED circuit? 18 A. My recollection is I didn't form an opinion 19 on how the changes for voltage, just that a dimmer 20 switch would be understood as a device that would 21 change voltage or regulate voltage. 22 Q. You do not have an opinion on how the 23 dimmer switch changes the voltage driving the LED 24 circuit; is that correct? 25 A. I did not form an opinion that was -- that	79 1 Q. Can you remind me of your answer? 2 A. We can look at the transcript and review it 3 together. 4 Q. Okay. I'm understanding your testimony is 5 that you have no opinion as to whether a dimmer 6 switch can adjust the input -- strike that. 7 I'm understanding your testimony is that 8 you have no opinion as to whether a dimmer switch 9 can adjust the input voltage to the LED driver such 10 that the LED driver's output is adjusted; is that 11 correct? Is my understanding correct? 12 A. I believe that mischaracterizes my answer. 13 My answer was that I have not formed an opinion on 14 that. 15 Q. You have not formed an opinion as to 16 whether a dimmer switch can adjust the input voltage 17 to the LED driver such that the LED driver's output 18 is adjusted; correct? 19 MR. MCBRIDE: Objection. Asked and 20 answered. 21 THE WITNESS: I believe I've already 22 answered it, but I have not formed an opinion 23 that -- that's -- I have not formed an opinion on 24 that. 25 By MS. DAHL:
78 1 was expressed in my declaration on how the dimmer 2 switch operates, just what the function of the 3 dimmer switch was. 4 Q. Do you know if a dimmer switch can adjust 5 the output of the LED driver by providing an input 6 signal to the LED driver that causes the LED driver 7 to then adjust its output? 8 MR. MCBRIDE: Objection. Form. 9 THE WITNESS: Yeah, I'm -- to my best 10 recollection, I did not form an opinion on that. 11 By MS. DAHL: 12 Q. Do you know if a dimmer switch can adjust 13 the input voltage to the LED driver such that the 14 LED driver's output is adjusted? 15 MR. MCBRIDE: Objection. Form. 16 THE WITNESS: What I know and what opinions 17 that are formed in the context of the patent are -- 18 are two different things. I did not form an opinion 19 on that in this declaration. 20 By MS. DAHL: 21 Q. You have no opinion as to whether a dimmer 22 switch can adjust the input voltage to the LED 23 driver such that the LED driver's output is 24 adjusted? 25 A. I believe I answered that question.	80 1 Q. Are conventional dimmer switches able to 2 adjust the input voltage to an LED driver such that 3 the LED driver's output is adjusted? 4 MR. MCBRIDE: Objection. Form. 5 THE WITNESS: I believe I understand what 6 you're asking. Within the context of my 7 declaration, I did not form an opinion on that. 8 By MS. DAHL: 9 Q. And you are not willing to form an opinion 10 outside of the context of your declaration; 11 correct? 12 MR. MCBRIDE: Objection. Form. 13 THE WITNESS: I have not formed an opinion 14 on that previously, and I do not want to render an 15 on-the-fly opinion right now. 16 By MS. DAHL: 17 Q. Do you know if conventional dimmer switches 18 can provide an input signal to LED circuit 19 drivers? 20 MR. MCBRIDE: Objection. Form. I think 21 it's been asked and answered. 22 So, Mary, do you want to point him to 23 someplace in his declaration where maybe he's talked 24 about this? 25 MS. DAHL: Well, he certainly talks about

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 21

Conducted on January 16, 2024

81 1 paragraph 22 of Exhibit 1014 in his declaration, and 2 so I'm asking him about -- to elaborate on his 3 understanding regarding how the dimmer switch 4 adjusts the output of the LED circuit driver. I'm 5 asking him about how exactly that's done, but I 6 understand your witness does not want to form an 7 opinion other than the ones stated in his 8 declaration. 9 MR. MCBRIDE: I would object to that 10 characterization, but all I'm saying is there seems 11 to be some sort of disconnect. If there's a 12 paragraph in his declaration that you want to ask 13 him about, maybe that would help, but it's up to 14 you. It's your -- your deposition. I'm just trying 15 to move it along. 16 MS. DAHL: I just want to make sure there's 17 not going to be any surprises from the witness. I'm 18 trying to understand the scope of what -- his 19 opinions. 20 BY MS. DAHL: 21 Q. So just -- just for the record, do you have 22 an opinion as to whether conventional dimmer 23 switches can provide an input signal to LED circuit 24 drivers? 25 MR. MCBRIDE: Objection. I think that's	83 1 A. So if that's okay, okay. 2 Q. The dimmer switch in paragraph 22 of 3 Exhibit 1014 does not change the connection of the 4 LED circuits from series to parallel or vice versa; 5 correct? 6 MR. MCBRIDE: Objection. Form. 7 THE WITNESS: I'm trying to get to the -- 8 the correct passage. Okay. Paragraph 22 of Exhibit 9 1014 is what you're referring to? 10 By MS. DAHL: 11 Q. Correct. Correct. I'll re-ask the 12 question. 13 A. Okay. 14 Q. The dimmer switch in paragraph 22 of 15 Exhibit 1014 does not change the connection of the 16 LED circuits from series to parallel; correct? 17 MR. MCBRIDE: Objection. Form. 18 THE WITNESS: My understanding of paragraph 19 22 is it's -- it's not suggesting any changing of 20 configuration from series to parallel or vice 21 versa. 22 By MS. DAHL: 23 Q. The dimmer switch in paragraph 22 of 24 Exhibit 2 -- apologies. The -- strike that. 25 The dimmer switch in paragraph 22 of
82 1 been asked and answered eight or ten times now. 2 By MS. DAHL: 3 Q. You can answer. 4 A. Just one moment. 5 I'm not sure -- maybe I'm not completely 6 understanding, but let me refer you to paragraph 110 7 of my declaration. It's the second or third 8 sentence where I -- I say that, "The '215 9 Provisional discloses an embodiment where a dimmer 10 switch regulates voltage." I -- I hadn't completed 11 the sentence before. Maybe I should have. Maybe 12 this will make more sense. "Or may have integrated 13 circuitry that allows for adjustability of the 14 otherwise relatively fixed voltage output of the LED 15 circuit driver." 16 Q. I understand that, but you have no opinion 17 as to how the dimmer switch, the method by which it 18 adjusts the -- the otherwise relatively fixed 19 voltage output of the LED circuit driver; correct? 20 I think that's what you previously testified. 21 A. Yes. 22 Q. Okay. 23 A. So I think -- if that's okay, then I'll 24 stop. 25 Q. Okay.	84 1 Exhibit 1014 does not connect or disconnect an 2 additional LED circuit to or from a power source; 3 correct? 4 A. No, that's not described in paragraph 22. 5 Q. None of the figures in Exhibit 1014 6 illustrate a switch connected between a DC voltage 7 and an LED circuit; correct? 8 A. To the best of my recollection just 9 reviewing the -- the figures now, no, I don't see a 10 switch connected -- I -- I -- I'm sorry, maybe I 11 misheard your question. Can you repeat that? It 12 took me longer to review the figures. 13 Q. None of the figures in Exhibit 1014 14 illustrates a switch connected between a DC voltage 15 and an LED circuit; correct? 16 A. That's correct. 17 Q. Only Figures 12, 15, and 19 of Exhibit 1014 18 illustrate a switch; correct? 19 A. I believe that's correct. 20 Q. In Figures 12, 15, and 19 of Exhibit 1014, 21 the switch is connected to an AC voltage source; 22 correct? 23 A. That's correct. That's what's illustrated 24 in the figures. 25 Q. In Figure 12 of Exhibit 1014, the voltage

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 22

Conducted on January 16, 2024

1 source is 12 volt AC; correct? 2 A. That's right. 3 Q. In Figure 15 of Exhibit 1014, the voltage 4 source is 120 volt AC; correct? 5 A. Correct. 6 Q. In Figure 19 of Exhibit 1014, the voltage 7 source is AC; correct? 8 A. That's correct. 9 Q. Figure 12 of Exhibit 1014 does not have a 10 bridge rectifier; correct? 11 A. That's correct. 12 Q. Figure 15 of Exhibit 1014 does not have a 13 bridge rectifier; correct? 14 A. A bridge rectifier is not illustrated in 15 Figure 15, that's correct. 16 Q. In Figure 19 of Exhibit 1014, the bridge 17 rectifiers are located after the switch; correct? 18 A. That's correct. 19 Q. None of the figures in Exhibit 1014 20 illustrate a switch connected to the output of a 21 bridge rectifier; correct? 22 A. That's correct. None of the figures show a 23 switch in between the bridge rectifier and the LED 24 circuit. 25 Q. Okay. I'm going to drop into the chat	1 Claims 1 through 20 "as being unpatentable over 2 Lefebvre in view of Allen." 3 Do you see that? That's paragraph 3 on 4 page 126 of Exhibit 1003. 5 A. Yes, I see that. 6 Q. On page 20 -- sorry. Strike that. 7 On page 127 of Exhibit 1003, the examiner 8 found that Lefebvre discloses, "A switch 9 electrically connected between the DC voltage output 10 and at least one of the first operating LED circuit 11 or the at least one additional LED circuit." 12 That's the second paragraph on page 127 of 13 Exhibit 1003. Do you see that? 14 A. I see that. 15 Q. Did you look at the April 27th, 2021, 16 examiner rejection in connection with forming your 17 opinions in this PGR? 18 A. I'm sure I reviewed this. I don't remember 19 specifically looking at this page. 20 Q. Okay. I'm going to drop into the chat 21 another exhibit. It's Exhibit 2007 which is 22 Lefebvre and let me know when you have Exhibit 2007 23 open. 24 (Whereupon, Ducharme Exhibit 2007 was marked for 25 identification.)
1 another exhibit. It's Exhibit 1003, Part 1, file 2 history for the '705. Let me know when you have 3 that open. It's pretty large, so it might take some 4 time to upload. 5 (Whereupon, Ducharme Exhibit 1003 was marked for 6 identification.) 7 MR. MCBRIDE: I just want to note for the 8 record that it looks like what you shared, Mary, is 9 Part 1 of the file history. So I guess there's 10 there is probably more parts of the file history. 11 MS. DAHL: Correct. Yes, it's -- when we 12 filed the Petition, I think we separated the file 13 history in multiple parts because it was such a big 14 document. So what I uploaded is Part 1 as filed 15 into the record. It's exactly what was filed. 16 By MS. DAHL: 17 Q. Let me know when you have the document 18 open. 19 A. Yep, I finally have it opened. 20 Just as a note, the storm cells are going 21 through right now, so... 22 Q. Would you please go to page 126 of Exhibit 23 1003, Part 1, and let me know when you're there. 24 A. Okay. I'm on page 126. 25 Q. On April 27th, 2021, the examiner rejected	1 THE WITNESS: I have it open. 2 By MS. DAHL: 3 Q. Did you review Exhibit 2007 in forming your 4 opinions in this PGR? 5 A. It looks familiar, but I don't remember 6 specifically. It could be that I'm just not 7 remembering, but it looks familiar to me. 8 Q. Do you remember when was the last time you 9 looked at Lefebvre Exhibit 2007? 10 A. No, I couldn't give you an exact date. It 11 would have been a few months ago anyways. 12 Q. Can you identify in Figure 4 of Exhibit 13 2007 any LED driver? 14 A. Well, I see what looks to be a power source 15 in terminal 65 and 67 for its delivery system. 16 Q. Does Figure 4 of Exhibit 2007 illustrate 17 any rectifiers? 18 A. Sorry, I was -- I'm looking for a specific 19 element. Oh, there -- I couldn't -- I didn't see 20 it. It's -- it was element 70. So it looks like 21 there's a rectifier on Figure 5 made up of 81, 80, 22 82, 83, and 84. 23 Q. Okay. Sorry, I think there was some 24 confusion. I was asking about Figure 4. Figure 4 25 of Exhibit 2007 doesn't --

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 23

Conducted on January 16, 2024

89 1 A. Yeah. 2 Q. -- have a rectifier; correct? 3 A. Yeah, I did misunderstand. I do not see a 4 rectifier, no. 5 Q. Can you identify the LED circuits in Figure 6 4 of Exhibit 2007? 7 MR. MCBRIDE: Objection. Form. 8 THE WITNESS: I don't quite -- well, okay. 9 I think the elements are 51 and 52 and 53. It took 10 me a moment to understand the -- the marking. 11 By MS. DAHL: 12 Q. Can you identify any switches in Figure 4 13 of Exhibit 2007? 14 A. Items 60 and 66 appear to be switches. 15 Q. Are any of the switches in Figure 4 of 16 Exhibit 2007 connected between a DC voltage and an 17 LED circuit? 18 A. It doesn't appear so, no. 19 Q. Why not? 20 MR. MCBRIDE: Objection. Form. Scope. 21 THE WITNESS: The -- from the figure, it 22 shows an AC source being connected to terminals 65 23 and 67; and then after that, there are switches. So 24 I don't see a DC source there. 25 By MS. DAHL:	91 1 Q. Yes, there's no figure -- strike that. 2 Yes, there's no switch shown in Figure 5, 3 but if we were to put a switch and that was 4 connected between a DC voltage and an LED circuit, 5 would it go -- would it have to be after the bridge 6 rectifier? 7 MR. MCBRIDE: Same objections. 8 THE WITNESS: I think I'm understanding. 9 My mind is -- is being twisted up here a little bit 10 by your question. I believe I'm answering it if I 11 say that in Figure 5, a bridge rectifier is used to 12 create a DC voltage drive for the LED circuit and 13 you could get a switch between that DC circuit -- 14 I'm sorry, the rectifier and the LED circuit, I 15 mean, it's possible to do that. Is that what you're 16 asking? I'm miss -- am I missing something? 17 By MS. DAHL: 18 Q. Yes, that answered my question. 19 Can you please reopen Exhibit 1003? It was 20 the previous exhibit that you were looking at. And 21 let me know when you have that open. 22 A. Okay. It's open. 23 Q. Okay. Please go to page 182 and let me 24 know when you're there. 25 A. Okay. I'm on 182.
90 1 Q. Can you -- can you identify in Figure 5 of 2 Exhibit 2007 any LED driver? 3 A. Well, I see a rectifier that is connected 4 to LED circuits, and that would be 80, 86, and 88 I 5 believe are the numbers. 6 Q. Can you identify any switches in Figure 5 7 of Exhibit 2007? 8 A. I don't see any switches in that Figure 5. 9 Q. In order for a switch to be connected 10 between a DC voltage and an LED circuit, the switch 11 would have to be after the bridge rectifier; 12 correct? 13 A. I -- I need to -- please repeat that 14 question so I make sure I understand it. 15 Q. In order for a switch to be connected 16 between a DC voltage and an LED circuit, the switch 17 would have to be after the bridge rectifier; 18 correct? 19 MR. MCBRIDE: Objection. Form and scope. 20 THE WITNESS: I -- I don't see a switch in 21 Figure 5. I'm sorry, I'm -- I'm -- I'm losing my 22 train of thought here, and I just need to hear the 23 question again. I know you just repeated it, but 24 I'm missing something. 25 By MS. DAHL:	92 1 Q. On June 22, 2021, the applicant responded 2 by arguing that "Lefebvre fails to show a switch 3 electrically connected between a DC voltage output 4 of an LED driver and at least one of a first 5 operating LED circuit or at least one additional LED 6 circuit." 7 Do you see that? 8 A. I -- I -- you're talking about the indented 9 quote in the center of the page? 10 Q. Sorry for the confusion. So I'm talking 11 about, like, the remarks that span page -- pages 182 12 through 184, but maybe I -- if it's helpful, I can 13 direct you to page 183, the first paragraph -- last 14 sentence of the first paragraph, it says, "Lefebvre 15 fails to disclose a switch electrically connected 16 between a DC voltage output of an LED driver and at 17 least one of a first operating LED circuit or at 18 least one additional LED circuit." 19 Do you see that? 20 A. I see it. 21 Q. Can you please go to page 182 of Exhibit 22 1003? 23 A. Okay. 24 Q. So on page 182 of Exhibit 1003, the 25 applicant argued that Figure 5 --

