

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

THERMALTAKE TECHNOLOGY CO., LTD.,
and THERMALTAKE, INC. (a.k.a.
THERMALTAKE USA,

Petitioners,

v.

LIAN LI INDUSTRIAL CO., LTD.,
and CHEN CIEN-HAO

Patent Owners.

IPR2024-01230

U.S. Patent No. 10,690,336

REMOTE DEPOSITION OF

ANDREW WOLFE, Ph.D.,
Monday, November 10, 2022
Volume 3 (Pages 240-360)

Stenographically Reported By: Lynne Ledanois
Certified and Licensed Court Reporter, No. 6811
Job No. 7727138

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

THERMALTAKE TECHNOLOGY CO., LTD.,
and THERMALTAKE, INC. (a.k.a.
THERMALTAKE USA,

Petitioners,

v.

LIAN LI INDUSTRIAL CO., LTD.,
and CHEN CIEN-HAO

Patent Owners.

IPR2024-01230
U.S. Patent No. 10,690,336

Videotaped deposition of ANDREW WOLFE, Ph.D., taken
in Santa Clara, California, commencing at 1:06 p.m.,
on Monday, November 10, 2022 before Lynne Ledanois,
Certified Shorthand Reporter No. 6811

A P P E A R A N C E S:

For the Petitioners:

PILLSBURY WINTHROP SHAW PITTMAN, LLP

BY: BROCK WEBER, ESQ.

4 Embarcadero Center

Floor 22

San Francisco, California 94111

415.983.1190

bweber@pillsburylaw.com

FOR LIAN LI INDUSTRIAL CO., LTD., and
CHEN, CHIEN-HAO, Patent Owners:

GREENBERG TRAURIG, LLP

BY: KYLE D. CHEN, ESQ.

1900 University Avenue

5th Floor

East Palo Alto, California 94303

650.289.7887

kchen@gtlaw.com

I N D E X O F E X A M I N A T I O N

Examination by:

Page

Mr. Chen

///

///

Monday, November 10, 2025

1:06 p.m.

ANDREW WOLFE, Ph.D.,

having been duly sworn, testified as follows:

EXAMINATION

BY MR. CHEN:

Q Hi, Dr. Wolfe. How are you doing?

A Good.

Q So -- so I guess you have done depositions many times. So I'll be brief on the introductory questions.

Is there anything that would prevent you from answering questions truthfully and fully today?

A No.

Q Are you on any sort of medication that may affect your testimony?

A I don't believe so.

Q Can you please identify your location more precisely?

A I'm at my business office in Santa Clara.

Q Okay. Do you have Exhibit 1001, 1031 and 1044 with you?

A Yes.

Q Can you please show them on the screen

1 just very briefly.

2 Okay. Documents. Good. Thank you.

3 Do you have any other documents with you?

4 A Not within arm's reach, no.

5 Q Do you have any other documents in the
6 room other than those three exhibits?

7 A There are some things in drawers.

8 Q Okay. So normally anything in the room
9 needs to be produced.

10 Can you tell me what other documents you
11 have in the room?

12 A Well, I have to go through them.

13 There's nothing that I have looked at in
14 the last couple of months. Just some things that
15 are in storage.

16 Q Oh, okay. Do you have access to any room
17 that has no other documents?

18 A No.

19 Q Then that's fine, let's just proceed and
20 obviously, you know, let's just use the documents in
21 front of you.

22 A Okay.

23 Q So, Dr. Wolfe, do you have Exhibit 1044?

24 A Yes.

25 Q What is Exhibit 1044?

1 A Supplemental reply declaration of Dr. Andrew
2 Wolfe in support of petitioner's opposition to patent
3 owner's revised contingent motion to amend.

4 Q Thank you.

5 What did you do to prepare for today's
6 deposition?

7 A Specifically for the deposition, after
8 everything was -- after everything was written?

9 Q Yes. I guess after -- after October 29th
10 when everything was filed.

11 A I think all I did was read through
12 Exhibit 1044 once.

13 Q Oh, okay. Did you meet with anybody for
14 the deposition?

15 A No.

16 Q Not necessarily in person, but did you
17 meet with anyone, say, over Zoom or other types of
18 conferencing means?

19 A There were not any substantive discussions.
20 I don't remember if there was any phone
21 calls related to scheduling. There might have been,
22 but nothing that would normally be considered depo
23 prep.

24 Q I see.

25 So with respect to Exhibit 1044, which is

1 your supplemental reply declaration, do you have
2 anything in Exhibit 1044 that you would like to
3 correct?

4 A Not that I am aware of right now.

5 Q Do you stand by everything you stated in
6 the declaration, which is Exhibit 1044?

7 A Yes.

8 Q Dr. Wolfe, can you please turn to Page 6
9 of 118 of Exhibit 1044.

10 A To be clear, you're talking about the
11 exhibit number pages in bold at the bottom?

12 Q Yes.

13 A Okay.

14 Q Actually, on that, I do have a question
15 for clarity reasons. Which page do you prefer?

16 A It doesn't matter as long as you tell me.

17 Q Okay. In your declaration, sometimes you
18 refer to page numbers.

19 Which way did you -- like did you use the
20 PDF numbers or did you use the page numbers?

21 A I used the page numbers at the center bottom
22 of the page. So I prepared everything except for
23 Page 1 and gave it to counsel. Then they added
24 Page 1.

25 Q Oh, okay. So you used the center portion

1 of the page, you did not use the exhibit page
2 numbers; is that correct?

3 A Correct. Those were added after I prepared
4 the document.

5 Q Let me be clear.

6 I meant like, say, for example, when you
7 call out an exhibit in your declaration, which is
8 1044, did you use the page numbers of the exhibits
9 that you cited that were PDF page numbers?

10 A I don't recall referring to pages in
11 Exhibit 1044. I probably referred to pages in earlier
12 exhibits and then we would have to look at those for
13 me to remember how I did it.

14 Q Oh, okay. No problem.

15 I guess if we need to use it, if it shows
16 up on the screen, you can tell me which way it is
17 and then we can go and look for the page numbers
18 you're referring to.

19 So can you please turn to Paragraph 59?

20 A Fifty-nine?

21 Q Fifty-nine, yes.

22 Okay. Can you please read Paragraph 59
23 into the record?

24 A "The only substantive difference between
25 claims 6 and 7," and I'm referring to the

1 newly-amended claims there, "is that claim 7 includes
2 the additional limitation 'a first connector
3 comprising a first flat surface' in element A(v) and
4 the additional limitation 'a second connector
5 comprising a second flat surface' in element A(vi)."

6 Q Dr. Wolfe, is everything you stated in
7 Paragraph 59 of your supplemental reply declaration,
8 which is Exhibit 1044, correct?

9 A I believe so. I believe that's the
10 substantive difference between the claims.

11 Q So please go to Paragraph 24 of your
12 supplemental reply declaration, which is
13 Exhibit 1044.

14 A Okay.

15 Q Can you please read that paragraph into
16 the record?

17 A "Additionally, Dr. Tuckerman has opined that
18 the function of the illumination elements in the '336
19 patent is aesthetic," citing Exhibit 2002 at
20 Paragraphs 24, 25 and 40, and Exhibit 2006 at
21 Paragraphs 25 and 26.

22 "If this is the case, it is my
23 understanding that aesthetic claim elements are not
24 sufficient to distinguish prior art. See, for
25 example, MPEP at 2144.04 I - Aesthetic Design

1 Changes, 'matters relating to ornamentation only
2 which have no mechanical function cannot be relied
3 upon to patentably distinguish the claimed invention
4 from the prior art'.

5 "Nonetheless, these illumination elements
6 are obvious in light of the prior art described in
7 Exhibit 1004."

8 Q Do you have anything you would like to
9 correct with respect to Paragraph 24 of your
10 declaration, which is Exhibit 1044?

11 A I'm not aware of anything at this time.

12 Q Can you please read Paragraph 25 into the
13 record of your reply declaration, which is
14 Exhibit 1044?

15 A Okay.

16 Paragraph 25: "New proposed claim 7
17 includes the limitations 'a first connector
18 comprising a first flat surface' and 'a second
19 connector comprising a second flat surface'.

20 "Dr. Tuckerman does not clearly state the
21 plain meaning of these limitations, but based on his
22 testimony, he appears to believe that the claimed
23 flat surface need not be on the actual conducting
24 elements of the connector but can be on any surface
25 of the connector housing. See, for example,

1 Exhibit 2052, Pages 29 through 30 illustrating
2 opinions regarding new proposed claim
3 elements 7(A)(v) and 7(A)(vi).

4 "Since Dr. Tuckerman does not attribute
5 any claimed functionality to the 'comprising a first
6 flat surface/comprising a second flat surface'
7 language and, in fact, contends that it can be any
8 surface of the connector, it does not appear to be
9 more than an aesthetic limitation.

10 "Once again, it is my understanding that
11 aesthetic claim elements are not sufficient to
12 distinguish prior art. See, for example, MPEP at
13 2144.04 I - Aesthetic Design Changes, 'matters
14 relating to ornamentation only which have no
15 mechanical function cannot be relied upon to
16 patentably distinguish the claimed invention from
17 the prior art'.

18 "As such, new claim 7 appears to have the
19 same scope as new claim 6."

20 Q Do you have anything to correct in
21 Paragraph 25 of your supplemental reply declaration,
22 which is Exhibit 1044?

23 A I'm not aware of anything at the moment.

24 Q Did you read Exhibit 2052, which is
25 Dr. Tuckerman's declaration?

1 A Prior to preparing this declaration, I did.

2 Q So on Page 14 of your declaration, in the
3 second line you refer to Pages 29 to 30 in
4 Exhibit 2052, which is Dr. Tuckerman's declaration.

5 Do you see that?

6 A Yes.

7 Q Are those page numbers the PDF page
8 numbers or the page numbers on Dr. Tuckerman's pages
9 at the center, like lower center of each page?

10 A I cannot be certain without looking back at
11 the exhibit again, but I think they are probably the
12 exhibit page numbers.

13 Q Let's actually take a look. Let me see.

14 Actually, as I'm looking for it, let me
15 ask you this: Dr. Wolfe, you stated that
16 Dr. Tuckerman contends that it can be any surface of
17 the connector -- I'm sorry, the flat surface can be
18 any surface of the connector.

19 Do you see that?

20 MR. WEBER: Objection, misstates the
21 document.

22 THE WITNESS: What I said was that he
23 didn't clearly state the plain meaning of the
24 limitation.

25 But based on his testimony both here and

1 in his deposition, that it was my understanding
2 that that was his position.

3 BY MR. CHEN:

4 Q Where is the -- do you have a deposition
5 cite? Why -- okay. I'm confused.

6 So on Page 14 of your supplemental
7 declaration, you stated that Exhibit 2052, Pages 29
8 to 30, you cited that; right?