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 24

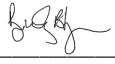
Conducted on January 16, 2024

93 1 A. Can you tell me where you're starting? 2 Q. Yes. It would be the last paragraph. 3 A. Okay. 4 Q. It would -- second -- third sentence. 5 Okay. 6 A. The third sentence starts, "Figure 5 7 fails." 8 Q. Yes. Okay. Great. We're on the same page 9 and same sentence. Okay. I'll re-ask my question. 10 So on page 182 of Exhibit 1003, the 11 applicant argued that "Lefebvre's Figure 5 fails to 12 show a switch electrically connected between a DC 13 voltage output of an LED driver and at least one of 14 a first operating LED circuit or at least one 15 additional LED circuit." 16 Do you see that? 17 A. Yes. 18 Q. Do you agree with that argument? 19 MR. MCBRIDE: Objection. Form. Scope too, 20 really. 21 By MS. DAHL: 22 Q. Okay. I'll rephrase my question. Do you 23 agree that Figure 5 of Lefebvre fails to show a 24 switch electrically connected between a DC voltage 25 output of an LED driver and at least one of a first	95 1 don't -- I don't think so. 2 MR. MCBRIDE: It may be technical, yeah. I 3 just wanted to point it out for you. 4 THE WITNESS: I provided what I thought 5 was -- was my answer, so I want to make sure you're 6 not waiting for me. 7 By MS. DAHL: 8 Q. Okay. Can you to page 183 of Exhibit 1003, 9 first sentence on the page? 10 A. Yes, I'm there. 11 Q. So the applicant argued on page 183 of 12 Exhibit 1003, "Even if Lefebvre's circuits of 13 Figures 4 and 5 were combined, the switches would be 14 placed before the bridge rectifiers, 80, 86, and 15 88." 16 Do you agree with the statement that even 17 if Lefebvre's circuits of Figures 4 and 5 were 18 combined, the switches would be placed before the 19 bridge rectifiers? 20 MR. MCBRIDE: Objection. Scope. 21 THE WITNESS: I agree that that statement 22 made by the patent owner in response is what the 23 sentence -- what you described is what's reflected 24 in the sentence, if that's what you're asking. 25 By MS. DAHL:
94 1 operating LED circuit or at least one additional LED 2 circuit? 3 MR. MCBRIDE: Object to scope. 4 THE WITNESS: I'm just reviewing the -- 5 the -- more of the context. 6 Yeah, I -- I did not form an opinion on 7 this significant instance within my declaration. To 8 do so now is going to take me a lot longer because I 9 need to absorb this whole discussion. I, of course, 10 reviewed this for the declaration. But with respect 11 to specific figures and one of the office's 12 exhibits, it would take me longer to provide what I 13 believe to be a -- 14 (Court Reporter clarification.) 15 THE WITNESS: -- correct answer. 16 MR. MCBRIDE: Al, you seem to be cutting 17 out a little bit. Is there -- for me anyway. Is 18 there anything on your end that you can do? 19 THE WITNESS: I'm cutting out? 20 MR. MCBRIDE: Yeah, a little bit. 21 THE WITNESS: Well, facing this way would 22 probably help. I'm looking at the document at the 23 same time, so I apologize for that, but I'll try to 24 speak up. Please let me know if it happens again. 25 It -- it may be the Internet. I don't know. But I	96 1 Q. That's not quite what I'm asking, so I'm 2 going to ask it again. 3 Do you -- I'm sorry. Maybe I'm 4 misunderstanding. Okay. So are you saying that you 5 agree that the patent owner made this argument or 6 that you agree with the veracity of the patent 7 owner's statement in this sentence? I don't think 8 that was quite clear in your answer. I just wanted 9 to clarify. 10 A. Yeah, sorry for the confusion. I did not 11 form an opinion on Lefebvre and this response in my 12 declaration. 13 Q. And you're not comfortable forming any 14 opinions as to the veracity of the arguments made by 15 patent owner in the June 22, 2021, response; 16 correct? 17 A. At this time I'm not prepared to agree or 18 disagree with the response that's shown in this -- 19 in this paragraph. 20 Q. You did not find it necessary to form an 21 opinion on the veracity of patent owner's arguments 22 in its June 22, 2021, arguments for the purpose of 23 forming your opinions as reflected in your 24 declaration; correct? 25 MR. MCBRIDE: Objection. Form and scope.

Conducted on January 16, 2024

97 1 THE WITNESS: Yeah, I would need to study 2 this and form an opinion, which I didn't reflect or 3 include in my declaration. So it's -- yeah, I think 4 that's -- that's my answer. 5 MR. MCBRIDE: Mary, we've been going for 6 over an hour. Whenever you think a good time for a 7 break is, I'd appreciate it. 8 MS. DAHL: Sure. We can go for a 10-minute 9 break. 10 MR. MCBRIDE: Okay. Sounds good. 11 MS. DAHL: Back at 11:20 -- not 11:20. 12 1:20. 13 MR. MCBRIDE: 2:20 for us but 11:20 for 14 you. 15 MS. DAHL: That's right. Okay. Great. 16 (Recess.) 17 COURT REPORTER: We're back on the record. 18 Counsel, you may proceed. 19 By MS. DAHL: 20 Q. Did you speak with your counsel during this 21 past break? 22 A. No. 23 Q. On page 183 of Exhibit 1003, it's the third 24 sentence, the applicant argued that "placing a 25 switch after an LED driver is more efficient since	99 1 THE WITNESS: Once again, I have not 2 previously formed an opinion on that, and I wouldn't 3 want to give an on-the-fly response now. 4 By MS. DAHL: 5 Q. Exhibit 1003, page 183, line 6, the 6 applicant argued, "This LED driver-switch 7 configuration enables the use of smaller and safer 8 switches, and is safer for a user to actuate the 9 switch while there is power being delivered through 10 the lighting system." 11 Do you agree that placing a switch after an 12 LED driver enables the use of smaller and safer 13 switches? 14 MR. MCBRIDE: Objection. Scope. 15 THE WITNESS: Once again, I have not formed 16 an opinion on that. 17 By MS. DAHL: 18 Q. I understand you have not formed an opinion 19 on that in your declaration. You're not comfortable 20 testifying about this today; correct? 21 A. I'm -- I have not formed an opinion on 22 that, and I wouldn't want to give you an on-the-fly 23 response. 24 Q. Can you think of any benefits to placing a 25 switch before the LED driver as opposed to placing
98 1 the LED driver can optionally output a lower 2 voltage, thereby reducing the amount of high voltage 3 isolation needed for the switch." 4 Do you agree that placing a switch after an 5 LED driver is more efficient? 6 MR. MCBRIDE: Objection. Scope. 7 THE WITNESS: I didn't form an opinion on 8 that. 9 By MR. DAHL: 10 Q. I understand you didn't form an opinion in 11 your declaration. Are you comfortable testifying 12 regarding any understanding you have sitting here 13 today about whether or not placing a switch after an 14 LED driver is more efficient? 15 MR. MCBRIDE: Objection. Scope. 16 THE WITNESS: Yeah, I've not previously 17 considered it, so I'm not prepared to form an 18 opinion on that on the fly here. 19 By MS. DAHL: 20 Q. Are you comfortable testifying regarding 21 any understanding you have sitting here today about 22 whether placing a switch after an LED driver reduces 23 the amount of high voltage isolation needed for the 24 switch? 25 MR. MCBRIDE: Objection. Scope.	100 1 it after the LED driver? 2 MR. MCBRIDE: Objection. Form. 3 THE WITNESS: Within the context of the 4 patent, I haven't considered that. So, no, I 5 haven't formed an opinion on it either. 6 By MS. DAHL: 7 Q. Is there anything in -- strike that. 8 Are you aware of anything in this June 22, 9 2021, applicant response that you disagree with? 10 A. Sitting here today, I don't recall anything 11 in particular I disagreed with. 12 (Court Reporter clarification.) 13 THE WITNESS: Sitting here today, I can't 14 think of anything in particular that I disagreed 15 with. 16 By MS. DAHL: 17 Q. You never cite to the '705 patent's file 18 history in your declaration; correct? 19 MR. MCBRIDE: Objection. Form. 20 THE WITNESS: The only citation would be 21 paragraph 20 from my declaration where I state, "And 22 forming my opinions, I have reviewed the exhibits 23 submitted to date in this IPR." 24 By MS. DAHL: 25 Q. You never specifically discuss the '705

Conducted on January 16, 2024

101 1 patent's prosecution history in your declaration; 2 correct? 3 A. To the best of my recollection, that's 4 correct. I don't recall citing it specifically. 5 Q. And you never considered the veracity of 6 any of the arguments made in the applicant's June 7 22, 2021, response; correct? 8 MR. MCBRIDE: Objection. Form. 9 THE WITNESS: I didn't say I didn't 10 consider them. I said I hadn't formed an opinion on 11 specifics of their response, of "their" being the 12 respondee. 13 By MS. DAHL: 14 Q. You have not formed any opinion on the 15 veracity of any of the arguments made in applicant's 16 June 22, 2021, response; correct? 17 MR. MCBRIDE: Objection. Form. 18 THE WITNESS: I haven't formed any specific 19 opinions, no. 20 By MS. DAHL: 21 Q. You testified that you don't remember 22 citing the '705 patent's prosecution history 23 specifically in your declaration. Why did you not 24 cite to the '705 patent's prosecution history 25 specifically in your declaration?	103 1 any information that may be 2 attorney-client privilege in response to this 3 question. 4 THE WITNESS: I don't believe my testimony 5 was that I didn't remember. I believe it was that 6 I -- I don't recall sitting here today, something 7 like that. But in -- there are -- there are no 8 specific citations within my declaration for Exhibit 9 1003. 10 MS. DAHL: I have no further questions. 11 MR. MCBRIDE: Okay. Can we take 10 minutes 12 real quick? I need to go to the bathroom. There's 13 something wrong with my eye. 14 Can we go off the record? 15 MS. DAHL: Sure. 16 (Recess.) 17 COURT REPORTER: We're back on the record. 18 Counsel, you may proceed. 19 MR. MCBRIDE: Thank you. We have no 20 further questions. 21 Thank you, Dr. Ducharme. Thank you, 22 everybody. 23 COURT REPORTER: Is that it? We're off the 24 record. 25 (Proceedings concluded.)
102 1 MR. MCBRIDE: Objection. Form. Scope. 2 I would counsel the witness not to reveal 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	104 1 CERTIFICATE OF STENOGRAPHIC REPORTER 2 I, BURGUNDY B. RYAN, a Certified Shorthand 3 Reporter, hereby certify that the witness in the 4 foregoing deposition, 5 ALFRED D. DUCHARME, Ph.D., 6 was by me duly sworn to tell the truth, the whole 7 truth, and nothing but the truth, in the 8 within-entitled cause; that said deposition was 9 taken at the time and place therein named; that the 10 testimony of said witness was stenographically 11 reported by me, a disinterested person, and was 12 thereafter transcribed into typewriting. 13 I further certify that I am not of counsel 14 or attorney for either or any of the parties to said 15 deposition, nor in any way interested in the outcome 16 of the cause named in said caption. 17 I further certify that the adverse party was 18 represented by counsel at the deposition. 19 I further certify that the deposition of 20 Alfred D. Ducharme, Ph.D. occurred via remote on Tuesday, 21 January 16th, 2024, commencing at 6:03 a.m. to 11:43 a.m. 22 DATED: Wednesday, January 17, 2024. 23  24 _____ 25 Burgundy B. Ryan, CSR No. 11373, RPR

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PGR2023-00016 - Home Depot

Ex. 1038 - Page 27

A			
a0	55:25, 56:24,	adjust	26:10, 63:2,
68:14, 68:18,	58:23, 59:1,	77:12, 78:4,	63:14, 63:15,
68:22	59:7, 59:10,	78:7, 78:12,	93:18, 93:23,
a1	59:12, 60:2,	78:22, 79:6,	95:16, 95:21,
4:15, 4:17,	84:21, 85:1,	79:9, 79:16,	96:5, 96:6,
68:14	85:4, 85:7,	80:2	96:17, 98:4,
able	89:22	adjustability	99:11
14:8, 25:9,	access	75:8, 82:13	al
58:10, 75:22,	61:15, 64:18	adjusted	67:3, 94:16
76:5, 80:1	accident	78:14, 78:24,	alfred
about	11:10	79:10, 79:18,	1:14, 4:21,
9:19, 31:8,	accomplished	80:3	5:7, 5:21, 6:5,
31:12, 32:9,	71:17	adjusts	104:5, 104:20
47:25, 60:12,	according	76:22, 77:6,	align
60:25, 61:1,	20:18, 21:3,	81:4, 82:18	10:9, 10:15,
61:2, 73:18,	47:6, 62:18,	adopted	10:18
80:24, 80:25,	65:24, 69:4,	10:13	aligned
81:2, 81:5,	69:24, 70:3	advantageous	10:16
81:13, 88:24,	accordingly	31:23, 34:4,	all
92:8, 92:11,	66:18	34:8	6:19, 10:21,
98:13, 98:21,	accurate	adverse	10:22, 10:24,
99:20	6:24	104:17	12:14, 12:18,
absorb	achieve	advised	12:21, 14:18,
94:9	46:11, 46:21	16:17, 16:19	32:19, 50:15,
ac	achieved	after	56:25, 60:12,
18:25, 20:8,	30:19	11:17, 53:19,	60:24, 61:1,
20:21, 20:24,	actual	53:25, 59:23,	61:2, 81:10
21:7, 21:25,	47:18	59:25, 67:25,	allen
22:18, 22:21,	actually	85:17, 89:23,	87:2
24:25, 25:5,	47:8, 66:25,	90:11, 90:17,	allowing
25:8, 25:10,	67:2	91:5, 97:25,	46:11
27:7, 34:10,	actuate	98:4, 98:13,	allows
39:13, 39:16,	99:8	98:22, 99:11,	82:13
40:2, 40:5,	added	100:1	alludes
40:7, 42:17,	19:24	again	47:20
42:23, 43:2,	addition	25:2, 25:16,	along
44:17, 45:5,	35:24, 36:6,	38:16, 45:25,	81:15
45:19, 45:22,	36:16	52:1, 66:6,	already
45:23, 47:3,	additional	77:4, 90:23,	8:11, 13:21,
47:5, 48:23,	35:21, 35:23,	94:24, 96:2,	17:2, 79:21
49:3, 49:5,	36:3, 36:5,	99:1, 99:15	also
49:9, 49:10,	36:9, 36:16,	ago	22:12, 26:3,
50:11, 51:13,	36:19, 84:2,	15:3, 88:11	29:4, 34:21,
51:19, 52:14,	87:11, 92:5,	agree	46:7, 46:15
52:21, 52:25,	92:18, 93:15,	19:23, 20:2,	although
53:2, 53:5,	94:1	20:11, 22:24,	77:4
	address	25:11, 25:20,	alto
	6:4, 6:5	26:7, 26:8,	2:8

always 48:16, 51:23, 73:19, 73:21 amount 98:2, 98:23 analysis 12:24 another 11:16, 11:17, 20:18, 20:20, 21:3, 21:18, 22:15, 25:17, 28:3, 28:20, 46:5, 46:14, 46:22, 46:23, 46:24, 46:25, 60:11, 63:20, 70:5, 72:10, 76:6, 86:1, 87:21 answer 3:3, 18:12, 19:8, 21:9, 23:5, 23:11, 23:14, 23:15, 23:20, 23:23, 24:3, 24:11, 37:21, 47:25, 51:18, 51:25, 54:22, 79:1, 79:12, 79:13, 82:3, 94:15, 95:5, 96:8, 97:4 answered 15:3, 18:9, 18:11, 18:18, 21:16, 23:2, 23:10, 24:8, 24:15, 24:17, 25:15, 38:13, 78:25, 79:20, 79:22, 80:21, 82:1, 91:18 answering 26:6, 91:10 answers 77:2 anti-parallel 56:24, 57:16,	57:22, 58:5 any 6:8, 6:23, 7:13, 7:19, 8:6, 10:11, 10:17, 11:23, 13:3, 13:10, 13:14, 13:17, 13:23, 13:25, 14:12, 15:11, 15:20, 16:1, 16:20, 17:1, 17:9, 53:9, 57:15, 59:18, 60:9, 81:17, 83:19, 88:13, 88:17, 89:12, 89:15, 90:2, 90:6, 90:8, 96:13, 98:12, 98:21, 99:24, 101:6, 101:14, 101:15, 101:18, 103:1, 104:14, 104:15 anyone 9:24 anything 6:13, 7:10, 8:10, 12:23, 14:5, 14:20, 61:20, 61:24, 64:21, 64:24, 70:25, 71:3, 73:9, 73:11, 94:18, 100:7, 100:8, 100:10, 100:14 anyway 94:17 anyways 88:11 apologies 83:24 apologize 17:5, 48:18, 49:19, 94:23 appeal 1:2	appear 18:13, 27:15, 27:18, 28:11, 29:18, 44:25, 45:13, 89:14, 89:18 appeared 5:6 appears 9:11 applicable 16:6, 16:11, 16:14 applicant 92:1, 92:25, 93:11, 95:11, 97:24, 99:6, 100:9 applicant's 101:6, 101:15 application 4:11, 4:14, 4:16, 8:21, 15:19, 15:21, 31:5 applications 4:26, 6:19, 70:17 applied 39:14, 39:17, 40:2, 40:6, 40:7, 42:9, 42:14, 43:2, 44:18, 45:6, 45:22, 47:4, 48:16, 49:4, 49:5, 49:9, 49:11 apply 17:9, 65:10 appreciate 32:11, 97:7 approximately 7:24, 62:23 april 86:25, 87:15 area 51:2	argued 92:25, 93:11, 95:11, 97:24, 99:6 arguing 92:2 argument 93:18, 96:5 arguments 96:14, 96:21, 96:22, 101:6, 101:15 arrangements 27:12 art 56:8 asked 24:14, 79:19, 80:21, 82:1 asking 31:12, 80:6, 81:2, 81:5, 88:24, 91:16, 95:24, 96:1 aspect 20:18, 20:20, 21:3, 21:18, 21:20, 22:1, 22:15, 25:17, 25:25, 28:3, 28:20, 76:24 associated 65:20, 68:2 attorney 104:14 attorney-client 103:2 available 61:14, 64:18 aware 11:23, 12:1, 13:17, 13:20, 13:22, 61:10, 61:17, 64:15, 64:21, 70:22, 70:25, 73:6, 73:9, 100:8 axis 66:16, 66:17
--	--	---	--

B			
back 9:21, 14:13, 32:16, 32:21, 44:7, 51:6, 67:13, 97:11, 97:17, 103:17 bathroom 103:12 because 21:17, 26:7, 40:18, 86:13, 94:8 been 5:9, 5:22, 14:3, 32:9, 38:15, 61:10, 61:17, 64:15, 66:24, 70:22, 73:6, 80:21, 82:1, 88:11, 97:5 before 1:2, 5:4, 7:14, 11:14, 12:5, 12:10, 24:16, 50:25, 82:11, 95:14, 95:18, 99:25 begin 38:1 beginning 21:17, 29:2 behalf 2:3, 2:11, 5:8 behavior 36:25, 37:4 being 38:18, 39:12, 40:11, 50:1, 52:9, 57:21, 58:19, 60:8, 87:1, 89:22, 91:9, 99:9, 101:11 belief 10:23	believe 8:4, 10:24, 11:18, 12:11, 14:1, 15:6, 17:11, 18:9, 18:18, 21:15, 23:2, 23:10, 23:19, 24:8, 24:17, 25:15, 27:6, 28:13, 30:21, 40:4, 46:9, 54:23, 61:19, 62:18, 70:24, 73:8, 78:25, 79:12, 79:21, 80:5, 84:19, 90:5, 91:10, 94:13, 103:4, 103:5 believed 10:23 below 48:9 benefits 99:24 besides 6:20, 8:6, 14:25, 15:11, 15:21 best 8:18, 11:8, 14:1, 43:14, 78:9, 84:8, 101:3 between 42:18, 49:14, 49:22, 50:6, 51:15, 51:22, 58:13, 68:18, 71:20, 84:6, 84:14, 85:23, 87:9, 89:16, 90:10, 90:16, 91:4, 91:13, 92:3, 92:16, 93:12, 93:24 bid 68:17	big 86:13 billing 8:13 bin 68:14, 68:21 bit 41:21, 43:18, 91:9, 94:17, 94:20 board 1:2, 32:5 bonding 35:4, 35:10, 35:13 book 61:1, 70:15, 71:16, 72:20 both 43:3, 43:11, 44:10, 44:13, 44:16, 44:18, 45:23, 46:6, 46:14, 46:15, 46:23, 46:24, 46:25, 47:4 bottom 30:9, 43:8, 62:19 bracket 46:9 break 32:10, 32:12, 32:23, 33:4, 43:17, 43:20, 43:21, 43:23, 44:1, 51:5, 66:23, 67:2, 97:7, 97:9, 97:21 bretschneider 12:2, 12:6, 12:9, 13:18, 13:24 bretschneider's 13:11, 13:15 bridge 39:4, 39:8,	41:14, 41:23, 48:2, 48:7, 50:11, 50:13, 53:7, 53:12, 53:14, 53:17, 53:18, 53:23, 53:25, 59:16, 59:20, 59:22, 59:24, 60:7, 60:9, 85:10, 85:13, 85:14, 85:16, 85:21, 85:23, 90:11, 90:17, 91:5, 91:11, 95:14, 95:19 brightness 36:15, 46:19, 47:2, 49:10 brightnesses 46:12 burgundy 1:24, 5:4, 104:2, 104:25 C c 39:15 california 2:8, 5:6 call 44:3 called 5:8, 60:24, 68:10 can't 6:23, 8:16, 11:19, 14:10, 14:19, 71:2, 100:13 caption 104:16 carmichael 2:12, 5:17 case 11:1, 14:10, 15:1, 31:11, 38:18, 46:22,

46:23, 46:24, 46:25, 72:5 cases 12:8, 14:3, 14:6, 14:12, 14:15, 14:16, 14:17, 14:22, 15:4, 73:19, 74:7 catch 11:14 cause 104:8, 104:16 causes 78:6 cells 86:20 center 2:14, 92:9 central 57:4 certain 58:8, 66:15 certainly 14:19, 17:15, 80:25 certificate 104:1 certified 5:5, 104:2 certify 104:3, 104:13, 104:17, 104:19 change 58:6, 58:10, 66:15, 74:20, 75:3, 75:11, 75:22, 77:9, 77:16, 77:21, 83:3, 83:15 changed 57:23 changes 63:9, 77:14, 77:19, 77:23 changing 75:16, 83:19 chapter 71:16	characterization 81:10 chart 66:7 chat 8:22, 8:23, 9:5, 17:18, 54:2, 60:11, 63:19, 70:5, 72:10, 76:9, 85:25, 87:20 check 50:19 chemical 63:10 chip 21:6, 31:23, 32:2, 34:10, 48:3 chips 34:23, 35:8, 35:15 chosen 33:17 circuitry 82:13 citation 100:20 cite 61:6, 64:10, 73:3, 100:17, 101:24 citing 101:4, 101:22 citings 103:8 claim 54:9, 54:11, 54:12, 54:15, 55:11 claims 87:1 clarification 32:6, 34:6, 94:14, 100:12 clarify 10:4, 96:9 clarity 3:24	clean 6:10, 6:11, 9:5, 9:11 clear 96:8 clearly 26:9, 50:14 clients 14:18 close 6:19, 44:2, 74:10 closed 6:22, 8:21 coast 67:1 code 6:7, 68:18, 68:21 codes 68:14 column 54:10, 56:3, 56:8 com 2:10, 2:18 combination 26:19, 46:6, 46:14 combinations 57:6 combined 95:13, 95:18 comes 12:7 comfortable 96:13, 98:11, 98:20, 99:19 comma 11:12 commencing 5:3, 104:21 communication 8:1 complete 6:24 completed 30:19, 82:10	completely 82:5 compose 48:7 composition 63:10 comprise 35:20 comprises 19:4, 19:11, 19:18, 20:4, 20:13, 21:11, 21:23, 25:13, 25:22, 26:11, 42:4, 55:25 comprising 26:16, 26:23, 28:7, 29:6 computer 6:20 con 58:7 concepts 61:18 concluded 103:25 conclusions 10:20 conducting 12:23 configuration 33:18, 51:13, 51:20, 57:23, 59:20, 59:25, 83:20, 99:7 configurations 49:3, 57:8, 57:17, 57:22, 75:16 configured 31:24 configuring 65:16 confusion 88:24, 92:10, 96:10 connect 76:1, 76:5,
---	--	---	--

84:1 connected 15:14, 21:6, 22:4, 26:20, 29:10, 30:24, 31:10, 31:14, 42:18, 44:11, 44:13, 44:14, 44:17, 45:3, 49:14, 49:22, 50:6, 51:10, 51:15, 51:21, 52:3, 52:7, 52:9, 52:21, 53:22, 53:25, 57:6, 57:19, 58:13, 58:17, 58:19, 59:7, 59:10, 60:6, 60:8, 84:6, 84:10, 84:14, 84:21, 85:20, 87:9, 89:16, 89:22, 90:3, 90:9, 90:15, 91:4, 92:3, 92:15, 93:12, 93:24 connecting 27:3 connection 26:17, 26:24, 31:1, 31:15, 31:17, 39:7, 53:16, 58:7, 58:11, 74:21, 75:4, 75:12, 75:22, 83:3, 83:15, 87:16 connections 58:6 consider 15:11, 16:3, 17:14, 101:10 considered 98:17, 100:4, 101:5 consist 27:11	constant 62:2, 62:13, 62:23, 65:3, 66:3 consultant 8:15 consulting 15:7 contacts 39:14 contained 75:6 content 70:23 contents 64:16, 73:7 context 36:23, 37:9, 37:17, 37:23, 37:24, 38:11, 38:19, 38:20, 55:11, 62:15, 63:15, 65:15, 65:17, 78:17, 80:6, 80:10, 94:5, 100:3 continuation 34:2 control 46:19, 47:2 conventional 74:20, 75:3, 75:11, 75:21, 76:1, 76:5, 80:1, 80:17, 81:22 conversation 7:20 convert 50:11 copies 6:11 copy 6:10, 9:11, 11:22 correction 11:13 corrections 6:16, 6:17,	11:6 correctly 19:8, 37:21, 42:11 correspond 66:18 could 26:9, 31:24, 36:17, 38:16, 43:6, 43:9, 45:9, 46:3, 53:10, 65:18, 88:6, 91:13 couldn't 8:16, 14:4, 48:21, 88:10, 88:19 counsel 5:12, 5:20, 7:11, 7:13, 7:16, 7:20, 8:2, 10:1, 10:9, 10:12, 16:10, 16:13, 16:19, 17:1, 24:1, 24:21, 33:5, 44:8, 67:14, 97:18, 97:20, 102:2, 103:18, 104:13, 104:18 couple 6:15, 14:4, 15:4, 38:7 coupled 77:1 course 9:4, 94:9 court 5:11, 5:19, 32:6, 32:21, 34:6, 44:7, 51:4, 51:6, 67:11, 67:13, 94:14, 97:17, 100:12, 103:17, 103:23 cover 4:12	create 91:12 creation 35:6, 35:9 csr 1:25, 104:25 current 32:1, 32:3, 63:9, 65:3, 65:13, 65:21, 66:2, 66:3, 66:6, 66:8, 66:9, 66:12, 66:17, 66:20, 67:16, 67:20, 68:1, 71:18, 71:20, 71:24 currently 10:18 currents 62:24, 65:20 cut 67:23 cutting 94:16, 94:19 D dahl 2:5, 4:3, 5:14, 5:25, 6:1, 9:1, 16:25, 17:21, 18:20, 19:9, 19:16, 20:1, 20:10, 20:23, 21:19, 23:13, 23:21, 24:2, 24:10, 24:18, 26:21, 30:7, 31:7, 32:12, 33:2, 33:3, 33:21, 34:14, 34:24, 36:20, 40:22, 41:16, 44:9, 49:12, 49:20, 50:3, 50:20, 50:22, 50:25, 51:3, 51:8, 54:8,
---	--	---	---