9 A I did.

10 Q And then in the next sentence you stated
11 that since Dr. Tuckerman does not attribute any
12 claimed functionality to the comprising a first flat
13 surface, comprising a second flat surface language
14 and, in fact, contends that it can be any surface of
15 the connector.

16 Do you see that?

17 MR. WEBER: Objection, misstates the
18 document.

19 Kyle, it's probably just you're not
20 reading the full thing, connector housing.

21 MR. CHEN: I'm trying to figure out the
22 sentence -- okay. Let me actually rephrase.
23 Strike that.

24 Q So I'm talking about a particular
25 statement in a paragraph and I'm trying to figure

1 out where that came from.

2 Dr. Wolfe, Page 14 of your supplemental --
3 sorry, strike that.

4 Dr. Wolfe, on Page 14 -- oh, strike that.
5 Actually, let me -- Dr. Wolfe?

6 A Yes.

7 Q In Paragraph 25 of your supplemental reply
8 declaration, which is Exhibit 1044, there is a
9 segment that states, "Dr. Tuckerman does not
10 attribute any claim functionality to the 'comprising
11 of first flat surface/comprising a second flat
12 surface' language and, in fact, contends that it can
13 be any surface of the connector."

14 Do you see that segment?

15 A I do.

16 Q Was that segment from Exhibit 2052,
17 Pages 29 through 30 when you wrote that?

18 MR. WEBER: Objection to form.

19 THE WITNESS: No, it's a summary sentence
20 of what I had mentioned previously, explaining
21 or reiterating my understanding of his
22 testimony and of the claim language itself.

23 The claim language itself simply says a
24 first connector comprising a first flat
25 surface.

1 And Dr. Tuckerman's testimony that I cited
2 and his other testimony were both consistent
3 with the idea that it did not need to actually
4 be the conducting elements to the connector, it
5 could appear elsewhere.

6 And he didn't restrict in his testimony in
7 any way what surface had to be flat.

8 BY MR. CHEN:

9 Q I see.

10 So you're not relying on Paragraphs 29
11 through 30 of Exhibit 2052 when making that
12 statement; correct?

13 MR. WEBER: Objection to form.

14 THE WITNESS: I never relied on those
15 paragraphs.

16 I relied on the two pages as -- and I
17 cited those as one of the pieces of evidence
18 that I relied on in forming my opinion about
19 Dr. Tuckerman's testimony regarding claim 7.

20 BY MR. CHEN:

21 Q So were those pages cited in Exhibit 2052
22 important in forming your opinion in Paragraph 25 in
23 Exhibit 1044, which is your supplemental reply
24 declaration?

25 A They are one of the things I relied on.

1 Q Did you cite any other testimony by
2 Dr. Tuckerman in Paragraph 25 of your supplemental
3 reply declaration, which is Exhibit 1044?

4 A Not in Paragraph 25, although I did note
5 that there were issues that he did not testify on.

6 Q So given that's the only citation you have
7 in that paragraph with respect to Dr. Tuckerman's
8 testimony, is the citation important in forming your
9 opinion in Paragraph 25?

10 MR. WEBER: Objection to form.

11 THE WITNESS: It's one of the things I
12 relied on.

13 BY MR. CHEN:

14 Q What are other things that you relied on
15 to make that sentence that Dr. Tuckerman contends
16 that the flat surface can be any surface of the
17 connector?

18 A I relied on the lack of testimony about the
19 subject in his testimony as a whole, that he didn't
20 suggest in any way that the claim referred to a
21 specific surface or that the location of the flat
22 surface was limited and he didn't ascribe any
23 functionality to the flat surface that relates to the
24 rest of the claim.

25 Q I guess I can try to share this.

1 So, Dr. Wolfe, can you see Page 28 at the
2 center bottom of the page of Exhibit 2052?

3 A I referred to this as Page 30 in my
4 document, and it's clear because I referred to claim
5 elements 7(A)(v) and 7(A)(vi) and those appear on
6 Pages 29 and 30 of the exhibit.

7 Q Okay. Did you rely on these two pages to
8 make the assertion that Dr. Tuckerman contends that
9 the flat surface can be on any surface of the
10 connector?

11 A Yes, it was one of the things that I relied
12 on.

13 Q Can you please elaborate how?
14 I can show you the two pages, you know,
15 however you want, you just tell me.

16 A No, I saw them.

17 Dr. Tuckerman testified that he can
18 identify the claimed flat surface as what appears to
19 be at most a nonfunctional surface.

20 He didn't attribute any functionality to
21 it. He didn't relate it to any other claim element.
22 He didn't describe any criteria that one would apply
23 other than the fact that there is a flat surface
24 somewhere on the connector.

25 So since he applied it very broadly, I

1 have assumed that is his opinion as to how it should
2 be applied.

3 He is an experienced expert and if he
4 thought that there were further limitations on how
5 that claim needed to be applied, I would have
6 expected him to state them.

7 Q So is it your position sitting here today
8 that Dr. Tuckerman contends that the flat surface
9 can be on any surface of the connector by lack of
10 certain statements that you just mentioned in his
11 declaration?

12 A No, as of right now, that's my understanding
13 from the totality of his testimony in his declaration
14 and his deposition.

15 Q Did you cite any deposition transcript of
16 Dr. Tuckerman in Paragraph 25 of your declaration,
17 1044?

18 A Not in Paragraph 25.

19 But again, this is claim language that was
20 written by the patent owner. If it needs to mean
21 something less than just comprising a first flat
22 surface, it's the patent owner's responsibility to
23 be clear about that.

24 Q Dr. Wolfe, I'm asking you about
25 Dr. Tuckerman's contention.

1 I'm asking you what your basis is that
2 Dr. Tuckerman contends that the flat surface can be
3 on any surface of the connector?

4 MR. WEBER: Objection to form.

5 THE WITNESS: My actual testimony is
6 that's what he appears to believe.

7 But he had an opportunity to perform an
8 analysis for purposes here of written
9 description support. And he applied it in the
10 broadest possible manner.

11 And given that he had the opportunity to
12 explain if those words are somehow narrower
13 than any surface on the connector and he had
14 that opportunity again in this deposition and
15 he has not done that, I think it's a reasonable
16 assumption that he is contending that it need
17 not be.

18 BY MR. CHEN:

19 Q So, Dr. Wolfe, is it your position that
20 whatever Dr. Tuckerman has not stated in his
21 declaration or testimony would be true just because
22 he did not say it?

23 A No. I'm saying --

24 Q That's what you just said.

25 MR. WEBER: Objection to form.

1 And please let the witness answer the
2 question.

3 THE WITNESS: I don't think there was
4 another question.

5 But I think we have to -- I have to
6 attempt to understand Dr. Tuckerman's testimony
7 in order to respond to it.

8 He has treated this claim limitation as
9 being very broad and I have responded to it as
10 such, without making any assumptions about
11 other things that he didn't testify to.

12 BY MR. CHEN:

13 Q Did he testify to this statement in your
14 Paragraph 25 that he contends that the flat surface
15 can be on any surface of the connector?

16 A I don't recall. I don't have his deposition
17 testimony in front of me. But he certainly applied it
18 that way in Exhibit 2052.

19 Q Where did he contend that the flat surface
20 can be on any surface of the executor?

21 MR. WEBER: Objection to form, asked and
22 answered.

23 THE WITNESS: I don't have his deposition
24 testimony in front of me, but as I said --

25 MR. WEBER:

1 MR. CHEN: Exhibit 520 --

2 THE WITNESS: Let me answer the question
3 or I'm not going to be able to do this.

4 BY MR. CHEN:

5 Q Okay. I apologize. Please proceed.

6 A I don't have his deposition testimony in
7 front of me.

8 But in Exhibit 2052, he applied it
9 consistently with the broad meaning that it could
10 comprise any surface of the connector.

11 Q Where did Dr. Tuckerman contend that
12 the flat surface can be on any surface of the
13 connector?

14 MR. WEBER: Objection to form, asked and
15 answered.

16 THE WITNESS: Again, I don't recall his
17 deposition testimony offhand, but that is my
18 understanding of the position that he took in
19 Exhibit 2052, although he did not use those
20 words.

21 BY MR. CHEN:

22 Q How did you acquire that understanding
23 without seeing those words in Exhibit 2052?

24 MR. WEBER: Objection to form.

25 THE WITNESS: Because if Dr. Tuckerman had

1 contended that it was any narrower than that,
2 then he would have been obligated to show that
3 it was present in the specification under the
4 narrower construction and he made no attempt to
5 do that.

6 BY MR. CHEN:

7 Q Where did you get that it's
8 Dr. Tuckerman's obligation to do so --

9 MR. CHEN: Brock, please don't nod or
10 shake your head trying to coach the witness.
11 Thank you.

12 MR. WEBER: I don't know what you're
13 talking about, but I'm not trying to do
14 anything.

15 I'm also doing an email, but there wasn't
16 time to do anything to Dr. Wolfe. So please go
17 ahead, Kyle.

18 MR. CHEN: I observed that you were
19 nodding when Dr. Wolfe was testifying. If that
20 was unintentional, I apologize, but that's my
21 observation.

22 MR. WEBER: Okay. I wasn't intending to
23 be in reference to that. I'm also an active
24 listener, but just go ahead, Kyle. This is --

25 MR. CHEN: Okay. Because we're remote,

1 sometimes I understand that things can be
2 misunderstood. That's fine.

3 But, you know, just please -- please not
4 make movements if you can.

5 MR. WEBER: I'm not going to abide by
6 that. I'm a human and when you're talking to
7 me, if you're making sense, and sometimes you
8 do, I'll shake my head. I was not doing it in
9 reference to Dr. Wolfe's testimony. Please
10 proceed, sir.

11 MR. CHEN: Okay. So as long as you're not
12 gesturing to Dr. Wolfe, that's fine, but it can
13 be misunderstood.

14 I just wanted to mention that because
15 we're on video. It is difficult to tell.

16 MR. WEBER: You got it. Understood.

17 MR. CHEN: Thank you.

18 Q Dr. Wolfe, where did Dr. Tuckerman contend
19 that the flat surface can be on any surface of the
20 connector --

21 MR. WEBER: Objection --

22 BY MR. CHEN:

23 Q -- in his declaration, which is
24 Exhibit 2052?

25 MR. CHEN: Brock, please let me finish my

1 question before making an objection.

2 MR. WEBER: My bad. You speak very
3 slowly, Kyle, so I didn't mean to.

4 Objection to form, asked and answered.

5 THE WITNESS: So, again, on Pages 29 and
6 30 of Exhibit 2052, Dr. Tuckerman puts forth
7 his justification that the first flat surface
8 and second flat surface limitations are present
9 in the specification of the '336 patent.

10 He does not narrow his interpretation of
11 those words in any way.

12 He does not provide any guidance other
13 than the plain meanings that they are part of
14 the connector and he points to what is at most
15 a nonfunctional part of the connector that is
16 unrelated to the rest of the claim, suggesting
17 that any flat surface is acceptable, and that's
18 what I relied on.