54:21, 55:6, 56:13, 56:20, 58:3, 60:16, 61:16, 62:1, 62:10, 64:1, 65:12, 66:25, 67:9, 67:15, 67:22, 70:11, 72:16, 74:19, 75:1, 75:19, 76:15, 78:11, 78:20, 79:25, 80:8, 80:16, 80:25, 81:16, 81:20, 82:2, 83:10, 83:22, 86:11, 86:16, 88:2, 89:11, 89:25, 90:25, 91:17, 93:21, 95:7, 95:25, 97:8, 97:11, 97:15, 97:19, 98:9, 98:19, 99:4, 99:17, 100:6, 100:16, 100:24, 101:13, 101:20, 103:10, 103:15 dahl@us 2:10 data 4:19, 63:21 date 12:15, 15:25, 88:10, 100:23 dated 104:22 days 7:7 dc 18:25, 20:8, 20:21, 20:24, 21:7, 22:1, 22:18, 22:21, 25:1, 25:5, 25:9, 25:10, 27:7, 34:10,	49:14, 49:22, 50:7, 50:11, 51:10, 51:14, 51:15, 51:20, 51:21, 51:22, 52:4, 52:6, 58:13, 58:17, 72:5, 84:6, 84:14, 87:9, 89:16, 89:24, 90:10, 90:16, 91:4, 91:12, 91:13, 92:3, 92:16, 93:12, 93:24 decision 12:17 declaration 4:21, 6:10, 6:17, 7:8, 7:12, 8:5, 8:7, 8:17, 8:20, 8:23, 9:12, 9:13, 10:2, 10:20, 11:9, 11:24, 12:14, 13:2, 15:17, 16:7, 17:12, 32:24, 37:13, 39:9, 48:4, 49:18, 57:3, 61:4, 61:9, 62:6, 64:8, 64:13, 65:7, 65:9, 70:19, 70:20, 72:25, 73:2, 74:15, 75:6, 75:20, 78:1, 78:19, 80:7, 80:10, 80:23, 81:1, 81:8, 81:12, 82:7, 94:7, 94:10, 96:12, 96:24, 97:3, 98:11, 99:19, 100:18, 100:21, 101:1, 101:23, 101:25,	103:8 declarations 13:23 declare 10:20 defined 53:4 defines 30:2, 30:13 delivered 99:9 delivery 88:15 denoted 41:4, 52:7, 65:25 denoting 66:7 dependent 66:16 depends 36:23 deposition 1:13, 3:1, 5:2, 6:2, 7:6, 8:2, 8:8, 8:11, 13:11, 13:24, 37:14, 81:14, 104:4, 104:8, 104:15, 104:18, 104:19 depot 1:5, 5:15 describe 21:22, 22:7, 29:16, 36:9, 47:17, 48:4 described 16:20, 17:2, 18:7, 18:15, 26:25, 43:13, 46:8, 65:3, 69:2, 69:6, 69:9, 69:12, 69:17, 69:21, 69:25, 84:4, 95:23 describes 19:3, 19:10,	19:18, 20:3, 20:12, 21:10, 21:25, 22:12, 22:14, 22:25, 23:3, 23:6, 23:17, 24:4, 24:12, 24:20, 24:25, 25:5, 25:8, 25:12, 25:17, 25:18, 25:21, 25:24, 26:11, 26:15, 26:18, 27:2, 27:6, 27:10, 27:22, 28:1, 28:3, 28:6, 28:9, 28:18, 28:20, 29:4, 29:8, 33:15, 33:24, 34:15, 34:19, 35:6, 35:12, 35:19, 35:22, 36:1, 36:5, 39:23, 40:1, 40:13, 40:25, 41:3, 41:6, 41:17, 42:6, 42:16, 43:16, 46:10, 47:21, 48:1, 76:24 describing 20:8, 20:17, 20:20, 36:25, 37:3, 37:5, 48:11 description 4:8, 17:17, 26:3, 30:21 designed 22:16, 26:1 desired 30:18 desktop 9:6 details 14:19 determine 71:18
--	--	--	---

determines 43:1, 45:22 device 18:25, 19:4, 19:11, 19:18, 20:3, 20:9, 20:12, 20:22, 20:25, 21:8, 21:11, 21:23, 22:1, 25:1, 25:5, 25:9, 25:12, 25:22, 26:11, 27:7, 27:11, 28:10, 29:1, 29:3, 29:5, 29:9, 31:2, 31:19, 33:16, 33:25, 40:9, 40:10, 40:14, 41:1, 41:8, 41:13, 41:18, 41:23, 42:4, 42:6, 42:9, 42:14, 42:16, 42:19, 43:4, 46:11, 46:20, 55:22, 55:24, 65:17, 77:20 devices 28:7, 35:20 diagram 41:12 difference 71:20 different 14:2, 15:4, 22:22, 25:10, 27:12, 36:15, 41:21, 46:2, 46:20, 50:4, 57:6, 57:8, 57:23, 74:3, 74:5, 74:7, 74:8, 77:3, 78:18 dimmer 74:11, 74:17,	74:20, 75:3, 75:7, 75:11, 75:17, 75:22, 76:1, 76:5, 76:22, 77:1, 77:6, 77:8, 77:11, 77:16, 77:19, 77:23, 78:1, 78:3, 78:4, 78:12, 78:21, 79:5, 79:8, 79:16, 80:1, 80:17, 81:3, 81:22, 82:9, 82:17, 83:2, 83:14, 83:23, 83:25 diode 4:26, 62:2, 62:12, 62:24, 63:8, 63:17, 70:16 diodes 4:22, 63:16 direct 3:25, 92:13 direction 65:11 directly 26:7 directory 6:11, 9:6 disagree 13:19, 13:21, 61:21, 64:22, 71:1, 71:3, 73:10, 73:12, 96:18, 100:9 disagreed 61:24, 100:11, 100:14 disagreeing 64:24 disclose 18:4, 31:16, 44:23, 45:11, 47:11, 47:23, 50:1, 50:2,	57:11, 92:15 disclosed 31:13, 46:18, 47:1, 47:7 discloses 30:18, 30:25, 33:10, 41:12, 41:20, 45:18, 47:15, 47:21, 49:2, 55:21, 74:16, 76:21, 77:5, 77:8, 82:9, 87:8 disclosing 40:14, 41:1, 41:18 disclosure 57:20 disclosures 53:11 disconnect 76:2, 76:6, 81:11, 84:1 discuss 17:12, 61:3, 61:8, 64:7, 64:12, 70:18, 72:22, 72:24, 100:25 discussed 8:11, 21:21, 61:18, 70:23 discussing 38:15 discussion 17:16, 64:10, 64:14, 94:9 disinterested 104:11 disrupt 50:25 dla 2:4, 5:14 dlapiper 2:10 document 10:25, 48:9, 60:24, 64:18,	86:14, 86:17, 94:22 documents 3:8, 8:6, 9:7, 12:21 doing 6:21, 20:19 done 6:21, 34:20, 34:21, 81:5 download 9:5 dr 6:5, 12:6, 12:9, 13:11, 13:15, 13:18, 13:24, 103:21 draft 10:6, 10:8, 10:16 drawn 53:15 drive 2:14, 26:19, 27:14, 33:19, 33:20, 47:14, 47:15, 47:18, 91:12 driven 22:17, 25:9, 26:2, 47:14, 47:15, 47:22 driver 47:12, 47:18, 47:20, 47:22, 47:24, 48:7, 75:9, 76:23, 76:25, 77:7, 77:10, 77:13, 78:5, 78:6, 78:13, 78:23, 79:9, 79:17, 80:2, 81:4, 82:15, 82:19, 88:13, 90:2, 92:4, 92:16, 93:13, 93:25, 97:25, 98:1,
---	--	--	--

98:5, 98:14, 98:22, 99:12, 99:25, 100:1 driver's 78:14, 78:23, 79:10, 79:17, 80:3 driver-switch 99:6 drivers 50:1, 80:19, 81:24 driving 77:14, 77:17, 77:23 drop 54:2, 60:11, 62:23, 63:19, 70:5, 72:10, 85:25, 87:20 dropped 48:18 dropping 8:22, 17:18, 76:9 ducharme 1:14, 4:21, 5:7, 5:21, 6:5, 8:24, 17:19, 54:5, 60:14, 63:23, 70:8, 72:13, 76:12, 86:5, 87:24, 103:21, 104:5, 104:20 due 66:15 duly 5:9, 5:22, 104:6 during 15:25, 30:19, 31:1, 31:15, 31:18, 32:23, 33:4, 33:16, 33:18, 34:1, 97:20 E each 21:5, 22:3,	22:18, 25:8, 29:2, 45:6 earlier 11:5 easily 31:24 east 67:1 easy 67:6 edited 10:9 edits 11:18 efficient 97:25, 98:5, 98:14 eight 82:1 either 27:4, 30:24, 31:17, 33:17, 42:23, 43:7, 43:10, 46:3, 100:5, 104:14 elaborate 81:2 electrical 31:1, 31:17, 39:14, 53:16 electrically 57:19, 59:10, 87:9, 92:3, 92:15, 93:12, 93:24 element 88:19, 88:20 elements 89:9 else 6:13, 7:10, 8:10, 9:24, 12:23 embodiment 74:17, 82:9 embodiments 30:23, 31:8, 31:12, 49:25,	50:10 emit 55:9 emitting 4:25, 54:17, 55:12, 55:15, 69:13, 69:18, 69:22, 70:1, 70:16 enable 43:10 enablement 17:17 enables 99:7, 99:12 end 94:18 end-user 58:6 enough 44:2 entire 38:2, 38:3 entitled 16:6, 70:15, 72:20 entry 68:10 equal 71:20 equation 71:7, 71:10, 71:12, 71:14, 71:19, 71:24 eric 12:2 error 11:20 esquire 2:5, 2:13 essentially 11:10 even 95:12, 95:16 ever 12:9 everybody 103:22	everyone 51:1 everything 6:22 exact 9:22, 88:10 exactly 11:19, 14:14, 15:2, 81:5, 86:15 examination 4:3, 5:24 examined 5:10, 71:16 examiner 86:25, 87:7, 87:16 example 25:8, 27:10, 31:10, 57:7, 68:22, 68:24, 74:4 examples 22:22 excerpt 60:24, 70:15, 72:20 excerpts 60:12 excuse 53:6 exhibits 6:12, 7:9, 8:7, 12:14, 15:24, 16:2, 94:12, 100:22 expert 8:14, 15:7, 15:9, 31:11 explain 71:10, 71:12 explanation 71:14 expressed 78:1 eye 103:13 F facing 94:21
--	--	---	--

fact 71:15 factual 11:23 fails 92:2, 92:15, 93:7, 93:11, 93:23 fair 18:14 familiar 12:3, 88:5, 88:7 family 4:19 fast-moving 51:2 few 7:7, 14:2, 15:3, 20:17, 53:5, 88:11 field 12:6 figures 49:13, 49:21, 50:5, 50:9, 50:14, 51:9, 51:12, 51:18, 52:2, 52:8, 52:10, 52:14, 52:17, 52:18, 53:21, 53:24, 58:12, 58:15, 58:18, 58:23, 58:25, 59:2, 59:4, 59:6, 59:9, 60:5, 60:10, 84:5, 84:9, 84:12, 84:13, 84:17, 84:20, 84:24, 85:19, 85:22, 94:11, 95:13, 95:17 file 4:10, 15:11, 15:18, 15:20, 15:23, 16:3,	86:1, 86:9, 86:10, 86:12, 100:17 filed 86:12, 86:14, 86:15 finally 86:19 find 32:24, 96:20 finding 11:16 fine 32:14 finished 32:7 first 5:9, 5:22, 10:6, 10:8, 10:16, 12:18, 20:17, 29:10, 33:1, 35:20, 35:24, 36:2, 36:6, 36:10, 36:17, 36:18, 36:24, 37:1, 37:2, 37:7, 37:10, 37:16, 37:20, 38:10, 38:14, 38:17, 38:21, 54:13, 87:10, 92:4, 92:13, 92:14, 92:17, 93:14, 93:25, 95:9 five 7:24, 15:5, 43:24, 50:23 fix 66:2, 66:6 fixed 63:10, 75:8, 77:9, 77:12, 82:14, 82:18 florida 6:7 flow 43:19, 71:18	fly 98:18 following 73:18 follows 5:10, 5:23 foregoing 104:4 form 16:22, 18:17, 19:6, 20:6, 21:14, 23:9, 23:18, 23:24, 24:6, 24:14, 26:13, 30:4, 31:4, 31:20, 33:13, 34:18, 36:12, 40:16, 41:10, 49:7, 49:16, 54:19, 55:5, 56:10, 56:17, 56:18, 56:24, 57:25, 61:12, 61:22, 62:5, 65:6, 66:22, 67:18, 74:13, 74:23, 74:24, 75:14, 77:18, 77:25, 78:8, 78:10, 78:15, 78:18, 80:4, 80:7, 80:9, 80:12, 80:20, 81:6, 83:6, 83:17, 89:7, 89:20, 90:19, 93:19, 94:6, 96:11, 96:20, 96:25, 97:2, 98:7, 98:10, 98:17, 100:2, 100:19, 101:8, 101:17, 102:1 formed 21:6, 27:3, 27:7, 30:5, 30:15, 37:7,	48:2, 56:11, 56:21, 58:2, 62:14, 63:3, 76:8, 78:17, 79:13, 79:15, 79:22, 79:23, 80:13, 99:2, 99:15, 99:18, 99:21, 100:5, 101:10, 101:14, 101:18 forming 12:24, 15:10, 17:8, 17:14, 87:16, 88:3, 96:13, 96:23, 100:22 forth 11:2 forward 22:17, 22:20, 25:10, 26:2, 26:4, 26:18, 33:19, 33:25, 34:9, 34:12, 35:3, 47:14, 57:8, 61:7, 62:3, 62:8, 62:12, 62:22, 63:8, 63:9, 64:11, 64:14, 65:4, 65:11, 65:14, 65:18, 65:19, 65:23, 66:4, 66:8, 66:10, 66:11, 66:18, 66:20, 66:21, 67:17, 67:20, 68:10, 68:18, 68:22, 69:1, 69:5, 69:8, 71:21, 72:7, 73:4, 73:20, 73:21, 73:23, 74:1, 74:5, 74:8 found 15:10, 87:8
--	--	--	--

four 39:7 front 6:8, 6:13 full 6:3, 11:2, 38:6, 66:9 function 78:2 functional 46:7, 46:15 fundamentals 4:27, 72:21 further 34:4, 34:7, 103:10, 103:20, 104:13, 104:17, 104:19	68:6, 71:4, 73:13, 76:18, 86:22, 91:5, 91:23, 92:21, 97:8, 103:12, 103:14 going 13:7, 23:25, 32:9, 50:18, 54:2, 60:11, 63:19, 66:24, 70:5, 81:17, 85:25, 86:20, 87:20, 94:8, 96:2, 97:5 good 6:1, 32:10, 32:17, 44:4, 67:2, 97:6, 97:10 grandparent 15:19, 15:21 graph 65:9, 65:19, 65:25, 66:14 graphs 66:14 great 93:8, 97:15 greater 34:10, 73:20, 73:23 guess 44:2, 86:9	94:22 helpful 92:12 here 10:14, 14:23, 30:22, 38:9, 39:2, 50:18, 50:24, 61:24, 64:23, 68:20, 71:2, 73:11, 90:22, 91:9, 98:12, 98:18, 98:21, 100:10, 100:13, 103:6 hereby 10:20, 104:3 herein 10:21, 10:22 high 64:6, 98:2, 98:23 highlighted 39:12, 48:8 histories 15:11, 15:14, 15:20 history 4:10, 15:18, 15:23, 16:3, 86:2, 86:9, 86:10, 86:13, 100:18, 101:1, 101:22, 101:24 hold 24:21 home 1:5, 5:15, 67:6 hour 8:19, 32:10, 66:24, 97:6 hourly 8:13 hours 7:25, 9:19, 9:23	54:6, 60:15, 63:24, 70:9, 72:14, 76:13, 86:6, 87:25 identified 53:7 identify 5:12, 88:12, 89:5, 89:12, 90:1, 90:6 illustrate 50:6, 51:10, 52:3, 52:9, 52:18, 53:22, 58:19, 59:3, 59:16, 60:6, 84:6, 84:18, 85:20, 88:16 illustrated 52:13, 57:14, 58:22, 60:9, 84:23, 85:14 illustrates 42:3, 49:14, 49:22, 58:13, 65:10, 84:14 illustration 50:12, 58:16 immediate 16:4 implies 58:9 inaccuracies 11:24 inc 1:5, 1:8 include 50:10, 53:13, 97:3 included 40:11 includes 40:8, 40:14, 41:2, 41:19, 42:7 indefiniteness 17:16 indented 92:8
G			
general 63:16, 64:13 generally 31:8, 31:12, 74:12 give 6:23, 8:19, 39:1, 66:9, 88:10, 99:3, 99:22 given 62:12, 65:13, 65:21, 66:12, 66:20, 67:16 go 5:11, 7:11, 12:13, 14:13, 17:25, 27:19, 28:14, 29:12, 29:19, 32:23, 33:22, 35:16, 38:24, 39:18, 41:25, 45:9, 45:15, 48:24, 50:22, 51:3, 55:18, 56:3, 66:23, 67:9, 67:10, 68:3,	hanover 2:6 happens 94:24 hardwired 58:10, 58:11 hear 48:21, 90:22 heard 12:4, 42:11 help 9:24, 81:13,		
	H		
		I	
		identification 8:25, 17:20,	

index 3:1 indicated 59:5 indicates 68:17 indicating 53:25, 59:5 individual 30:24, 31:9, 62:2 individually 40:7 information 10:22, 103:1 informed 16:18, 16:19 initially 38:13 input 78:5, 78:13, 78:22, 79:6, 79:9, 79:16, 80:2, 80:18, 81:23 instance 10:7, 11:17, 15:22, 29:11, 94:7 institution 12:16 instructed 3:3, 16:10, 16:13, 16:16 integrated 34:8, 82:12 integrating 32:4 intent 58:8 interested 104:15 international 4:14 internet 94:25 interpreted 36:18	interrupt 43:19 introduction 4:22, 4:25, 70:16 invention 20:19, 20:21, 21:4, 21:18, 21:20, 22:2, 22:15, 25:18, 25:25, 28:4, 28:21, 50:16, 76:25 ip 2:12, 5:17 ipr 15:25, 100:23 isolation 98:3, 98:23 items 89:14 iterative 10:1 itself 71:15 J january 1:15, 5:2, 104:21, 104:22 job 1:26 junction 63:11 june 92:1, 96:15, 96:22, 100:8, 101:6, 101:16 K kind 57:23, 71:22 know 6:7, 6:20, 9:2, 14:15, 17:22, 18:1, 26:8, 27:20, 28:15, 29:13, 33:7,	35:17, 37:9, 38:25, 39:19, 47:8, 48:13, 48:25, 51:1, 54:4, 54:10, 55:19, 56:4, 60:17, 62:17, 63:5, 63:21, 67:7, 68:4, 70:6, 71:5, 72:11, 73:14, 76:10, 76:19, 78:4, 78:12, 78:16, 80:17, 86:2, 86:17, 86:23, 87:22, 90:23, 91:21, 91:24, 94:24, 94:25 knowledge 10:21 L labeled 42:5, 42:10, 42:15 labs 1:8, 5:17, 14:3, 14:6, 14:11, 14:16, 14:22, 15:1, 15:8 large 86:3 larger 56:22 last 7:7, 15:5, 22:9, 30:17, 39:10, 43:15, 48:4, 53:4, 88:8, 92:13, 93:2 law 71:17 least 20:4, 20:13, 20:25, 21:4,	21:5, 21:11, 22:2, 22:3, 22:18, 25:10, 26:3, 28:4, 28:7, 28:18, 29:6, 34:4, 34:8, 34:9, 41:14, 41:23, 48:1, 55:25, 56:15, 56:22, 87:10, 87:11, 92:4, 92:5, 92:17, 92:18, 93:13, 93:14, 93:25, 94:1 leaving 36:9 leds 21:6, 22:4, 32:2, 39:7, 48:2, 48:8, 55:1, 55:2, 55:3, 55:8, 59:25, 63:17, 64:6 lefebvre 87:2, 87:8, 87:22, 88:9, 92:2, 92:14, 93:23, 96:11 lefebvre's 93:11, 95:12, 95:17 left 11:10, 11:13, 11:17, 46:4 legal 16:7, 16:11, 16:14, 16:20, 17:2, 17:4, 17:6, 17:9, 17:14 less 73:21, 73:22 let's 5:11, 35:16, 67:9 level 26:19, 26:20,
---	---	---	---

30:19, 32:1, 32:4, 34:16, 34:20, 34:22, 35:4, 35:7, 35:8, 35:11, 35:14, 46:19, 47:2, 47:14 levels 22:21, 36:15 light 4:25, 54:18, 55:9, 55:12, 55:15, 69:13, 69:18, 69:22, 70:1, 70:16 lighting 4:27, 32:7, 41:13, 41:22, 42:6, 42:16, 42:19, 46:20, 55:22, 55:24, 65:17, 72:21, 99:10 limited 15:13 line 3:4, 3:9, 3:14, 3:19, 22:5, 22:11, 25:7, 27:1, 27:6, 28:17, 28:23, 29:2, 29:8, 31:22, 33:1, 40:4, 40:5, 40:7, 56:4, 56:6, 56:8, 99:5 lines 24:19, 24:22, 25:4, 30:8, 56:3 listed 17:10, 68:25, 69:10, 69:11, 69:16 listing 74:7 little 43:18, 66:24, 91:9, 94:17,	94:20 llp 2:4 located 53:19, 59:23, 85:17 long 7:22, 43:23 longer 43:18, 43:25, 67:1, 84:12, 94:8, 94:12 look 8:20, 31:6, 79:2, 87:15 looked 15:23, 88:9 looking 16:9, 37:6, 42:2, 45:17, 46:3, 48:14, 87:19, 88:18, 91:20, 94:22 looks 46:8, 86:8, 88:5, 88:7, 88:14, 88:20 losing 90:21 lot 94:8 lower 98:1 lunch 67:4, 67:5, 67:8, 67:12 lunchtime 67:1 lynk 1:8, 5:17, 13:25, 14:3, 14:6, 14:11, 14:16, 14:22, 15:1, 15:8 M made 10:21, 10:22,	37:19, 48:2, 88:21, 95:22, 96:5, 96:14, 101:6, 101:15 make 9:5, 9:6, 11:6, 11:7, 19:8, 23:25, 42:11, 81:16, 82:12, 90:14, 95:5 many 9:19 marked 3:18, 8:24, 17:19, 54:5, 60:14, 63:23, 70:8, 72:13, 76:12, 86:5, 87:24 marking 89:10 marks 3:24, 29:23, 30:10 mary 2:5, 2:10, 5:14, 6:1, 32:9, 66:23, 80:22, 86:8, 97:5 matching 22:19, 26:4 materials 6:8 matter 11:3 maybe 80:23, 81:13, 82:5, 82:11, 84:10, 92:12, 96:3 mcbride 2:13, 5:16, 7:18, 7:22, 16:22, 18:17, 19:6, 19:13, 19:21, 20:6, 20:15, 21:14, 23:9, 23:18,	23:24, 24:6, 24:14, 26:13, 30:4, 31:4, 31:20, 32:9, 32:14, 32:17, 33:13, 34:18, 36:12, 40:16, 41:10, 49:7, 49:16, 49:24, 50:8, 54:19, 55:5, 56:10, 56:17, 57:25, 61:12, 61:22, 62:5, 65:6, 66:22, 67:3, 67:18, 74:13, 74:23, 75:14, 78:8, 78:15, 79:19, 80:4, 80:12, 80:20, 81:9, 81:25, 83:6, 83:17, 86:7, 89:7, 89:20, 90:19, 91:7, 93:19, 94:3, 94:16, 94:20, 95:2, 95:20, 96:25, 97:5, 97:10, 97:13, 98:6, 98:15, 98:25, 99:14, 100:2, 100:19, 101:8, 101:17, 102:1, 103:11, 103:19 mean 10:4, 37:4, 38:3, 38:17, 41:7, 46:13, 54:16, 55:2, 55:8, 55:11, 72:2, 91:15 meaning 56:21 means 34:11, 37:8, 37:17, 38:11, 55:9, 56:14
---	---	---	---

meant 40:19, 40:23	45:24, 49:17, 82:4, 89:10	34:12, 34:22, 35:8, 35:14	52:2, 53:21, 53:24, 58:12, 60:5, 84:5, 84:13, 85:19, 85:22
meet 7:13, 7:16, 7:22	months 88:11	multi-way 43:9	note 3:23, 6:18, 9:4, 86:7, 86:20
meeting 7:20	more 34:22, 35:8, 35:14, 37:22, 37:24, 82:12, 86:10, 94:5, 97:25, 98:5, 98:14	multiple 22:23, 31:25, 43:9, 46:2, 46:11, 65:18, 86:13	noted 11:13
mentioned 11:5, 34:16	morning 6:1	myself 27:24	notes 6:8, 6:15
met 7:11	move 81:15	N	nothing 11:20, 13:1, 104:7
method 35:1, 35:3, 82:17	moving 51:2	name 6:1, 6:3, 12:2, 12:5, 12:7, 14:11, 14:12	notice 5:1
middle 62:21, 71:7, 73:18	much 5:19	named 104:9, 104:16	number 7:3, 8:19, 9:22, 13:5, 68:24
might 37:4, 46:22, 46:23, 46:24, 46:25, 65:15, 86:3	multi-brightness 29:1, 29:3, 29:5, 30:9, 30:14, 34:13, 35:23, 41:13, 41:22	necessarily 3:25, 36:24, 37:3, 37:4	numbers 14:20, 62:19, 90:5
mind 91:9	multi-chip 31:23	necessary 96:20	O
minute 44:1, 97:8	multi-current 32:2	need 6:7, 13:20, 23:22, 37:9, 37:10, 37:22, 37:24, 38:1, 38:6, 43:17, 43:20, 43:23, 43:24, 90:13, 90:22, 94:9, 97:1, 103:12	object 31:4, 31:20, 36:12, 55:5, 61:12, 61:22, 74:13, 81:9, 94:3
minutes 32:13, 43:24, 50:23, 103:11	multi-voltage 18:25, 19:4, 19:11, 19:18, 20:3, 20:8, 20:12, 20:21, 20:24, 21:7, 21:11, 21:22, 21:25, 23:4, 24:25, 25:5, 25:8, 25:12, 25:18, 25:22, 26:11, 26:16, 26:23, 27:3, 27:7, 27:11, 28:7, 28:9, 28:25, 29:3, 29:5, 29:9, 29:22, 30:3, 32:2, 33:15,	needed 11:21, 98:3, 98:23	objection 16:22, 18:17, 19:6, 19:13, 19:21, 20:6, 20:15, 21:14, 23:9, 23:18, 23:24, 24:6, 24:14, 26:13, 30:4, 33:13, 34:18, 40:16, 41:10, 49:7, 49:16, 49:24, 50:8, 54:19, 56:10, 56:17, 57:25, 62:5, 65:6, 66:22,
mischaracterizes 24:7, 79:12		never 12:5, 100:17, 100:25, 101:5	
misheard 40:20, 84:11		new 54:3	
miss 91:16		none 3:5, 3:10, 3:15, 3:20, 49:13, 49:21, 50:5, 51:9, 51:12, 51:18,	
missing 90:24, 91:16			
misspoke 38:5			
misstatements 11:24			
misunderstand 89:3			
misunderstanding 96:4			
mode 43:6			
moment 15:3, 39:1,			