19 BY MR. CHEN:

20 Q Dr. Wolfe, do you understand that you're
21 testifying under oath?

22 A I do. We've covered that.

23 Q Dr. Wolfe, do you understand that you're
24 testifying under penalty of perjury?

25 A I do.

1 Q Dr. Wolfe, do you understand that your
2 testimony is your sworn representation of the facts
3 and your opinions to the board?

4 A I'm not sure I understand your question. It
5 sounds certainly very, very legal.

6 I am -- my understanding is that I am here
7 to answer every question truthfully and completely
8 to the best of my ability. And that's what I'm
9 doing and what I intend to do.

10 Q Can you please turn to PDF Page 118 of
11 your declaration, which is Exhibit 1044.

12 A Yes.

13 Q Can you please read the text that you
14 signed on PDF Page 118 of Exhibit 1044 into the
15 record?

16 A "I hereby declare under penalty of perjury
17 under the laws of the United States of America that
18 the foregoing is true and correct, that all statements
19 made of my own knowledge are true, and that all
20 statements made on information and belief are believed
21 to be true. I understand that willful false
22 statements are punishable by fine or imprisonment or
23 both pursuant to 18 U.S.C. Section 1004."

24 Q Dr. Wolfe, do you understand this
25 statement that you signed on PDF Page 118 of

1 Exhibit 1044?

2 A I am not an attorney, but I believe I
3 understand it to the degree any informed citizen would
4 understand it.

5 Q What is your understanding of this
6 paragraph on Page 118 PDF of your declaration, which
7 is Exhibit 1044?

8 A My understanding is that I am obligating
9 myself to present true and correct statements to the
10 best of my knowledge and true and correct opinions to
11 the best of my knowledge in this declaration and I've
12 done so.

13 Q Let's go back to Paragraph 25 of your
14 declaration, which is Exhibit 1044.

15 In that paragraph you stated, "Since
16 Dr. Tuckerman does not attribute any claimed
17 functionality to the 'comprising a first flat
18 surface/comprising a second flat surface' language
19 and, in fact, contends that it can be any surface of
20 the connector, it does not appear to be more than an
21 aesthetic limitation."

22 Did I read that correctly?

23 A I believe so.

24 Q What is your factual basis to make that
25 statement to the board?

1 A My factual basis is the way that he applies
2 that claim language throughout his declaration in
3 Exhibit 2052.

4 Q Where did he actually make that
5 contention?

6 MR. WEBER: Objection, form, asked and
7 answered.

8 THE WITNESS: Through the way he applies
9 that claim language.

10 I never said that he used those words. I
11 said that that is his contention and I
12 explained very clearly prior to that that
13 that's what he appears to believe based on his
14 testimony.

15 BY MR. CHEN:

16 Q Did you cite any testimony to support your
17 statement that he, in fact, contends that it can be
18 any surface of the connector?

19 A Yes.

20 Q Where did you cite such testimony?

21 A On Pages 29 and 30 of Exhibit 2052.

22 Q Did Dr. Tuckerman actually make that
23 contention on the pages that you just cited that the
24 flat surface can be on any surface of the connector?

25 MR. WEBER: Objection to form.

1 THE WITNESS: He did not use the words,
2 but he applied the limitation in that manner.

3 BY MR. CHEN:

4 Q Is it fair to say that's your
5 interpretation of his contention?

6 A I think if you read Paragraph 25 as a whole,
7 it's clear that that's what I say.

8 Q So it's just your opinion, not fact;
9 correct?

10 MR. WEBER: Objection to form.

11 THE WITNESS: His testimony is fact.

12 It's my opinion that the reasonable
13 conclusion from his testimony is that he's
14 applying the limitation of first flat connector
15 and a second -- I'm sorry, a first flat surface
16 and a second flat surface in such a way that it
17 can be any surface of the connector.

18 BY MR. CHEN:

19 Q So you admit that it's your opinion, not a
20 fact; correct?

21 MR. WEBER: Objection to form.

22 THE WITNESS: I don't know what you're
23 trying to get at. I think the paragraph is
24 clear as it stands that it is my conclusion
25 from reading his testimony.

1 BY MR. CHEN:

2 Q What I'm getting at is simple. I'm trying
3 to find out what is your factual basis for making
4 that statement that, in fact, he contends that any
5 surface on the connector would be able to satisfy
6 the limitation of the flat surface and recite it.

7 So let me lay out some foundation.

8 Dr. Wolfe, how many cases have you been on
9 giving testimony?

10 A I don't know.

11 Q Would you say you've been on more than ten
12 cases giving testimony?

13 A Yes.

14 Q Do you think that you have been on more
15 than 50 cases giving testimony?

16 A Yes.

17 Q Have you been on more than 100 matters
18 giving testimony?

19 A Yes.

20 Q Have you been on more than 200 matters
21 giving testimony?

22 A I don't know.

23 Q Would it be fair to say that you've been
24 on between 100 and 200 matters giving testimony?

25 A I don't know. It could be more.

1 Q Okay. Given that you have been on more
2 than 100 cases and matters giving testimony, do you
3 understand the difference between fact and opinion?

4 MR. WEBER: Objection --

5 THE WITNESS: I do.

6 BY MR. CHEN:

7 Q So let me ask it again.

8 What is the fact that you relied on in
9 making the statement that Dr. Tuckerman contends
10 that any surface can be the flat surface on the
11 connector in Paragraph 25 of your declaration, which
12 is Exhibit 1044?

13 MR. WEBER: Objection to form, asked and
14 answered.

15 THE WITNESS: When given every
16 opportunity to explain the scope of the claim
17 limitations a first flat surface and second
18 flat surface in his declaration, he stated the
19 plain language there, which refers to any flat
20 surface on a connector, and he applied it in
21 that manner.

22 And I reached the conclusion that given
23 those facts, that's the position he has taken
24 in that declaration, or at least it's the
25 position he has conveyed in that declaration.

1 BY MR. CHEN:

2 Q Dr. Wolfe, can you cite to any fact that
3 Dr. Tuckerman actually made such a contention?

4 MR. WEBER: Objection to form, asked and
5 answered.

6 THE WITNESS: I don't have a different
7 answer. I think I've answered that question at
8 least six times.

9 And I think I've exhaustively explained
10 what I was intending to convey in Paragraph 25.
11 I really just don't have anything to add to
12 that.

13 BY MR. CHEN:

14 Q Is it your testimony today, Dr. Wolfe,
15 that the lack of fact is the fact that you're
16 relying on to state that Dr. Tuckerman indeed made
17 the contention you stated in Paragraph 25 of your
18 declaration, which is Exhibit 1044?

19 MR. WEBER: Objection to form.

20 THE WITNESS: That is not my testimony.

21 BY MR. CHEN:

22 Q Well, then what is the fact that you rely
23 on to make the statement that Dr. Tuckerman contends
24 that the flat surface can be any surface of the
25 connector in Paragraph 25 of your declaration, which

1 is Exhibit 1044?

2 MR. WEBER: Objection to form, asked and
3 answered.

4 THE WITNESS: I've already answered that
5 to the best of my ability.

6 BY MR. CHEN:

7 Q Is it your answer the lack of fact that
8 you can identify?

9 A That's never been my testimony.

10 Q What is your testimony then?

11 MR. WEBER: Objection to form, asked and
12 answered.

13 THE WITNESS: I've given you my testimony.
14 I've given you my testimony more than once.

15 BY MR. CHEN:

16 Q Let's go to Paragraph 70 of your
17 supplemental reply declaration.

18 A Seventy?

19 Q Seventy, yes.

20 Are you there?

21 A I am.

22 Q Can you please read Paragraph 70 into the
23 record?

24 A "Dr. Tuckerman admits that there is no
25 discussion in the text of the specification regarding

1 the shape of the connectors. Tuckerman deposition
2 Page 191, Lines 4 through 11. Dr. Tuckerman admitted
3 that he could not tell from the photographs he
4 provided of Lian Li products in Exhibit 2006, Page 105
5 whether they practiced this claim limitation regarding
6 a flat connector. Tuckerman deposition Page 194,
7 Line 18 through 196, Line 17.

8 "But he stated he did not see anything
9 that looked flat. If Dr. Tuckerman, an expert,
10 cannot identify a flat surface from his own
11 photograph, a POSITA could never clearly determine
12 that the drawings in the '336 patent disclose a flat
13 connector surface."

14 Q What are the factual bases for you to
15 provide the testimony in Paragraph 70 in
16 Exhibit 1044, which is your supplemental reply
17 declaration?

18 A The factual basis for the first sentence is
19 Dr. Tuckerman's testimony. The factual basis for the
20 second sentence is Dr. Tuckerman's testimony.

21 And then the factual basis for the opinion
22 and the remaining portion of the sentence is my
23 observation of the figures in the '336 which to me,
24 from the perspective of a person of ordinary skill,
25 appear not to show a flat surface where

1 Dr. Tuckerman has identified one but instead an
2 opening, which is then corroborated by the Lian Li
3 product that Dr. Tuckerman provided photographs of
4 in Exhibit 2006, Page 105, which I had the
5 opportunity to inspect and then to get additional
6 samples of and photograph myself.

7 Q Dr. Wolfe, did you make any false
8 testimony in Paragraph 70 of Exhibit 1044, which is
9 your supplemental reply declaration?

10 A I'm sorry, was the question do I have false
11 testimony in there?

12 Q Yes.

13 A Not that I am aware of at this time.

14 Q Dr. Wolfe, did you testify that the first
15 sentence is based on Dr. Tuckerman's deposition
16 transcript in Paragraph 70 of your declaration,
17 which is Exhibit 1044?

18 A Yes.

19 Q Your citations to Dr. Tuckerman depo 191,
20 is that the page number?

21 A Yes, of the copy that I had.

22 Q Dr. Wolfe, did you write Paragraph 70 of
23 Exhibit 1044, which is your supplemental reply
24 declaration?

25 A Yes, I wrote all the paragraphs.

1 Q Did counsel write any of the paragraphs in
2 Exhibit 1044?

3 A No, counsel didn't write anything except for
4 the cover page.

5 Q Dr. Wolfe, is it your testimony today that
6 you wrote every single word in Exhibit 1044 without
7 assistance from counsel?

8 A I want to be really careful in answering
9 your question. I had conversations with counsel about
10 the testimony and about the documents before I started
11 writing.

12 But to the best of my recollection, from
13 the time that I started typing the declaration until
14 I provided a copy to counsel, I didn't have further
15 communications with them.

16 MR. WEBER: If that's the question he's
17 trying to get into, I instruct the witness not
18 to reveal the contents of any attorney-client
19 communication that you may have had, Dr. Wolfe.
20 Thank you.

21 BY MR. CHEN:

22 Q Is it your testimony today, Dr. Wolfe,
23 that other than the first page, which is a cover
24 page of Exhibit 1044, you typed every single word in
25 the declaration, which is Exhibit 1044?