67:18, 74:23, 75:14, 78:8, 78:15, 79:19, 80:4, 80:12, 80:20, 81:25, 83:6, 83:17, 89:7, 89:20, 90:19, 93:19, 95:20, 96:25, 98:6, 98:15, 98:25, 99:14, 100:2, 100:19, 101:8, 101:17, 102:1 objections 91:7 obtained 36:15 occasionally 73:23 occur 31:1, 31:15, 31:18 occurred 104:20 occurring 34:16 october 8:5, 9:21 office 1:1 office's 94:11 often 12:7 oh 88:19 ohms 71:17 okay 6:19, 8:22, 8:23, 9:15, 24:24, 28:24, 32:13, 32:16, 35:16, 39:3, 42:20, 43:21, 43:22, 44:1, 44:2, 44:5,	48:24, 54:2, 54:7, 55:18, 63:19, 63:25, 67:3, 68:8, 74:10, 76:2, 76:9, 76:17, 79:4, 82:22, 82:23, 82:25, 83:1, 83:8, 83:13, 85:25, 86:24, 87:20, 88:23, 89:8, 91:22, 91:23, 91:25, 92:23, 93:3, 93:5, 93:8, 93:9, 93:22, 95:8, 96:4, 97:10, 97:15, 103:11 on-the-fly 80:15, 99:3, 99:22 once 38:16, 45:24, 58:4, 66:6, 99:1, 99:15 one 27:13, 32:11, 34:22, 35:8, 35:14, 36:9, 37:20, 39:1, 40:5, 43:2, 43:6, 43:10, 45:23, 45:24, 46:21, 46:22, 48:1, 49:3, 49:4, 49:17, 50:17, 65:14, 65:23, 66:4, 66:11, 66:21, 69:10, 73:19, 82:4, 87:10, 87:11, 92:4, 92:5, 92:17, 92:18, 93:13, 93:14, 93:25, 94:1, 94:11 ones 17:9, 81:7	only 8:1, 52:8, 52:17, 58:18, 59:2, 59:4, 63:8, 65:4, 65:14, 65:23, 66:4, 66:11, 66:21, 84:17, 100:20 open 9:3, 9:8, 9:9, 17:23, 17:24, 50:19, 54:4, 54:7, 60:17, 60:18, 63:21, 63:25, 70:7, 70:10, 72:12, 72:15, 76:11, 76:17, 86:3, 86:18, 87:23, 88:1, 91:21, 91:22 opened 86:19 operable 18:25, 20:8, 20:22, 20:24, 21:8, 22:1 operate 31:25, 46:2 operated 43:11 operates 78:2 operating 30:19, 35:20, 35:24, 36:2, 36:6, 36:10, 36:17, 36:18, 36:21, 36:24, 37:1, 37:2, 37:8, 37:10, 37:11, 37:17, 37:20, 38:10, 38:14, 38:17, 38:21, 54:13, 54:15, 54:17, 55:1, 55:3,	55:4, 55:8, 55:10, 55:16, 87:10, 92:5, 92:17, 93:14, 94:1 operation 43:6 opinion 11:1, 11:12, 23:3, 30:5, 30:12, 30:15, 37:7, 37:16, 37:20, 38:7, 38:10, 38:14, 56:12, 56:14, 56:19, 56:21, 57:2, 58:2, 62:8, 62:11, 62:14, 63:3, 74:24, 75:2, 75:6, 75:10, 75:15, 75:17, 75:21, 75:25, 76:4, 76:8, 77:18, 77:22, 77:25, 78:10, 78:18, 78:21, 79:5, 79:8, 79:13, 79:15, 79:22, 79:23, 80:7, 80:9, 80:13, 80:15, 81:7, 81:22, 82:16, 94:6, 96:11, 96:21, 97:2, 98:7, 98:10, 98:18, 99:2, 99:16, 99:18, 99:21, 100:5, 101:10, 101:14 opinions 10:10, 10:11, 10:14, 10:15, 10:16, 10:17, 10:18, 11:3, 12:24, 13:15, 13:17, 15:10,
---	---	---	--

17:8, 17:15, 37:13, 78:16, 81:19, 87:17, 88:4, 96:14, 96:23, 100:22, 101:19 opposed 99:25 opposing 14:21 opposite 46:23 optionally 98:1 options 33:19, 33:20 order 9:22, 23:23, 37:21, 38:7, 90:9, 90:15 ordinary 56:7 other 7:13, 7:19, 8:6, 11:11, 11:16, 13:25, 14:17, 15:20, 16:20, 17:1, 17:9, 22:21, 32:24, 40:6, 43:10, 43:24, 46:24, 57:4, 67:7, 81:7 others 7:19 otherwise 75:8, 82:14, 82:18 out 6:16, 6:19, 32:25, 39:9, 48:18, 67:23, 77:14, 94:17, 94:19, 95:3 outcome 104:15 output 51:16, 51:22,	53:22, 58:17, 60:6, 60:8, 75:9, 76:22, 77:6, 78:5, 78:7, 78:14, 78:23, 79:10, 79:17, 80:3, 81:4, 82:14, 82:19, 85:20, 87:9, 92:3, 92:16, 93:13, 93:25, 98:1 outside 69:15, 80:10 over 7:7, 14:3, 15:4, 66:24, 71:21, 87:1, 97:6 oviedo 6:6 own 10:2, 10:5, 10:9 owner 1:9, 2:11, 5:17, 95:22, 96:5, 96:15 owner's 96:7, 96:21 P p-n 63:11 package 32:4, 34:11, 34:23, 35:7, 35:9, 35:15, 35:22, 56:25 packager 33:11, 33:16, 58:4 packages 31:24 packaging 30:20, 31:1, 31:16, 31:19, 32:1, 33:17,	33:18, 34:1, 34:12, 34:16, 34:20, 34:22, 35:4, 35:7, 35:11, 35:12, 35:13, 35:14 page 3:4, 3:9, 3:14, 3:19, 4:2, 4:8, 12:13, 12:19, 12:20, 62:16, 62:18, 62:20, 62:22, 63:4, 63:6, 63:7, 65:25, 66:7, 68:3, 68:7, 68:8, 68:9, 68:17, 71:4, 71:8, 71:13, 73:13, 73:17, 86:22, 86:24, 87:4, 87:6, 87:7, 87:12, 87:19, 91:23, 92:9, 92:11, 92:13, 92:21, 92:24, 93:8, 93:10, 95:8, 95:9, 95:11, 97:23, 99:5 pages 1:27, 92:11 palo 2:8 paragraphs 16:8, 16:14, 16:21, 17:2, 17:10 parallel 26:17, 26:24, 27:5, 27:13, 29:10, 30:25, 31:10, 31:14, 31:18, 33:12, 33:18, 44:11, 44:15, 44:17, 45:3, 56:23, 57:7, 57:16,	57:21, 58:5, 74:22, 75:4, 75:12, 75:17, 75:23, 83:4, 83:16, 83:20 paraphrased 27:2 parent 13:5, 16:4 part 16:21, 17:3, 22:9, 26:15, 50:1, 64:13, 86:1, 86:9, 86:14, 86:23 particular 58:9, 61:24, 64:24, 64:25, 65:2, 71:3, 100:11, 100:14 parties 14:21, 104:14 parts 86:10, 86:13 party 104:17 passage 63:1, 83:8 past 14:3, 15:4, 15:14, 97:21 paste 11:22 patent 1:1, 1:2, 1:9, 2:11, 4:9, 4:10, 4:12, 4:14, 4:16, 5:17, 7:3, 13:5, 14:20, 15:12, 16:4, 38:2, 38:3, 38:4, 38:5, 54:3, 54:12, 54:16, 55:11, 55:19, 55:21, 55:25, 56:9, 57:5, 57:10, 57:15, 57:20,
---	---	---	--

58:12, 58:19, 58:23, 59:2, 59:6, 59:11, 59:15, 59:22, 60:2, 60:5, 62:15, 65:15, 65:18, 78:17, 95:22, 96:5, 96:6, 96:15, 96:21, 100:4 patent's 13:4, 100:17, 101:1, 101:22, 101:24 patents 13:25, 15:14, 15:15, 15:16 people 43:25, 67:7 person 56:7, 104:11 personally 5:6 petition 12:16, 86:12 petitioner 1:6, 2:3, 5:8, 5:15 pgr 9:15, 12:25, 13:4, 13:7, 13:8, 13:12, 13:15, 13:18, 15:1, 16:21, 17:3, 17:8, 87:17, 88:4 ph 1:14, 4:21, 5:7, 5:21, 104:5, 104:20 phone 50:19 phrase 56:22 phrased 23:20, 23:22 pick 66:8, 66:17	piper 2:4, 5:14 place 6:6, 31:5, 104:9 placed 53:10, 95:14, 95:18 placing 97:24, 98:4, 98:13, 98:22, 99:11, 99:24, 99:25 please 5:12, 6:3, 6:19, 12:13, 17:22, 17:25, 18:10, 26:22, 27:19, 27:25, 28:14, 29:12, 29:19, 32:22, 38:24, 40:20, 41:25, 45:15, 48:24, 54:4, 56:3, 60:17, 63:22, 71:4, 71:10, 71:12, 72:12, 73:13, 76:11, 76:18, 86:22, 90:13, 91:19, 91:23, 92:21, 94:24 pllc 2:12 plurality 19:4, 19:11, 19:19, 19:24, 19:25, 21:23, 25:13, 25:22, 26:12 point 6:16, 8:16, 8:17, 8:21, 18:10, 26:22, 31:3, 32:25, 80:22, 95:3 pointed 39:8	points 39:7 portion 13:3, 30:2, 30:13 posita 48:5, 48:6, 50:14, 61:10, 61:14, 61:17, 64:15, 64:18, 70:22, 73:6 position 43:9 possible 46:5, 46:13, 50:15, 91:15 post-grant 7:2 power 42:17, 42:18, 42:22, 84:2, 88:14, 99:9 powered 44:11, 46:3, 64:6 predetermined 22:17, 26:2 preferably 22:18 preliminary 12:16 preparation 8:2, 16:1, 37:14 prepare 7:5, 8:7, 8:10, 9:17, 9:24, 37:13 prepared 96:17, 98:17 preparing 9:20 present 7:19 pretty 14:18, 86:3 previous 18:12, 91:20	previously 14:7, 18:11, 25:16, 80:14, 82:20, 98:16, 99:2 printed 32:5 privilege 103:2 probably 9:22, 86:10, 94:22 proceed 5:20, 32:22, 44:8, 67:14, 97:18, 103:18 proceeding 7:2, 12:15 proceedings 51:5, 103:25 process 10:1, 33:17, 33:18, 34:20 produce 51:14, 51:21 product 4:19, 32:8, 65:2, 65:22, 66:5, 66:13, 68:21, 69:2, 69:6, 69:9, 69:12, 69:17, 69:21, 69:25 production 3:8 prosecution 15:13, 101:1, 101:22, 101:24 provide 17:1, 33:19, 34:4, 34:8, 75:21, 80:18, 81:23, 94:12 provided 10:8, 13:24, 62:7, 95:4 provides 26:3, 35:23
---	--	---	---

providing 21:7, 27:14, 78:5 provisional 4:11, 74:15, 74:16, 76:10, 82:9 pst 1:18, 1:20, 5:3 publication 4:16 publicly 61:14, 64:17 purpose 96:22 pursuant 5:1 put 91:3	quick 103:12 quite 51:17, 89:8, 96:1, 96:8 quotation 3:24, 29:23, 30:10 quote 3:25, 92:9	73:11, 100:10, 101:4, 103:6 recently 14:25 recess 32:20, 44:6, 67:12, 97:16, 103:16 recites 54:13 recognize 9:10, 60:19, 64:2, 70:12, 72:17 recollection 7:15, 8:18, 11:8, 13:13, 14:2, 16:5, 38:2, 43:14, 77:18, 78:10, 84:8, 101:3 record 5:11, 5:13, 6:4, 13:3, 25:3, 32:21, 32:25, 44:7, 50:21, 50:22, 51:3, 51:4, 51:7, 67:9, 67:10, 67:11, 67:13, 81:21, 86:8, 86:15, 97:17, 103:14, 103:17, 103:24 records 14:14 rectified 41:14, 41:23 rectifier 48:7, 50:13, 53:7, 53:12, 53:14, 53:17, 53:23, 54:1, 59:16, 59:21, 60:7, 60:9, 85:10, 85:13, 85:14, 85:21, 85:23, 88:21,	89:2, 89:4, 90:3, 90:11, 90:17, 91:6, 91:11, 91:14 rectifiers 4:23, 39:5, 39:8, 48:8, 50:11, 53:18, 59:23, 59:24, 85:17, 88:17, 95:14, 95:19 reduces 98:22 reducing 98:2 refamiliarize 27:24 refer 9:13, 13:7, 40:23, 72:8, 74:2, 74:15, 82:6 reference 71:15 referenced 13:1, 70:20, 73:1 referred 17:7 referring 9:14, 39:11, 43:15, 57:3, 62:6, 65:7, 66:7, 67:19, 74:3, 83:9 refers 18:21, 18:24, 28:25, 34:25, 35:2 reflect 3:25, 97:2 reflected 95:23, 96:23 refresh 38:2 regarding 7:2, 13:4, 16:10, 16:13,
Q question 16:12, 16:24, 18:9, 18:11, 18:19, 19:7, 21:9, 21:16, 22:10, 23:5, 23:11, 23:15, 24:9, 24:17, 25:2, 25:15, 26:7, 27:25, 38:13, 40:21, 40:24, 49:19, 50:4, 52:1, 52:2, 54:20, 55:7, 77:2, 77:3, 77:4, 78:25, 83:12, 84:11, 90:14, 90:23, 91:10, 91:18, 93:9, 93:22, 103:3 questioned 41:22 questions 3:3, 3:18, 24:1, 103:10, 103:20	R r-a-d-i-s-s-o-n 6:6 radisson 6:6 range 62:23, 64:5, 65:10, 65:19, 65:25, 66:10, 66:19, 68:24, 69:15 ranges 69:4, 69:11, 69:24 rate 8:13 re-ask 83:11, 93:9 read 7:7, 36:13, 38:1, 38:15, 58:1, 71:15 real 103:12 real-time 51:23 really 11:12, 93:20 reason 6:23 recall 9:21, 12:11, 13:16, 14:8, 14:23, 15:2, 15:22, 37:19, 38:14, 43:13, 61:23, 64:23,		