1 A I prepared the entire declaration. In some
2 cases I copied and pasted from other documents that
3 are in the record for this case.

4 But I selected every word and I prepared
5 every paragraph.

6 Q What other documents did you copy and
7 paste from?

8 MR. WEBER: Objection, form.

9 THE WITNESS: I don't recall them all.
10 They are all in the record.

11 For example, I copied the text of new
12 claim 6 and 7 from patent owner's brief. I
13 copied unchanged discussions of claim elements
14 from Exhibit 1031 to Exhibit 1044. Those are
15 some of the kinds of things that I did.

16 I copied photographs from other documents.
17 I think they all have citations. And I
18 prepared some new photographs and I took those
19 new photographs myself.

20 I think there's one photograph of an LED
21 that I did not take myself.

22 BY MR. CHEN:

23 Q In Paragraph 70 of Exhibit 1044, did you
24 testify that the first sentence was based on the
25 deposition transcript of Dr. Tuckerman on Page 191?

1 A Yes, that is my characterization of his
2 testimony.

3 Q What is that first sentence that you used
4 of Dr. Tuckerman's deposition Page 191?

5 A I don't understand the question. You want
6 me to read it into the record again?

7 Q Yes, sure, why not. Please.

8 A "Dr. Tuckerman admits that there is no
9 discussion in the text of the specification regarding
10 the shape of the connectors. Tuckerman deposition 191
11 Page 191, Lines 4 through 11."

12 Q In the second sentence you stated that
13 "Dr. Tuckerman admitted that he could not tell from
14 the photographs he provided of Lian Li products in
15 Exhibit 2006, Page 105 whether they practiced this
16 claim limitation regarding a flat connector,"
17 relying on his deposition testimony on Page 194;
18 correct?

19 A No.

20 Q What is your factual basis for making the
21 second sentence in Paragraph 70 of your supplemental
22 reply declaration, which is Exhibit 1044?

23 A The second sentence in Paragraph 70 is my
24 characterization of Dr. Tuckerman's deposition
25 testimony at Page 194, Line 18 through Page 196,

1 Line 17.

2 Q In the next sentence you stated, "But he
3 stated that he did not see anything that looked
4 flat." Correct?

5 A Correct.

6 Q What is your factual basis that he made
7 that statement?

8 A Well, again, it's not a quote. It's my
9 characterization of his statement. But I believe it's
10 the same testimony from Pages 194 through 196. I'd
11 have to check.

12 Q In the next sentence you stated that "If
13 Dr. Tuckerman, an expert, cannot identify a flat
14 surface from his own photograph, a POSITA could
15 never clearly determine that his drawings in the
16 '336 patent disclose a flat connector surface."

17 Do you see that?

18 A I do.

19 Q What is your factual basis for testifying
20 that Dr. Tuckerman, an expert, cannot identify a
21 flat surface from his own photograph?

22 A My understanding that that was his
23 testimony.

24 Q Dr. Wolfe, did you read Dr. Tuckerman's
25 deposition transcript?

1 A Yes.

2 Q Do you recall reading Dr. Tuckerman's
3 testimony saying that he could not identify a flat
4 surface from his own paragraph -- photograph?

5 A I don't recall his exact testimony right
6 now. But as I've explained in this paragraph, it's my
7 understanding that the photograph was placed before
8 him as an exhibit.

9 And his testimony was that he could not
10 determine for certain if there was a flat surface as
11 claimed.

12 Q So your review of Dr. Tuckerman's
13 testimony is that he stated that he did not see
14 anything that looked flat; correct?

15 A That's what I put in Paragraph 70. Again, I
16 would have to see the original testimony again to
17 embellish on that.

18 Q But substantively, the factual basis in
19 Paragraph 70 of your supplemental declaration, which
20 is Exhibit 1044, is accurate; correct?

21 A I don't understand the question.

22 Q Are all the factual basis you're relying
23 on to provide the testimony in Paragraph 70 of your
24 declaration, which is Exhibit 1044, accurate?

25 A It sounds like you're asking me whether

1 Dr. Tuckerman accurately testified. And I cannot make
2 that determination.

3 Q No, that's not my question. Okay. So let
4 me clarify and lay some foundation first.

5 I'm asking if you have provided accurate
6 factual basis with respect to Dr. Tuckerman's
7 testimony in Paragraph 70 of your declaration, which
8 is Exhibit 1044?

9 MR. WEBER: Objection.

10 BY MR. CHEN:

11 Q Do you understand what I just stated?

12 A I'm still not sure if I understand your
13 question.

14 But I believe that my characterizations of
15 his testimony are fair and they are my understanding
16 of his testimony.

17 Q And you testified that you read
18 Dr. Tuckerman's declaration -- I'm sorry,
19 Dr. Tuckerman's deposition transcript yourself;
20 correct?

21 A I did read it myself, yes.

22 Q And by your reading, you understood that
23 he stated he did not see anything that looked flat
24 in his deposition; correct?

25 A That's my characterization of his testimony

1 and I believe it's a fair one.

2 Q Let me actually share something,
3 Dr. Wolfe.

4 Do you see Page 197 of Dr. Tuckerman's
5 deposition testimony on the screen?

6 A I do. I'll note that this is not what I
7 cited.

8 Q Give me one second. Let me share it then.
9 Dr. Wolfe, do you see Page 196 of
10 Dr. Tuckerman's deposition transcript on the screen?

11 A Yes.

12 Q Is Page 196 what you cited in Paragraph 70
13 of Exhibit 1044, which is your supplemental reply
14 declaration?

15 A Yes.

16 Q Can you please read Lines 9 through 12 of
17 Page 196 of Dr. Tuckerman's deposition testimony,
18 which is Exhibit 1045.

19 A "The witness: Well, these photos don't have
20 enough contrast for me to answer that definitively. I
21 don't see -- other than the electrical contact, I
22 don't see anything there that doesn't look flat."

23 Q So let's go back to Paragraph 70 of your
24 declaration, which is Exhibit 1044.

25 Did you testify that Dr. Tuckerman stated

1 that he didn't see anything there that looked flat?

2 A I did. I was wrong. I misunderstood his
3 statement because the question was whether or not
4 there was anything flat. And the syntax is a little
5 strange.

6 I did misunderstand his testimony. So
7 that statement is incorrect. I retract that
8 statement.

9 Q Do you have anything else that you would
10 like to retract in your declaration, which is
11 Exhibit 1044?

12 A No, I'm not aware of any other errors right
13 now, but if any were called to my attention, I would
14 certainly reconsider them.

15 This, of course, supports my previous
16 statement that he seems to think that anything on
17 the connector can be the flat surface.

18 Q Dr. Wolfe, do you admit that you stated
19 the exact opposite of what Tuckerman actually
20 testified at deposition in Paragraph 70 of your
21 declaration, which is Exhibit 1044?

22 MR. WEBER: Objection, form.

23 THE WITNESS: With respect to one
24 sentence, I did. I misread his transcript.

25 MR. CHEN: Okay. We can take a break.

1 Let's take a break for 15 minutes because I
2 think we've been on the record for one and a
3 half hours. And I would like to figure out the
4 Exhibit Share issue if possible.

5 Would that be okay with you?

6 MR. WEBER: That's fine with me.

7 MR. CHEN: Okay.

8 THE WITNESS: Okay.

9 MR. CHEN: Let's take 15.

10 (Recess taken.)

11 BY MR. CHEN:

12 Q Dr. Wolfe, welcome back.

13 During the break, did you talk to anyone?

14 A No.

15 Q Did you review any documents?

16 A I opened my mail that came through the slot.
17 That's all.

18 Q Okay. Did you receive any email from
19 counsel?

20 A No, not email. The mailman dropped off some
21 catalogs and I just looked at them and recycle them.

22 Q I see, okay.

23 Dr. Wolfe, please go to Exhibit 1001.

24 A Okay.

25 Q Please go to Figure 1 of Exhibit 1001.

1 A Okay.

2 Q What is Figure 1 of Exhibit 1001?

3 A Figure 1 is a schematic diagram depicting
4 the outer appearance of a body in accordance with an
5 embodiment of the present invention.

6 Q For the '336 patent; correct?

7 A Yes, I guess. I'm just reading you what it
8 says in the patent.

9 Q What is your definition of a person of
10 ordinary skill in the art for this proceeding?
11 Please feel free to look at your declaration if you
12 need to.

13 A I provided that in Exhibit 1004, which I
14 don't have in front of me.

15 Q Oh. Can I call a person of ordinary skill
16 in the art a POSITA?

17 A I would understand that.

18 Q So it's P-O-S-I-T-A, POSITA, a person of
19 ordinary skill in the art.

20 Am I sharing something right now or no?

21 A No.

22 Q Okay. Dr. Wolfe, in Figure 1 of
23 Exhibit 1001, do you see a connector labeled as 5?

24 A Yes.

25 Q Do you see a power socket labeled as 4?

1 A Yes.

2 Q Do you see a -- strike that.

3 Dr. Wolfe, around the time of the '336
4 patent's filing, would a POSITA have understood
5 power socket 4 in Figure 1 of the '336 patent to be
6 a connector?

7 A Just to clarify, we're talking about May 6,
8 2019?

9 Q Yes, around that time, like 2018, 2019.

10 A I think it could be a connector. It could
11 be an opening with a connector inside the opening.

12 Q Dr. Wolfe, around the time of the '336
13 patent's filing, were connectors well known in the
14 field?

15 A In the field of computer fans?

16 Q Yes.

17 A Yes, connectors were well known at that time
18 in the field of computer fans.

19 Q Just that so we have a clear record, let
20 me ask that question again.

21 Dr. Wolfe, around the time of the '336
22 patent's filing, were connectors well known in the
23 field of computer illumination fans?

24 A Yes.

25 Q Among these well-known connectors, were

1 socket type of connectors well known in the field?

2 A There were a variety of types of socket
3 connectors, but yes, there were many well known in the
4 field of -- assuming, again, the field of illumination
5 fans.

6 Q Around the time of the '336 patent's
7 filing, would a POSITA have been able to readily use
8 a socket type connector on an illumination fan
9 anywhere on the illumination fan's body without
10 undue experimentation?

11 MR. WEBER: Objection to form.

12 THE WITNESS: No, there were some places
13 that would be easy to use a fan and some places
14 that would be relatively impossible.

15 BY MR. CHEN:

16 Q Using the example of the embodiment in
17 Figure 1 of the '336 patent, can you please tell me
18 where on the body of the illumination fan in
19 Figure 1 of the '336 patent a POSITA would have been
20 able to readily install a socket type connector?

21 MR. WEBER: Objection to form.

22 THE WITNESS: That depends on a number of
23 very specific factors, the depth of the
24 connector, the size of the fan, the strength of
25 the materials.

1 I can give you some examples.

2 Certainly socket 4 could have been moved a
3 tiny bit closer to the corner or a tiny bit
4 further from the corner. It could have been
5 placed next to connector 5 on the other corner,
6 but many other positions would require more
7 details that aren't provided here.

8 BY MR. CHEN:

9 Q Sorry, did someone say something?

10 A I just coughed, sorry.

11 Q Oh, okay.

12 Can you please go to Figure 4 of
13 Exhibit 1001. Are you there?

14 A I am.

15 Q What is Figure 4 of Exhibit 1001?

16 A Figure 4 is a schematic diagram depicting
17 two bodies before being assembled in accordance with
18 another embodiment of the present invention.

19 Q Dr. Wolfe, do you see an illumination fan
20 embodiment on the right-hand side of Figure 4 of
21 Exhibit 1001?

22 A Presumably, yes.

23 Q Dr. Wolfe, do you see an illumination fan
24 embodiment on the left-hand side of Figure 4 of
25 Exhibit 1001?

1 A I think that's likely. It's not really
2 explicit that Figure 4 is an illumination fan, but I
3 think in context, that's a reasonable conclusion.

4 Q Do you see a power socket 4 located on a
5 surface of the illumination fan embodiment in
6 Figure 4 of Exhibit 1001?

7 A If we assume that the label 4 is used
8 consistently across the drawings, then that would also
9 be a power socket, yes.

10 Q On the illumination fan to the right in
11 Figure 4 of Exhibit 1001, do you see a connector
12 labeled as 5 on a surface of the illumination fan
13 embodiment?

14 A I see a connector labeled 5, it's not clear
15 that it's on the surface.

16 Q How would you characterize the location of
17 the connector labeled as number 5 in the
18 illumination fan embodiment on the right-hand side
19 of the Figure 4 in Exhibit 1007?

20 MR. WEBER: Objection, form.

21 THE WITNESS: Well, it's clearly on the
22 side of the fan body in the way that I have
23 applied the term "side" in my analysis.

24 Other than that, it's ambiguous and
25 there's literally no description. It could be

1 inset. It's just unclear and since there's
2 literally no text about those connectors with
3 respect to this embodiment, there's really no
4 guidance.

5 BY MR. CHEN:

6 Q Well, I'm trying to find a term mutually
7 agreeable to identify the surface on which
8 connector 5 is located in the illumination fan
9 embodiment on the right-hand side of Figure 4.

10 What would you call that surface that is
11 somewhat flush with connector 5?

12 A Unknown, ambiguous. I don't see any
13 description of a surface that's somewhat flush with
14 connector 5.

15 I don't see any text describing the
16 location of connector 5 and I don't see sufficient
17 information in the drawing to tell me how
18 connector 5 is positioned with respect to the
19 surface of the fan body.

20 Q Let me see if I can -- I can actually draw
21 it so that we have a clear record. Give me a
22 second.

23 Dr. Wolfe, can you see -- am I sharing
24 Figure 4 on the screen?

25 A Yes.

1 Q Okay. So I guess I'm trying to find a way
2 to call this portion. What would you like to call
3 it, Dr. Wolfe?

4 A We can call it the leftmost surface of the
5 fan body, but I don't think that elements 7 or 5 are
6 illustrated as being flush to that surface.

7 Q That's fine. I just want to get an
8 identification of that surface, that's all.

9 So you wanted to call it the leftmost
10 surface of the illumination fan body on the
11 right-hand side of Figure 4 in Exhibit 1001?

12 A That's fine.

13 Q Okay. Dr. Wolfe, do you see a connector
14 located on the leftmost surface of the illumination
15 fan body on the right-hand side of Figure 4?

16 A No, I see a connector located in an opening
17 on that surface.

18 Q This is going to be really hard.

19 Dr. Wolfe, do you have the claim language
20 available in Exhibit 1044, which is your
21 declaration, the substitute claim language for 6 and
22 7?

23 A I believe I recited it verbatim, but I'll
24 have to find it.

25 Yes, Pages 33 through 36 of the exhibit.

1 Q Are you talking about PDF pages or the
2 center page numbers?

3 A The exhibit page numbers, the ones in bold
4 at the bottom.

5 Q Did you say thirty --

6 A Thirty-three.

7 Q Thirty-three, okay. Great. So let's see.
8 So with that, let me ask you the following
9 questions:

10 Dr. Wolfe, does substitute Claim 6 or 7
11 claim a first illumination fan?

12 A So we have had two sets of substitute claims
13 in the proceedings, so should I assume today that
14 whenever you ask me about the substitute claims,
15 you're asking me about the ones that I have quoted in
16 Exhibit 1044?

17 Q Sure. Yes.

18 So just to clarify, the old substitute
19 claims that were in the previous version of the
20 motion to amend are not in effect now, so right now
21 only the revised motion to amend counts. Therefore,
22 if I talk about claims 6 and 7, I'm talking about
23 the new amended claims 6 and 7, as you call them in
24 Paragraph 58 of your declaration.

25 Can we ask and answer questions on that

1 basis?

2 A Yes.

3 Q Dr. Wolfe, does substitute claim 6 or 7
4 claim a first illumination fan?

5 A Yes.

6 Q Does substitute claim 6 or 7 claim a
7 second illumination fan?

8 A So I know there are some legal complexities
9 there.

10 My understanding would be that it does
11 because it's recited in the preamble and then
12 referenced later in a limitation on an antecedent
13 basis.

14 Q On that basis, that's fine. Let me just
15 ask the question again so that the record is clean.

16 Dr. Wolfe, does substitute claim 6 or 7
17 claim a second illumination fan?

18 A Again, my understanding is that the law
19 regarding preambles is a little bit complicated, but
20 in this situation, the preamble recites a second
21 illumination fan, it's been referenced through its
22 antecedent basis in multiple limitations. And my
23 understanding would be that that means that it is
24 claimed.

25 But I do think that that is a claim

1 construction issue for the panel.

2 Q Okay. So reading substitute claim 6 or 7,
3 you believe whether a second illumination fan is
4 claimed is an issue for claim construction; right?

5 A I do, but as I said, based on my
6 understanding of the law, it is claimed. But I'm not
7 a judge.

8 Q That's fine.

9 Obviously your testimony is going to be
10 based on your understanding of the law. So let's
11 just proceed with questions and answers based on
12 your understanding of the law, so that is a standing
13 assumption.

14 Can we do that?

15 A Okay.

16 Q Okay. Dr. Wolfe, does substitute claim 6
17 or 7 claim a second illumination fan?

18 A Under my understanding of the law, it does.

19 Q Dr. Wolfe, does substitute claim 6 or 7
20 claim a third illumination fan?

21 A I don't see that in the claim.

22 Q Is your answer no?

23 A To my understanding, there is no third
24 illumination fan in claim 6 and 7.

25 Q So just to make the record clean, please

1 indulge me and let me ask the question again.

2 Dr. Wolfe, in your understanding, does
3 substitute claim 6 or 7 claim a third illumination
4 fan?

5 A In my understanding, it does not.

6 Q Dr. Wolfe, based on your understanding,
7 can the claimed first illumination fan in claim 6 or
8 7 be connected to a third illumination fan?

9 MR. WEBER: Objection, form.

10 THE WITNESS: In some embodiments, I'm not
11 aware of any embodiment that's disclosed in the
12 specification that's like that.

13 BY MR. CHEN:

14 Q Can we please turn to Paragraph 63 of your
15 declaration, which is Exhibit 1044.

16 Let me see. Actually, I meant
17 Paragraph 67. Did I say that? Did I say it
18 correctly?

19 A I'll turn to whatever paragraph you like.

20 Q I apologize, I misspoke.

21 I meant Paragraph 63 on PDF Page 38 of
22 118, but what I actually wanted is to discuss the
23 figure on the next page.

24 A Okay.

25 Q On PDF Page 39 of your supplemental reply

1 declaration, which is Exhibit 1044, do you see
2 annotated Figure 3 of the '336 patent?

3 A I do.

4 Q Dr. Wolfe, in your understanding, can the
5 yellow fan body in the middle be the first
6 illumination fan as claimed in substitute claim 6 or
7 7?

8 A I didn't see any disclosure in the
9 specification of the middle fan being the first fan,
10 so, no, it cannot.

11 Q Why not?

12 A Because the claim requires that when the
13 first connector of the body of the first illumination
14 fan is connected with a second connector -- I'm sorry,
15 that's not the right language.

16 The claim requires that when the power
17 socket on the first side of the body, and that would
18 be the body of the first illumination, fan is
19 supplied with power via the power socket's
20 electrical connection with the second connector, the
21 center fan and the illumination area of the body of
22 the first illumination fan are respectively driven
23 into rotation and illumination.

24 And then further, that when the first
25 connector of the body of the first illumination fan

1 is connected with the second connector of the body
2 of a second illumination fan, a center fan and an
3 illumination of the body of the second illumination
4 fan are respectively driven into rotation and
5 illumination.

6 And as illustrated there, the power socket
7 is in the middle between the first fan and the
8 second fan.

9 So I don't know -- and the second
10 connector is also in the middle. So there is just
11 not enough disclosure to know how it would operate.

12 Q Can you give a reason why it cannot be the
13 first fan claimed in substitute -- strike that.

14 Dr. Wolfe, can you give a reason why the
15 middle fan -- strike that.

16 Dr. Wolfe, can you provide a reason why
17 the middle illumination fan in Figure 3 of the '336
18 patent cannot be the first fan claimed in substitute
19 claim 6 or 7?

20 A Yes.

21 Q What would be that one reason?

22 A As it's illustrated, the only exposed power
23 connector is power connector 4 shown in red on the
24 right, which is on the second illumination fan.

25 So, therefore, the first fan can't be

1 driving the second fan into rotation and
2 illumination, because the power would have to come
3 through the second fan.

4 There is no exposed power connector on the
5 third fan.

6 I see that it says power supply, but the
7 actual diagram in the -- in the Figure 3 shows that
8 the power connector in Figure 3 would be on the red
9 surface between the preceding illumination fan and
10 the second illumination fan.

11 If you line up three fans, as illustrated
12 in Figure 3, two of the power connectors would be
13 interior and one would be exposed and the annotated
14 drawing from Exhibit 2037 shows that the exposed one
15 is on the second illumination fan.

16 So it wouldn't make any sense for the
17 first illumination fan to be driving the second fan
18 into illumination.

19 Q Dr. Wolfe, in your opinion, does the '336
20 patent disclose an embodiment covered by substitute
21 claim 6 or 7?

22 MR. WEBER: Objection, form.

23 THE WITNESS: I do not believe there is a
24 written description in the '336 patent of an
25 embodiment that meets all of the limitations of

1 claim 6 or 7.

2 BY MR. CHEN:

3 Q In your understanding, Dr. Wolfe, can an
4 illumination fan in the '336 patent receive power
5 from another illumination fan?