16:20, 21:20, 81:3, 98:12, 98:20 regular 8:13 regulate 75:7, 75:18, 77:21 regulates 74:17, 77:1, 82:10 rejected 86:25 rejection 87:16 related 13:25, 75:16, 77:4 relative 75:8 relatively 77:9, 77:12, 82:14, 82:18 remains 62:23 remarks 92:11 remember 11:19, 14:4, 14:10, 14:14, 14:19, 14:21, 14:25, 87:18, 88:5, 88:8, 101:21, 103:5 remembered 5:1 remembering 88:7 remind 79:1 remote 1:16, 5:4, 104:20 render 38:7, 80:14 reopen 91:19 repeat 11:11, 11:18,	16:12, 19:7, 22:9, 27:25, 40:18, 42:12, 49:19, 54:24, 84:11, 90:13 repeated 33:1, 90:23 rephrase 22:11, 55:7, 93:22 rephrasing 19:22 report 9:20, 9:25, 10:6, 11:2, 11:7 reported 1:23, 104:11 reporter 5:5, 5:11, 5:19, 32:6, 32:21, 34:6, 44:7, 51:4, 51:6, 67:11, 67:13, 94:14, 97:17, 100:12, 103:17, 103:23, 104:1, 104:3 reporter's 1:12, 3:23 represent 50:15 representative 53:9, 59:18 represented 39:10, 39:11, 104:18 representing 46:1, 51:13, 51:19, 52:6, 53:16 represents 11:1, 39:8 request 3:8 resistance 71:22, 71:23 resistor 71:17	resizing 39:2 respect 61:6, 62:8, 62:15, 73:3, 94:10 responded 92:1 respondee 101:12 response 12:16, 95:22, 96:11, 96:15, 96:18, 99:3, 99:23, 100:9, 101:7, 101:11, 101:16, 103:2 rest 37:9, 72:5 restate 40:20, 40:24 reveal 102:2 review 7:2, 8:6, 12:23, 15:20, 37:9, 37:22, 37:25, 38:6, 49:18, 79:2, 84:12, 88:3 reviewed 7:8, 12:14, 12:21, 13:3, 13:10, 13:14, 13:23, 15:13, 15:19, 15:24, 16:1, 37:12, 87:18, 94:10, 100:22 reviewing 58:15, 84:9, 94:4 revision 4:20 right 32:12, 32:19, 38:9, 46:4, 62:19, 76:14,	80:15, 85:2, 86:21, 97:15 row 68:10 rpr 1:24, 104:25 ryan 1:24, 5:5, 104:2, 104:25 S safer 99:7, 99:8, 99:12 said 24:16, 37:12, 38:5, 41:6, 51:18, 67:24, 101:10, 104:8, 104:10, 104:14, 104:16 same 12:6, 19:13, 19:21, 20:15, 44:17, 45:5, 47:5, 48:3, 49:24, 50:8, 72:8, 74:2, 91:7, 93:8, 93:9, 94:23 samsung 63:20, 65:16, 65:22, 66:5, 66:12, 68:21, 69:2, 69:6, 69:9, 69:12, 69:17, 69:21, 69:25 say 15:15, 15:18, 18:14, 37:2, 41:7, 67:24, 82:8, 91:11, 101:9 saying 81:10, 96:4 says 41:9, 41:11,
---	--	---	---

62:22, 63:8, 74:16, 92:14 schematic 41:12 scope 11:2, 56:10, 57:25, 62:5, 81:18, 89:20, 90:19, 93:19, 94:3, 95:20, 96:25, 98:6, 98:15, 98:25, 99:14, 102:1 scroll 44:20, 48:12, 54:9, 62:16, 63:4 second 26:15, 26:18, 29:11, 29:20, 29:23, 33:14, 49:4, 49:10, 50:17, 62:21, 63:7, 66:24, 73:14, 73:17, 82:7, 87:12, 93:4 section 16:6, 39:11 see 19:25, 29:22, 30:9, 36:13, 39:2, 39:3, 39:24, 40:3, 49:6, 49:8, 52:5, 54:12, 58:16, 62:25, 63:1, 63:12, 63:13, 68:12, 68:15, 71:7, 73:24, 84:9, 87:3, 87:5, 87:13, 87:14, 88:14, 88:19, 89:3, 89:24, 90:3, 90:8, 90:20, 92:7, 92:19, 92:20,	93:16 seem 94:16 seems 81:10 seen 56:8 select 33:11 selecting 31:25, 32:3, 33:25, 34:11 selection 35:3 sense 55:15, 82:12 sentence 29:20, 29:23, 30:18, 33:15, 37:10, 39:10, 43:15, 48:5, 57:4, 63:7, 82:8, 82:11, 92:14, 93:4, 93:6, 93:9, 95:9, 95:23, 95:24, 96:7, 97:24 separated 86:12 serially 21:5, 22:3 series 18:22, 20:25, 21:4, 21:12, 22:2, 22:7, 22:12, 22:16, 22:19, 22:25, 23:7, 23:17, 24:5, 24:12, 25:13, 26:1, 26:17, 26:20, 26:24, 27:4, 27:8, 27:13, 29:11, 30:25, 31:10, 31:14, 31:18, 33:12, 33:17, 41:4,	41:7, 41:8, 41:14, 41:24, 56:15, 56:16, 56:22, 56:23, 57:7, 57:16, 57:21, 58:5, 74:21, 75:4, 75:12, 75:16, 75:23, 83:4, 83:16, 83:20 services 8:14 set 11:2 share 9:7 shared 86:8 sheet 4:12, 4:19, 63:21, 64:5, 65:24 shorthand 5:5, 13:8, 104:2 should 82:11 show 50:10, 51:12, 51:19, 53:16, 53:24, 59:4, 66:14, 85:22, 92:2, 93:12, 93:23 showed 62:19 showing 10:25, 22:21, 51:14, 51:20, 53:12, 58:16 shown 40:10, 40:11, 41:4, 50:13, 57:19, 59:13, 59:19, 59:24, 65:9, 69:4, 71:12, 71:19, 72:3, 91:2,	96:18 shows 45:25, 46:17, 59:9, 59:17, 65:8, 65:19, 65:25, 89:22 sic 19:17 side 40:5, 40:6, 46:4 signal 78:6, 80:18, 81:23 signature-plkal 104:23 signed 10:25 significant 94:7 similar 14:16, 14:18 simple 43:5 simply 31:25 since 8:4, 8:5, 69:15, 97:25 single 14:10, 21:6, 23:11, 23:14, 31:23, 31:24, 32:2, 34:10, 34:11, 34:22, 35:6, 35:8, 35:15, 48:3, 56:25, 62:3, 62:12, 65:4, 65:22, 66:1, 66:4, 66:9, 66:12, 66:18, 67:17, 67:21, 67:24, 68:1, 70:4 single-voltage 18:22, 19:5, 19:12, 19:19,
---	---	--	---

20:4, 20:13, 20:25, 21:4, 21:12, 21:24, 22:2, 22:7, 22:12, 22:16, 22:19, 22:25, 23:7, 23:17, 24:5, 24:12, 25:13, 25:23, 26:1, 26:12, 26:17, 26:19, 26:24, 27:4, 27:8, 27:12, 27:23, 28:2, 28:4, 28:8, 28:10, 28:18, 28:21, 29:6, 29:9, 67:21, 68:2 sirens 50:18 sitting 14:23, 38:9, 61:24, 64:23, 71:2, 73:11, 98:12, 98:21, 100:10, 100:13, 103:6 six 7:24 skill 56:7 slightly 50:4, 63:9, 77:3 smaller 99:7, 99:12 solid-state 4:27, 72:21 some 6:11, 6:16, 7:8, 8:21, 11:6, 39:2, 50:10, 71:22, 81:11, 86:3, 88:23 someplace 80:23 something 9:22, 11:17,	41:20, 90:24, 91:16, 103:6, 103:13 sometimes 73:22 sorry 11:19, 17:5, 17:11, 22:10, 24:21, 24:24, 26:6, 27:24, 35:1, 40:23, 48:21, 51:17, 53:11, 54:24, 60:21, 60:25, 67:23, 72:22, 84:10, 87:6, 88:18, 88:23, 90:21, 91:14, 92:10, 96:3, 96:10 sort 81:11 sound 12:2 sounds 32:17, 44:4, 97:10 source 42:17, 42:19, 42:23, 43:2, 44:14, 45:19, 52:10, 52:21, 52:25, 53:3, 53:5, 58:20, 58:22, 58:25, 59:7, 59:10, 59:12, 60:3, 71:21, 72:2, 72:4, 72:5, 72:7, 84:2, 84:21, 85:1, 85:4, 85:7, 88:14, 89:22, 89:24 sources 52:13, 52:15, 58:24 span 92:11	speak 94:24, 97:20 specific 8:17, 14:19, 15:22, 31:3, 32:3, 37:19, 38:7, 88:18, 94:11, 101:18, 103:8 specifically 14:5, 14:9, 21:21, 26:8, 73:12, 74:16, 87:19, 88:6, 100:25, 101:4, 101:23, 101:25 specification 30:13, 64:5, 65:24 specifics 101:11 specified 12:22 spend 9:19 stage 30:20, 34:1 standard 17:14 standards 16:7, 16:11, 16:14, 16:20, 17:2, 17:6, 17:9 stands 71:24 start 45:24 started 40:18 starting 29:8, 31:22, 56:4, 64:12, 93:1 starts 21:17, 93:6 state 5:6, 6:3, 25:2, 25:16, 100:21	stated 10:19, 13:21, 15:24, 41:21, 43:12, 81:7 statement 58:8, 63:2, 63:14, 63:15, 95:16, 95:21, 96:7 statements 10:21, 10:22 states 1:1, 15:18, 20:17, 34:21, 40:5, 49:9, 65:8 stay 50:24 stenographic 104:1 stenographically 1:23, 104:10 stephen 2:13 steve 5:16, 7:18 stevenmcbride@car- michaelip 2:18 still 47:25, 48:21 stipulations 3:13 stop 82:24 storm 51:2, 86:20 street 2:6 strike 35:1, 58:10, 60:22, 64:20, 64:25, 71:11, 72:23, 76:3, 79:6, 83:24, 87:6, 91:1, 100:7 study 97:1
---	--	--	--

submitted 12:15, 15:25, 100:23 submitting 8:5 subsequently 57:22 substrate 21:7, 48:3 suggesting 34:3, 83:19 suite 2:7, 2:15 supplied 42:9, 42:14, 43:1 supply 73:19, 73:20, 73:22, 74:1, 74:4, 74:8 supplying 72:5 support 3:1 supporting 7:9, 8:7, 15:15 sure 16:16, 16:23, 17:13, 19:8, 32:12, 42:11, 50:20, 68:5, 77:2, 81:16, 82:5, 87:18, 90:14, 95:5, 97:8, 103:15 surprises 81:17 switched 36:3 switches 42:22, 46:2, 50:2, 50:12, 74:11, 74:20, 75:3, 75:11, 75:22, 76:1, 76:5, 80:1, 80:17, 81:23, 89:12, 89:14,	89:15, 89:23, 90:6, 90:8, 95:13, 95:18, 99:8, 99:13 switching 35:23, 36:5, 36:10, 36:16, 36:18 sworn 5:9, 5:18, 5:22, 104:6 symbol 45:25, 46:17, 51:13, 51:19, 52:6, 52:7, 59:4 symbology 53:24, 59:9 symbols 53:15, 59:19 system 88:15, 99:10 T table 68:9, 69:16, 70:3 take 32:12, 43:17, 43:20, 43:21, 44:1, 67:1, 86:3, 94:8, 94:12, 103:11 taken 104:9 takes 67:8 taking 5:2, 6:2 talk 33:4 talked 12:9, 80:23 talking 31:8, 92:8, 92:10 talks 73:18, 80:25 teaching 57:5	technical 95:2 technology 4:26, 70:16 teleconference 1:16, 5:4 tell 5:22, 26:9, 44:21, 46:5, 46:14, 93:1, 104:6 temperature 62:3, 62:9, 62:13, 63:10, 65:4, 65:13, 65:21, 66:1, 66:2, 66:3, 67:16 ten 32:13, 82:1 term 30:3, 30:14, 61:7, 64:11, 73:4 terminal 42:23, 88:15 terminals 39:17, 89:22 testified 5:10, 5:23, 82:20, 101:21 testify 5:9 testifying 7:1, 98:11, 98:20, 99:20 testimony 6:24, 13:11, 13:17, 13:24, 24:7, 79:4, 79:7, 103:4, 104:10 th 86:25, 87:15, 104:21 thank 5:19, 32:14, 33:2, 103:19,	103:21 thereafter 104:12 thereby 98:2 therefore 31:22 therein 104:9 thereof 5:3 thing 39:2, 72:8, 74:2 things 6:16, 6:18, 74:3, 78:18 think 7:24, 26:6, 40:18, 40:19, 67:23, 71:2, 80:20, 81:25, 82:20, 82:23, 86:12, 88:23, 89:9, 91:8, 95:1, 96:7, 97:3, 97:6, 99:24, 100:14 thinking 47:25 third 57:4, 82:7, 93:4, 93:6, 97:23 thought 11:21, 90:22, 95:4 three 30:8, 73:19 three-way 43:14, 43:16 through 7:7, 7:11, 14:13, 16:8, 16:15, 16:21, 17:3, 17:10, 24:19, 24:23, 25:4, 27:1,
--	--	--	---