6 A I missed a word.

7 Q What?

8 A I'm sorry, I missed a word in the question.

9 Q I'll ask it again.

10 Dr. Wolfe, in your opinion, can an
11 illumination fan in the '336 patent receive power
12 from another illumination fan?

13 A Yes, when that happens in a specific way
14 that is disclosed in the patent specification and the
15 claims.

16 Q So if we use the labeling of the annotated
17 Figure 3 on PDF Page 39 of Exhibit 1044, can the
18 blue illumination fan labeled as the second
19 illumination fan receive power from the first
20 illumination fan that is colored in yellow?

21 A Not in any manner that's described in the
22 '336 patent.

23 The '336 patent describes it just the
24 other way, that the power comes into power socket 4
25 and then could be provided from the blue fan to the

1 yellow fan.

2 Q I apologize, the blue fan's first
3 connector -- well, okay. Strike that.

4 On PDF Page 39 of Exhibit 1044, where is
5 the first connector of the blue fan?

6 A It's on the red surface. It's labeled 5.
7 So I need to correct what I said before.
8 Actually, there is no actual disclosure of the blue
9 fan driving the yellow fan.

10 Q Is there any disclosure showing that the
11 yellow fan is driving the blue fan?

12 MR. WEBER: Objection to form, asked and
13 answered.

14 THE WITNESS: No. There are flaws in the
15 patent.

16 BY MR. CHEN:

17 Q Dr. Wolfe, is it your position that the
18 '336 patent does not disclose a configuration that
19 one of the three illumination fans as shown in
20 Figure 3 of the '336 patent supplies power to
21 another illumination fan?

22 A That's correct. The patent does not do that
23 in a way that shows that the inventors possessed that
24 invention. The disclosure is just wrong.

25 Q Dr. Wolfe, in your opinion, does either of

1 claim -- strike that.

2 Dr. Wolfe, does substitute claim 6 or 7
3 cover any embodiment in the '336 patent?

4 MR. WEBER: Objection, form.

5 THE WITNESS: I think I answered this
6 already. It's my opinion that there is no
7 written description of any embodiment in the
8 specification that meets all the limitations of
9 claim 6 or 7.

10 BY MR. CHEN:

11 Q Dr. Wolfe, in your declaration you opine
12 that Tsuji, in view of Huang, teaches substitute
13 claim 6; correct?

14 A Yes, or makes it obvious.

15 Q Did you identify which fan in Tsuji
16 corresponds to the first fan -- strike that.

17 Dr. Wolfe, did you identify which fan in
18 Tsuji corresponds to the first illumination fan
19 claimed in substitute claim 6 or 7?

20 A Yes.

21 Q Where did you do that?

22 A Paragraph 72.

23 Q In Paragraph 72 of your declaration, which
24 is 1044, did you rely on Figure 5 of Exhibit 1007,
25 which is Tsuji?

1 A Among others, yes.

2 Q Is the first illumination fan claimed by
3 substitute claim 6 or 7 present in Figure 5 of
4 Tsuji?

5 A Yes, as I said, each exemplary fan unit
6 meets the limitation. And then in Figure 14 that I
7 have at the end of the paragraph, one of the fans is
8 labeled "first."

9 Q In Figure 14 reproduced on PDF Page 48 of
10 your declaration, which is Exhibit 1044, did you map
11 the first unit 10 to the first illumination fan in
12 substitute claim 6 or 7?

13 A Yes. Let me just check.

14 Yes.

15 Q Thank you.

16 Let me actually ask the question again
17 because you were checking, so now you're sure. Let
18 me ask the question again so the record is clean.

19 Dr. Wolfe, in Figure 14 reproduced on PDF
20 Page 48 of your declaration, which is Exhibit 1044,
21 did you map the first unit 10 to the first
22 illumination fan in substitute claim 6 or 7?

23 MR. WEBER: Objection, form.

24 THE WITNESS: Yes.

25

1 BY MR. CHEN:

2 Q I apologize. The transcript doesn't look
3 right, so let me ask the question again. Maybe it's
4 my pronunciation.

5 So starting fresh, new question.

6 Dr. Wolfe, in Figure 14 of Tsuji
7 reproduced on PDF Page 48 of Exhibit 1044, which is
8 your supplemental reply declaration, did you map the
9 first unit -- in parentheses first 10 on the left to
10 the first illumination fan claimed in substitute
11 claim 6 or 7?

12 A Yes.

13 MR. CHEN: We've been on the record for a
14 little bit over an hour. Can we take a break
15 for ten minutes?

16 MR. WEBER: Sounds good.

17 MR. CHEN: Okay.

18 (Recess taken.)

19 BY MR. CHEN:

20 Q Dr. Wolfe, let's go to Paragraph 45 of
21 your declaration.

22 Dr. Wolfe, what is Paragraph 45 of your
23 declaration, which is Exhibit 1044, about?

24 A I presented the opinion that it would be
25 obvious for a person of ordinary skill at the time to

1 place connector pins either in a single housing or in
2 two housings, in particular separating out the power
3 pins from the data pins.

4 To corroborate that, I pointed to a number
5 of examples. One was the SATA specification, which
6 had been known for a long time.

7 And I pointed to the published version in
8 2003 where the connector for power and data could be
9 in a single housing or they could be in two housings
10 and it was simply a design choice and each one would
11 have been obvious in light of the other one.

12 And I just pointed to the fact that a
13 person of ordinary skill would have known of
14 numerous examples of that kind of a design choice
15 where either one or two housings could be used for a
16 set of connectors.

17 Q Dr. Wolfe, in your declaration, did you
18 combine the SATA connector with any of the prior art
19 in rendering your opinion?

20 MR. WEBER: Objection to form, vague, the
21 document speaks for itself.

22 THE WITNESS: No, I used it to illustrate
23 what a POSITA would have known at the time and
24 to corroborate that.

25

1 BY MR. CHEN:

2 Q On PDF Page 24 of your declaration, which
3 is Exhibit 1044, do you illustrate a SATA connector
4 there?

5 A I copied the illustration of SATA connectors
6 from the SATA specification. On one side it's got all
7 the pins on a single housing. On the other side it's
8 got the pins in two housings.

9 And together with Figure 5 and with some
10 of the other figures that are on Page 26 of the
11 declaration, it just shows the variety of design
12 choices.

13 Q On PDF Page 25 of your declaration, which
14 is Exhibit 1044, do you show an annotated version of
15 the SATA connector?

16 A I would have to look back at the original
17 document. I don't think I annotated it, I think
18 that's the original.

19 Q Okay. On Page -- strike that.

20 On PDF Page 25 of Exhibit 1044, which is
21 your declaration, is the signal segment key labeled
22 in Figure 10 a connector?

23 A It's not a connector, it's a portion of a
24 connector housing. The key is just that little piece
25 that juts out.

1 Q Oh, I see. Okay.

2 MR. CHEN: Sorry, the hospital is calling
3 me. Can you hold on just one second?

4 (Discussion off the record.)

5 MR. CHEN: Sorry about that.

6 Q Dr. Wolfe, do you agree that in a SATA
7 connector, there is a signal segment and a power
8 segment?

9 A In some SATA connectors, that's true.
10 Others are split so that the connector is all power or
11 the connector is all signals. They are all disclosed
12 in the specification.

13 Q Are the signal connectors and power
14 connectors in SATA electrically connected?

15 A I don't understand the question.
16 Electrically connected to what?

17 Q Okay. So maybe that's based on
18 foundation.

19 In SATA, there are signal connections;
20 correct?

21 A There are.

22 Q In SATA, there are power connections;
23 correct?

24 A Correct. They can be implemented in
25 multiple ways.

1 Q In SATA, are signal connections separate
2 from the power connections?

3 A It depends on what you mean by "separate."
4 They appear on separate pins, but sometimes they are
5 housed together in the same connector.

6 Q Dr. Wolfe, in your understanding, is there
7 any pin in the signal connections in SATA
8 electrically connected with any pin in the power
9 connections of SATA?

10 A Yes.

11 Q Which one?

12 A The ground pins.

13 Q Other than the ground pin of the signal
14 connections and the power connections, are there any
15 other pin of the power connections and signal
16 connections electrically connected?

17 MR. WEBER: Objection to form.

18 THE WITNESS: I don't know.

19 BY MR. CHEN:

20 Q You don't know?

21 A No. I mean, we put the whole document in
22 the record, we can look at it, but I don't know.

23 Again, sometimes those pins are in the
24 same housing, sometimes the pins are in two
25 different housings. When they are in two different

1 housings, each housing has ground and those are
2 connected together.

3 But I don't know whether or not any other
4 pins are connected together when they are in
5 separate housings.

6 Q Do you understand what SATA is?

7 A Yes.

8 Q Let's back up.

9 In a circuit in a device, is the ground
10 shared by different components?

11 A Sometimes. Usually it is.

12 There are also sometimes where you could
13 have more than one ground.

14 Q In the case that there is only one ground
15 shared by multiple components in a device, would you
16 characterize that all these components to be
17 electrically connected?

18 A Yes, I think -- I mean, it depends on the
19 context and how the word "electrically connected" is
20 being used.

21 But if I had a bunch of connectors that
22 all had ground on them, I would call that
23 electrically connected.

24 I believe, in fact, that I even
25 illustrated that in one of the figures that I

1 annotated in my report.

2 Q So in your view, any circuitry that is
3 sharing a ground, they are electrically connected?

4 A We'd have to look at context.

5 But certainly if you have two power
6 connectors or a power connector and a signal
7 connector that are sharing a ground on the same
8 device, I think you would say that they are
9 electrically connected by ground. Again, it depends
10 on context.

11 I think I make that representation in
12 Paragraph 88.

13 Q What is your understanding of ground?

14 A Ground is a complex concept and it really
15 depends on the circuit. But in general, it's a
16 reference point for measuring voltages in a circuit.

17 Q In your understanding, is it ground to
18 earth?

19 A In some cases it is, in some cases it's not.
20 In many electrical devices, it's not.

21 The one I'm on right now, for example,
22 doesn't have an earth ground.

23 Q What?

24 A The computer I'm on right now, for example,
25 does not have an earth ground.

1 Q Okay. In your opinion, if two competitive
2 devices are sharing ground, they are short
3 basically?

4 A You're saying they are shorted?

5 Q Yes, they are shorted.

6 A Again, it depends on context, but normally
7 if two components are sharing ground, we would say
8 that their ground pins are shorted.

9 Now, there's going to be some finite
10 resistance between them. But usually it's small
11 enough that we would treat that as being shorted,
12 yes.

13 Q And the two components, because they are
14 sharing grounds, you would view them as being
15 electrically connected?

16 A Again, it depends on context, but in many
17 cases, I would.

18 Especially if we're talking about power
19 connectors who have the purpose of sharing power
20 connections. Ground is one of the power connections
21 on most power connectors.

22 Q Dr. Wolfe, which components in Tsuji did
23 you map to the first connector?

24 A I believe I indicated that it could be
25 mapped either way, but I think that in particular, I

1 mapped -- well, I think I considered a few. I think I
2 mapped CNC to the first connector, if I remember
3 correctly.

4 Q Dr. Wolfe, which component did you map --
5 strike that.

6 Dr. Wolfe, which component in Tsuji did
7 you map to the power socket in substitute claims 6
8 or 7?

9 A I mapped either connector CNA or CNB as the
10 power socket. And then in the alternative, I also
11 stated that it would be obvious to split the pins of
12 connectors CNC between two housings and use one of
13 those two housings as the power socket.

14 Q Which component in Tsuji did you map to
15 the second connector of the first illumination fan
16 in substitute claim 6 or 7?

17 A CND.

18 Q In Tsuji, is CNA supplied with power via
19 its electrical connection to CND?

20 A I'm sorry, was the last one CNB as in boy?

21 Q No.

22 A D as in dog?

23 Q D as in dog, but let me actually look at
24 the transcript.

25 Let's strike that. Let me reask the

1 question because it sounds like I wasn't pronouncing
2 the question clearly. Give me a second. I'll go to
3 the transcript.

4 Dr. Wolfe, in Tsuji, is CNA supplied with
5 power via its electrical connection to CND?

6 A I apologize for my weak hearing, CND as in
7 dog?

8 Q CND as in dog. I'll actually say it in
9 the question so that it's clear.

10 A All right.

11 Q Dr. Wolfe, in Tsuji, is CNA supplied with
12 power via its electrical connection to CND as in
13 dog?

14 A No. The portion of CNC that works with
15 power is, but CNA is not.

16 Q Dr. Wolfe, in Tsuji, is CNB as in boy
17 supplied with power via its electrical section to
18 CND as in dog?

19 A No.

20 Q So earlier in an answer you mentioned CNC
21 as I was asking about CNA. So let me ask that
22 question again, and I'm asking about CNA.

23 A I'm sorry, I have a motorcycle driving by.
24 I need a second, please.

25 Q Okay. So earlier I was asking about CNA,

1 but then you answered something about CNC. Just so
2 that the record is clear, please let me ask that
3 question again, so that the record is clear. So
4 I'll start anew.

5 Dr. Wolfe, in Tsuji, is CNA supplied with
6 power via its electrical connection to CND as in
7 dog?

8 A Not literally as drawn, no.

9 Q On PDF Page 48 of Exhibit 1044, which is
10 your declaration, you mapped fan unit 10 on the
11 left, in parentheses "first," to the first
12 illumination fan claimed in substitute claim 6 or 7;
13 correct?

14 A Yes.

15 Q In fan unit 10 (first) on PDF 48 of
16 Exhibit 1044, which is your declaration, is CNC
17 supplied with power via its electrical connection to
18 CND as dog?

19 A It can be.

20 Q Is it?

21 A Well, if you connect power to CND, it will
22 be provided to CNC. And there is a disclosure of
23 redundant power supplies where you can connect to
24 multiple places.

25 Q But isn't it redundant power supply

1 between CNA and CND?

2 A Yes. So if you connect CNA and CND in fan
3 unit second to power, then CNC on fan unit second will
4 drive power to CND on fan unit first, which will then
5 drive it to CNC in fan unit first.

6 That's not the intended method of
7 operation, but it's at least the equivalent
8 disclosure of what's in the '336 patent.

9 (Reporter clarification.)

10 THE WITNESS: CNC, Charlie, Nancy,
11 Charlie.

12 MR. CHEN: Lynne, just for clarity of the
13 record, we're basically reciting the letters.
14 So it's not C and A, C and B, it's actually
15 literally letter C, letter N as in Nancy, and
16 letter A.

17 Q Dr. Wolfe, when you testified that the fan
18 unit second on the right-hand side in Figure 14 of
19 Tsuji on Page 48 PDF of your declaration,
20 Exhibit 1044 -- strike that. Let me rephrase.

21 Dr. Wolfe, did you map the fan unit 10
22 (second) on the right-hand side of Figure 14 of
23 Tsuji on PDF 48 of your declaration, which is
24 Exhibit 1044, to the second illumination fan claimed
25 in substitute claim 6 or 7?

1 A Yes.

2 Q In your understanding, Dr. Wolfe, does the
3 first illumination fan claimed in substitute
4 claim 6 or 7 supply power to the second illumination
5 pan?

6 A Yes, when operated as described in Tsuji.

7 Q Dr. Wolfe, given that you mapped the first
8 fan unit 10 on the left as the first illumination
9 fan and the second fan unit on the right in
10 Figure 14 of Tsuji, isn't it true that under these
11 mappings, the first fan unit on the left in
12 Figure 14 of Tsuji is supplying power to the second
13 fan unit on the right in Figure 14?

14 A That would be the normal operation, yes.

15 Q In that operation, is the CNC of the first
16 fan unit on the left in Figure 14 supplied with
17 power via its electrical connection to CND as in dog
18 of the first fan unit on the left in Figure 14 of
19 Tsuji?

20 MR. WEBER: Objection to form.

21 THE WITNESS: Not in that particular mode
22 of operation, no.

23 Well, actually, it could be. I mean, they
24 are all connected together the same as in the
25 '336 patent, right? So if power was coming in

1 on CNA or CND, they could be going over to CND
2 and then back to CNC.

3 They are all connected together. It's the
4 same as the '336. So it really depends on what
5 mode of operation you're looking at.

6 BY MR. CHEN:

7 Q So in a different mode of operation, it
8 could be; is that your testimony?

9 MR. WEBER: Objection to form.

10 THE WITNESS: It could be. It really
11 depends on how it's connected to the power
12 supplies.

13 BY MR. CHEN:

14 Q On PDF Page 48 of your declaration,
15 Exhibit 1044, the CNC in the first fan unit on the
16 left is directly connected to CNA and CNB; correct?

17 A It is.

18 Q In your mappings of Figure 14 on PDF
19 Page 48 of Exhibit 1044, are the CNA and CNB
20 connected to a power supply?

21 A That's irrelevant. It's an apparatus claim.
22 It talks about what happens in certain situations.

23 So what's important is that when CND is --
24 when CNC is supplied with power through its
25 connection to CND, the fan will rotate and the

1 lights will illuminate. That's what the claim
2 requires.

3 The same things for CNB and CNA except
4 that they are provided on the other side of the
5 diode.

6 MR. CHEN: We've been on the record for
7 about an hour. Let's take a ten-minute break.

8 MR. WEBER: Okay. Thanks.

9 (Recess taken.)

10 BY MR. CHEN:

11 Q Dr. Wolfe, in substitute claim 6 or 7, is
12 it required that the first illumination fan has the
13 same configuration as the second illumination fan?

14 MR. WEBER: Objection to form.

15 THE WITNESS: I'm not sure what you mean
16 by "configuration." That's not something
17 that's claimed.

18 BY MR. CHEN:

19 Q Dr. Wolfe, how much time did you spend on
20 writing your supplemental reply declaration, which
21 is Exhibit 1044?

22 A I don't remember exactly, but I think after
23 reading patent owner's brief and Dr. Tuckerman's
24 declaration the first time, I then spent about another
25 15 hours or so, maybe 12, somewhere in that ballpark.

1 Q What is your rate in terms of your
2 compensation?

3 A 750 an hour.

4 Q Can you go to Exhibit 1031, which is your
5 prior declaration.

6 A Okay.

7 Q So you deleted a lot of paragraphs from
8 your prior declaration, Exhibit 1031, when you wrote
9 your supplemental declaration, 1044. Why did you do
10 that?

11 MR. WEBER: Objection to form.

12 THE WITNESS: My understanding is they
13 were already on the record and I was
14 supplementing only based on new material.

15 BY MR. CHEN:

16 Q In substitute claim 6 or 7, does the power
17 socket of the first illumination fan function to
18 receive power?

19 A We're back to Exhibit 1044, we're talking
20 about the claims that I addressed in Exhibit 1044, not
21 1031 now?

22 Q I'm actually just asking you about the
23 claim itself. You can use Exhibit 1044 for
24 reference if you like, so let me reask the question.

25 Dr. Wolfe in substitute claim 6 or 7, does

1 the power socket of the first illumination fan
2 function to be supplied with power?

3 A So in the new amended claims that I address
4 in Exhibit 1044, the power socket of the first
5 illumination fan need not be supplied with power but
6 when it is supplied with power, the fan must respond
7 in a particular way.

8 And it's my understanding that patent
9 owner's position is that it can be supplied with
10 that power indirectly and not through something
11 plugged into its connector.

12 Q What is your understanding of the
13 function of the power socket in substitute claim 6
14 or 7?

15 MR. WEBER: Objection to form.

16 THE WITNESS: I don't believe there is a
17 recited function.

18 There are some structural characteristics
19 that are recited and the behavior of the center
20 fan and the illumination area are claimed when
21 the power socket is supplied with power via the
22 power socket's electrical connection to the
23 second connector, but the power socket is not
24 performing any function in that situation.
25

1 BY MR. CHEN:

2 Q Does the power socket of the first
3 illumination fan in substitute claim 6 or 7 receive
4 power?

5 A So as I said, there's nothing in the claim
6 that says it has to receive power, but there is a
7 portion of the claim that says how the fan and the
8 illumination area must respond when the power socket
9 receives power in a particular way.

10 Q Dr. Wolfe, when the power socket of the
11 first illumination fan in substitute claim 6 or 7 is
12 supplied with power, does the power socket function
13 to receive power?

14 A Not necessarily.

15 Q Dr. Wolfe, is it your position that when
16 the power socket of the first illumination fan is
17 supplied with power in substitute claim 6 or 7, that
18 power socket does not receive power?

19 A The claim is silent about certain
20 circumstances. It only talks about what happens when
21 the power socket on the first side of the body of the
22 first illumination fan is supplied with power via the
23 power socket's electrical connection with the second
24 connector.

25 It doesn't tell you what happens if you

1 plug a power supply into the power socket, which
2 would be the normal thing a person would do and the
3 thing that's disclosed in the specification.

4 Q When the power socket of the first
5 illumination fan in claims 6 or 7 -- strike that.

6 Dr. Wolfe, when the power socket of the
7 first illumination fan in substitute claim 6 or 7 is
8 supplied with power, does the power socket function
9 to supply power to the center fan and the
10 illumination area of the first illumination fan?

11 THE WITNESS: You're muted, Brock. I
12 don't know if that was an objection or not.

13 MR. WEBER: Yes, thank you, Dr. Wolfe.
14 Yes, objection to form.

15 Go ahead.

16 THE WITNESS: The claim is silent as to
17 that. We can look at preferred embodiments.
18 There are embodiments disclosed that would
19 perhaps do that.

20 But the claim is silent as to what happens
21 if you connect a power supply directly to the
22 power socket.

23 BY MR. CHEN:

24 Q Dr. Wolfe, is your position that when the
25 power socket -- strike that.

1 Dr. Wolfe, is your position -- strike
2 that.

3 Dr. Wolfe, is it your position that when
4 the power socket of the first illumination fan in
5 substitute claim 6 or 7 is received -- okay. Let me
6 start over. Apologies.