27:2, 32:24, 35:9, 71:18, 86:21, 87:1, 92:12, 99:9 time 32:10, 86:4, 88:8, 94:23, 96:17, 97:6, 104:9 times 7:13, 82:1 tiny 41:21 today 6:2, 6:9, 6:24, 9:13, 11:5, 14:24, 51:2, 61:25, 64:23, 71:2, 73:11, 98:13, 98:21, 99:20, 100:10, 100:13, 103:6 today's 7:5, 37:14 together 79:3 took 84:12, 89:9 top 43:7 tornado 50:18 tornadoes 51:1 towards 73:18 trademark 1:1 train 90:22 transcribed 104:12 transcript 1:12, 79:2 trial 1:2 trouble 11:16	true 10:22, 10:23, 10:24 truly 52:1 truth 5:10, 5:23, 104:6, 104:7 try 12:18, 94:23 trying 81:14, 81:18, 83:7 tuesday 1:15, 5:2, 104:20 turned 36:22, 37:5, 48:16, 69:13, 69:18, 69:22, 70:1 twice 33:1 twisted 91:9 two 18:21, 20:4, 20:13, 20:25, 21:4, 21:5, 21:11, 22:2, 22:3, 25:10, 27:11, 27:14, 28:4, 28:7, 28:10, 28:18, 28:21, 29:6, 29:9, 33:19, 34:5, 34:8, 41:3, 41:7, 41:8, 41:14, 41:23, 49:2, 53:8, 55:25, 56:15, 56:22, 59:17, 68:14, 78:18 two-position 43:6 two-way 42:18, 42:20,	42:22, 42:25, 43:13, 43:16, 45:21, 46:1, 46:2, 46:18, 46:21 type 58:7, 63:17 types 12:7 typewriting 104:12 typo 32:24, 46:9 typographical 11:21 tysons 2:16 U uh-huh 22:6 unable 21:9, 23:5, 24:3, 24:11, 38:9 under 65:25 understand 7:1, 13:8, 16:23, 17:4, 17:6, 19:14, 19:23, 20:7, 20:16, 20:19, 22:22, 25:24, 33:14, 34:2, 38:16, 38:21, 46:1, 48:6, 50:14, 51:17, 51:23, 52:1, 53:9, 54:15, 55:10, 55:17, 56:8, 59:18, 80:5, 81:6, 81:18, 82:16, 89:10, 90:14, 98:10, 99:18 understanding 21:2, 26:14,	30:1, 30:12, 61:13, 79:4, 79:7, 79:11, 81:3, 82:6, 83:18, 91:8, 98:12, 98:21 understands 48:6 understood 68:5, 77:20 unit 64:25, 65:2, 65:22, 66:4, 66:12 united 1:1 unless 40:20, 43:24, 43:25 unpatentable 87:1 upload 86:4 uploaded 86:14 use 16:17, 23:11, 23:14, 36:23, 99:7, 99:12 user 58:9, 99:8 uses 47:13, 50:15 using 71:17 utilize 65:16 V v 68:11 value 66:17, 74:5 values 66:15 variables 66:15 varies 63:8
--	---	--	--

various 50:10 veracity 96:6, 96:14, 96:21, 101:5, 101:15 versa 83:4, 83:21 versus 66:8, 67:20 via 5:3, 104:20 vice 83:4, 83:20 video 1:16, 5:4 view 87:2 virginia 2:16 volt 45:19, 45:22, 52:25, 59:12, 85:1, 85:4 voltage" 61:7, 64:11, 73:4 voltages 22:23, 25:10, 27:14, 31:25, 57:9, 65:11, 65:18, 65:19, 66:1, 66:10, 66:19 volts 22:18, 22:20, 22:21, 26:3, 26:5, 34:10, 48:16, 48:19, 48:20, 48:22, 48:23, 69:1, 69:5, 69:8, 69:14, 69:15, 69:19, 69:23, 70:2 vs 1:7, 72:2 W wait 43:18, 60:25	waiting 95:6 want 26:8, 31:6, 42:11, 43:19, 50:23, 50:25, 80:14, 80:22, 81:6, 81:12, 81:16, 86:7, 95:5, 99:3, 99:22 wanted 6:16, 11:5, 11:7, 32:25, 95:3, 96:8 wants 9:5, 67:4, 67:5 way 23:20, 36:14, 58:9, 94:21, 104:15 ways 46:3, 46:21 we'll 15:15, 15:18, 44:2 we're 32:21, 44:2, 44:7, 51:4, 51:6, 67:11, 67:13, 93:8, 97:17, 103:17, 103:23 we've 32:9, 66:24, 97:5 weather 50:19 wednesday 104:22 westwood 2:14 whatever 67:4 whenever 97:6 whereupon 5:18, 8:24,	17:19, 54:5, 60:14, 63:23, 70:8, 72:13, 76:12, 86:5, 87:24 whether 21:10, 23:6, 23:16, 24:3, 24:11, 26:9, 30:1, 30:13, 33:11, 45:22, 62:11, 75:2, 75:10, 75:21, 75:25, 76:4, 78:21, 79:5, 79:8, 79:16, 81:22, 98:13, 98:22 whole 5:22, 39:2, 65:10, 94:9, 104:6 wide 62:23 willing 80:9 wire 33:11, 35:3, 35:10, 35:13, 56:8, 56:15, 56:19, 56:22, 58:8 wired 57:15, 57:21 wires 58:4 within 13:1, 15:5, 32:5, 34:11, 34:23, 35:15, 37:20, 56:25, 68:24, 69:11, 80:6, 94:7, 100:3, 103:8 within-entitled 104:8 witness 5:8, 5:18,	8:14, 15:9, 16:23, 18:18, 19:7, 19:14, 19:22, 20:7, 20:16, 21:15, 23:10, 23:19, 23:25, 24:8, 24:16, 26:14, 30:5, 31:5, 31:21, 32:7, 32:16, 32:19, 32:23, 33:14, 34:7, 34:19, 36:13, 40:17, 41:11, 49:8, 49:17, 49:25, 50:9, 50:21, 50:24, 54:7, 56:11, 56:18, 58:1, 61:13, 61:23, 62:6, 63:25, 65:7, 67:6, 67:19, 70:10, 72:15, 74:14, 74:24, 75:15, 76:14, 78:9, 78:16, 79:21, 80:5, 80:13, 81:6, 81:17, 83:7, 83:18, 88:1, 89:8, 89:21, 90:20, 91:8, 94:4, 94:15, 94:19, 94:21, 95:4, 95:21, 97:1, 98:7, 98:16, 99:1, 99:15, 100:3, 100:13, 100:20, 101:9, 101:18, 102:2, 103:4, 104:3, 104:10 wo 4:15 word 16:17, 18:5, 18:12, 19:24,
--	--	--	---

19:25, 23:11, 23:14, 27:15, 27:17, 28:11, 29:17, 29:22, 47:13, 51:23, 56:19, 67:24 words 10:3, 10:5, 11:11, 20:18, 38:8, 46:17, 53:5, 57:4 work 14:17, 15:7, 74:12 worked 12:5, 14:2, 14:6, 14:11, 14:15, 14:22, 15:1, 15:3 wouldn't 14:8, 58:10, 99:2, 99:22 write 10:2 written 10:12, 17:16, 19:15, 19:24, 21:3, 29:23, 30:22, 36:14, 68:20 wrong 103:13 Y yeah 8:23, 9:4, 11:9, 11:15, 11:18, 21:15, 23:25, 32:14, 32:17, 56:11, 60:25, 61:1, 64:17, 78:9, 89:1, 89:3, 94:6, 94:20, 95:2, 96:10, 97:1, 97:3, 98:16 years 14:4, 15:4,	15:5 yellow 48:8 yep 6:22, 86:19 yesterday 7:11, 7:14, 7:17, 8:1 yourselves 5:13 Z zip 6:7 zoom 6:20, 6:22 \$ \$440 8:18 . .2000 2:9 .9250 2:17 0 00 43:18 00009 13:4, 13:7 0179585 4:17 03 1:18, 5:3, 104:21 1 1 1:27, 97:12 10 12:13, 12:19, 12:20, 32:16, 32:17, 35:19, 36:1, 36:8, 44:1, 44:3, 50:22, 65:25,	66:7, 97:8, 103:11 10,932,341 13:5 100 2:7 1001 4:9, 54:3, 54:4, 54:5, 57:13, 58:15, 60:10 1003 4:10, 86:1, 86:5, 86:23, 87:4, 87:7, 87:13, 91:19, 92:22, 92:24, 93:10, 95:8, 95:12, 97:23, 99:5, 103:9 1014 4:11, 19:17, 76:10, 76:12, 76:14, 76:19, 76:21, 77:5, 81:1, 83:3, 83:9, 83:15, 84:1, 84:5, 84:13, 84:17, 84:20, 84:25, 85:3, 85:6, 85:9, 85:12, 85:16, 85:19 104 1:27 11 1:20, 43:18, 44:3, 56:8, 97:11, 97:13, 104:21 11,297,705 4:9, 4:10, 7:3 110 74:14, 82:6 112 17:13 11373 1:25, 104:25	12 22:20, 26:5, 34:9, 34:10, 45:18, 45:22, 48:16, 48:20, 48:22, 48:23, 52:25, 54:10, 56:3, 56:9, 57:10, 57:12, 57:14, 57:18, 59:12, 69:5, 69:18, 84:17, 84:20, 84:25, 85:1, 85:9 120 22:20, 26:5, 39:9, 48:4, 48:5, 70:2, 85:4 126 86:22, 86:24, 87:4 127 87:7, 87:12 13 68:10 138211 4:15 14 29:12, 29:14, 29:15, 29:17 15 29:19, 29:24, 30:2, 30:8, 30:17, 31:11, 34:3, 84:17, 84:20, 85:3, 85:12, 85:15 16 1:15, 5:2, 33:22, 33:23, 33:24, 34:2, 34:15, 34:19, 34:25, 35:2, 35:12, 104:21 162 17:12 164 15:19, 15:21
---	---	--	---

169 57:4 17 4:14, 104:22 176 33:1 18 35:16, 35:19, 35:22, 36:1, 36:8, 36:14, 37:6, 38:8, 38:20, 43:15 182 91:23, 91:25, 92:11, 92:21, 92:24, 93:10 183 92:13, 95:8, 95:11, 97:23, 99:5 184 92:12 186 10:19 19 84:17, 84:20, 85:6, 85:16 2 2 97:13 2.2 4:20 20 9:23, 12:13, 12:20, 12:22, 15:24, 32:16, 32:17, 87:1, 87:6, 97:11, 97:12, 97:13, 100:21 2003 4:17 2007 4:16, 87:21, 87:22, 87:24, 88:3, 88:9, 88:13, 88:16,	88:25, 89:6, 89:13, 89:16, 90:2, 90:7 2010 4:15 2021 86:25, 87:15, 92:1, 96:15, 96:22, 100:9, 101:7, 101:16 2022 13:4, 13:7 2024 1:15, 5:3, 104:21, 104:22 2036 4:19, 63:20, 63:23, 64:2, 64:7, 64:10, 64:16, 64:17, 64:21, 65:3, 67:19, 68:3, 68:7, 68:9, 68:17, 69:3, 69:6, 69:9, 69:13, 69:18, 69:22, 70:1 2045 4:21, 8:23, 8:24, 9:2, 9:8, 9:10, 9:15, 9:17, 10:11, 10:17, 11:25, 15:11, 16:8, 16:15, 75:20 2051 4:22, 60:12, 60:14, 60:19, 60:23, 61:3, 61:6, 61:11, 61:18, 61:20, 62:16, 62:22, 63:4, 63:7 2052 4:25, 70:6, 70:8, 70:12, 70:18, 70:23, 70:25, 71:4,	71:8, 71:13, 72:4 2053 4:27, 72:11, 72:13, 72:17, 72:22, 72:24, 73:3, 73:7, 73:9, 73:14, 73:17 21 16:8, 16:14, 16:21, 17:3, 17:10 215 74:15, 74:16, 76:10, 82:8 22 76:18, 76:21, 77:5, 77:8, 81:1, 83:2, 83:8, 83:14, 83:19, 83:23, 83:25, 84:4, 92:1, 96:15, 96:22, 100:8, 101:7, 101:16 22182 2:16 24 17:25, 18:3, 18:6, 18:7, 18:13, 18:15, 18:21, 18:24, 19:3, 19:10, 19:14, 19:17, 19:25, 20:2, 20:7, 20:11, 20:17, 20:19, 21:1, 21:2, 21:10, 21:18, 21:21, 21:25, 22:20, 26:5, 69:8, 69:22, 76:24 25 22:5, 22:11, 22:14, 22:24, 23:3, 23:6,	23:16, 24:4, 24:12, 24:19, 24:22, 25:4, 25:7, 25:11, 25:16, 25:21, 25:24, 26:10, 26:15, 26:23, 27:1, 27:6, 27:10, 27:16, 27:18 27 47:8, 47:9, 47:11, 47:13, 47:17, 47:20, 86:25, 87:15 270 2:15 28 27:19, 27:21, 27:22, 28:1, 28:3, 28:6, 28:9, 28:12 3 3.9 72:3 30 9:23, 28:14, 28:16, 28:17, 28:20, 28:23, 29:4, 29:8, 47:23, 48:1, 48:10, 55:22, 55:24 308 6:6 32 33:7, 33:9, 33:10, 33:15, 45:3, 45:6, 56:1 3203 2:6 34 16:8, 16:15, 16:21, 17:3, 17:10 341 13:8, 13:12,
--	--	---	---

13:15, 13:18, 16:4 35 17:12	45:25, 46:7, 46:16, 46:19, 89:14 62 40:10, 40:14, 41:1, 41:13, 41:18, 41:23, 42:4, 42:6, 42:17, 42:19, 43:4 63 4:19 65 11:9, 11:11, 88:15, 89:22 650.833 2:9 66 11:9, 89:14 67 88:15, 89:23 68 39:5, 39:7, 39:12, 41:14, 41:23 69 40:15, 41:2, 41:4, 41:15, 41:19, 41:24, 42:5, 42:7, 43:7, 43:8, 44:13	58:12, 58:18, 58:23, 59:2, 59:6, 59:11, 59:15, 59:22, 60:2, 60:5, 86:2, 100:17, 100:25, 101:22, 101:24 72 4:27, 39:14, 39:15, 39:17, 40:2, 40:6, 40:7, 42:23, 42:24 74 42:18, 42:20, 42:22, 42:25 76 4:11 78 42:10, 42:15, 42:17, 42:19, 42:23, 43:2, 53:2, 53:5, 60:2 79 61:8	88 90:4, 95:15 9 9 52:10, 52:18 92 57:15, 57:18, 70:21, 73:1 94304 2:8
4 43 1:20, 104:21 5 5.9 68:18 51 89:9 52 89:9 520599 1:26 53 89:9 54 4:9 56 48:24, 49:1, 49:2, 49:4, 49:5, 49:8, 49:9, 49:11 57 46:8, 46:10, 46:18, 47:1 58 39:18, 39:20, 39:23, 40:1, 40:4, 40:13, 40:19, 40:24, 40:25, 41:11, 41:17, 41:20 59 53:4 6 6 1:18, 5:3, 68:22, 104:21 6.1 68:18 60 4:22, 45:22,	7 70 4:25, 88:20 703.646 2:17 705 13:4, 15:1, 15:12, 15:23, 16:4, 38:4, 54:3, 54:12, 54:16, 55:11, 55:18, 55:21, 55:25, 56:9, 57:5, 57:10, 57:14, 57:20,	8 8 40:9, 42:5 80 88:21, 90:4, 95:14 81 64:12, 88:21 82 65:8, 88:22 83 88:22 84 88:22 86 4:10, 90:4, 95:14 8607 2:14 87 4:16, 15:17	