7 Dr. Wolfe, is it your position that when
8 the power socket of the first illumination fan in
9 substitute claim 6 or 7 is supplied with power, the
10 power socket does not receive power?

11 A Again, I think that's the same question as
12 before. But when -- there's nothing in the claim
13 about whether it receives power. It's just not in the
14 claim.

15 When the power socket is supplied with
16 power via the power socket's electrical connection
17 with the second connector, then the center fan and
18 illumination area of the body of the first
19 illumination fan are respectively driven into
20 rotation and illumination. That is the only
21 limitation.

22 If the power socket receives its power --
23 is supplied with power in some other way, the claim
24 is silent. So we can speculate or we can analyze
25 specific embodiments, but the claim doesn't address

1 that issue.

2 Q Dr. Wolfe, is the power socket of the
3 first illumination fan in claim 6 or 7 connected to
4 the illumination area?

5 A Yes.

6 Q Dr. Wolfe, is the power socket of the
7 first illumination fan in substitute claim 6 or 7
8 connected to the center fan?

9 A Yes.

10 Q Dr. Wolfe, when the power socket of the
11 first illumination fan in substitute claim 6 or 7 is
12 supplied with power, would that power go to the
13 illumination area via the power socket's electrical
14 connection to the illumination area?

15 A The claim is silent about it. It doesn't
16 tell us whether it's a bidirectional connection or a
17 directional connection.

18 I mean, if that's what the patent owner
19 wanted to claim, they could have, but that's not
20 what's claimed here.

21 Q By the law of physics and electrical
22 engineering in your understanding, Dr. Wolfe, when
23 the power socket of the first illumination fan in
24 substitute claim 6 or 7 is supplied with power,
25 would that power go to the illumination area via the

1 power socket's electric connection to the
2 illumination area?

3 A It depends if it's a directional connection
4 or a nondirectional connection.

5 Q Okay. Dr. Wolfe, when the power socket --
6 strike that.

7 Dr. Wolfe, when the power socket of the
8 first illumination fan in substitute claim 6 or 7 is
9 supplied with power, would that power go to the
10 center fan via the power socket's electrical
11 connection to the central fan?

12 A It depends on the nature of the connection.
13 If the connection is a simple wire, then it would.

14 Q Dr. Wolfe, does claim 6 or 7 recite that
15 when the power socket is supplied with power, the
16 center fan is driven into rotation?

17 A No, the claim is narrower than that as
18 written.

19 Q Dr. Wolfe, when the power socket of the
20 first illumination fan in substitute claim 6 or 7 is
21 supplied with power, would that power go to the
22 illumination area via the power socket's electrical
23 connection to the illumination area?

24 A The claim is silent on that unless the power
25 is supplied via the power socket's electrical

1 connection with the second connector.

2 Q Dr. Wolfe, would a POSITA expect the power
3 to go from the power socket to the center fan in
4 substitute claim 6 or 7 when the power socket of the
5 first illumination fan is supplied with power?

6 A I don't think the POSITA would add any
7 characteristics to the claim that are not there. In
8 some embodiments, it might and in some embodiments, it
9 might not.

10 Q Dr. Wolfe, is it your position that the
11 power socket in substitute claim 6 or 7 has no
12 function?

13 A It has no recited function. I don't see
14 one. It has structural limitations, but I don't see a
15 recited function.

16 Q Does substitute claim 6 or 7 recite that
17 the power socket can be supplied with power?

18 A It does in a particular way by the second
19 connector.

20 Q Dr. Wolfe, is the first connector of the
21 first illumination fan in substitute claim 6 or 7
22 capable of connecting to a second connector of the
23 second illumination fan?

24 A Yes.

25 Q Dr. Wolfe, can the first connector of the

1 first illumination fan in substitute claim 6 or 7
2 function to connect to a second connector of the
3 second illumination fan?

4 A It's not completely clear to me whether
5 that's function or structure. Again, that would be a
6 more legal conclusion.

7 Q I'm not asking for a legal conclusion.
8 I'm asking for your opinion as to how a POSITA would
9 have considered this situation, so let me rephrase.

10 Dr. Wolfe, would a POSITA have understood
11 the first connector of the first illumination fan in
12 substitute claim 6 or 7 has the functions to connect
13 to a second connector of the second illumination
14 fan?

15 MR. WEBER: Objection, form.

16 THE WITNESS: I don't have an opinion on
17 whether or not that's a function. It was
18 present in the prior art, so I didn't have to
19 consider whether it was a function or a
20 structure.

21 BY MR. CHEN:

22 Q Dr. Wolfe, does substitute claim 6 or 7
23 recite that the power socket of the first
24 illumination fan is supplied with power?

25 A Only under certain circumstances, not in

1 general.

2 And actually, no, I'm sorry. Now that I
3 think about your question, it does not recite that
4 it is supplied with power. It recites what happens
5 if it is supplied by power via the power socket's
6 electrical connection with the second connector.

7 Q Dr. Wolfe, does substitute claims 6 or 7
8 recite that when the power socket of the first
9 illumination fan is supplied with power, it is
10 supplied with power?

11 A No, it does not say that.

12 Q Is it your position that in substitute
13 claim 6 or 7, when the power socket of the first
14 illumination fan is supplied with power, it is not
15 supplied with power?

16 A That's not my position either.

17 Q When is the power socket of the first
18 illumination fan in substitute claim 6 or 7 supplied
19 with power?

20 A The claim does not tell us when it happens.

21 Q Would a POSITA reading substitute claim 6
22 or 7 have understood that the power socket in
23 substitute claim 6 or 7 is capable of being supplied
24 with power?

25 A That's not a limitation of the claim, but it

1 might be true of some embodiments.

2 Q Would a POSITA reading substitute claim 6
3 or 7 have understood that some embodiments of the
4 claimed power socket is capable of being supplied
5 with power?

6 A I think they would have assumed that was
7 true for some embodiments of the claim if the claim is
8 valid.

9 Q Would a POSITA reading substitute claim 6
10 or 7 have understood that some embodiments of the
11 first connector of the first illumination fan is
12 capable of being connected with a second connector
13 of the second illumination fan?

14 A I think that they would for some
15 embodiments.

16 Q Would a POSITA reading substitute claim 6
17 or 7 have understood that some embodiments of the
18 power supply of the first illumination fan is
19 capable of being connected with a second connector
20 of the second illumination fan?

21 A I don't see that in the claim.

22 Q So the answer is no?

23 A I'm not even sure what you're talking about,
24 I don't see a power supply in the claim.

25 Q Okay. My apologies.

1 Dr. Wolfe, would a POSITA reading claim 6
2 or 7 have understood that some embodiments of the
3 power socket of the first illumination fan is
4 capable of being connected with a second connector
5 of the second illumination fan?

6 A It could be possible for some embodiments.

7 Q Dr. Wolfe, does substitute claim 6 or 7
8 have any language that will make a POSITA understand
9 that the power socket of the first illumination fan
10 is capable of connecting with a second connector of
11 the second illumination fan?

12 A I don't think so. It says what happens if
13 they're connected, but it doesn't say they are capable
14 of connecting.

15 Q Dr. Wolfe, is it your position that if a
16 structure in a patent claim is not recited to have a
17 function, then such structure has no function?

18 A I'm not sure I understand the question. If
19 it has no claimed function, I think that's a
20 tautology.

21 Q Dr. Wolfe, to be clear, it is your
22 understanding -- okay, let me backtrack.

23 Dr. Wolfe, have you heard of the notion
24 that all logic ultimately is just tautology?

25 MR. WEBER: Objection to form.

1 THE WITNESS: I have not.

2 BY MR. CHEN:

3 Q Do you understand that is a truism in
4 logic?

5 A I have not heard the phrase and I don't know
6 what context to put it into.

7 Q Do you understand logic?

8 MR. WEBER: Objection --

9 THE WITNESS: I understand logic from the
10 perspective of a chip designer but not from the
11 perspective of a philosopher.

12 BY MR. CHEN:

13 Q So what did you mean by saying it's a
14 tautology when a structure is not recited to have a
15 function in the plain language to have no claim
16 function?

17 MR. WEBER: Objection to form.

18 THE WITNESS: I think that you asked me to
19 assume that the claim does not recite a
20 function and I don't know how you can claim a
21 function if you don't recite a function.

22 There may be some legal principle I'm not
23 aware of.

24 BY MR. CHEN:

25 Q Okay. So is it your understanding that if

1 a structure in the claim is not recited to power the
2 function, then there is no claim function?

3 A Again, I'm not a legal expert. But my
4 experience, if you're claiming a function, you have to
5 write that into the claim.

6 Q And if you do not write a function to a
7 structure in the claim, then in your understanding,
8 the structure has no claim function; correct?

9 A I'm not a legal expert, but my understanding
10 is that the person reading the claim should understand
11 if the function is being claimed.

12 And that if the words of the claim don't
13 claim a function, then one shouldn't read a function
14 into the claim.

15 Q Is that the assumption you had when
16 answering the question about whether the power
17 socket in substitute claim 6 or 7 has any function?

18 MR. WEBER: Objection to form.

19 THE WITNESS: I don't think I opined on
20 whether it has any function. What I opined on
21 is that there is not a function recited in the
22 claim.

23 BY MR. CHEN:

24 Q Would a POSITA -- I can see why you say
25 it's tautology, but would a POSITA -- strike that.

1 Let me start anew.

2 Dr. Wolfe, would a POSITA reading
3 substitute claim 6 or 7 have understood the power
4 socket of the first illumination fan in substitute
5 claim 6 or 7 to have any function?

6 A Well, it's a comprising claim. It could
7 perform a function, but I don't see any recited
8 function in the claim. I don't see any claimed
9 function in the claim.

10 I don't see any words in the claim that
11 tell me that the power socket is supposed to do
12 something other than exist and be connected to other
13 things, which I see as structural limitations.

14 Q So, Dr. Wolfe, you do agree that
15 substitute claim 6 or 7 recite that the power socket
16 of the first illumination fan is capable of
17 receiving power?

18 A I don't see any words that say that in
19 claim 6 or 7. If they are there, maybe it would be
20 helpful if you pointed them out.

21 Q Well, when the power socket of the first
22 illumination fan in substitute claim 6 or 7 is
23 supplied with power -- strike that.

24 Dr. Wolfe, does substitute claim 6 or 7
25 recite the following: When the power socket is

1 supplied with power via the power socket's
2 electrical connection to the second connector?

3 A I'm sorry, you paraphrased it, but it was
4 close enough.

5 Q Dr. Wolfe, does substitute claim 6 or 7
6 recite that, quote, when the power socket on the
7 first side of the body is supplied with power via
8 the power socket's electrical connection with the
9 second connector, unquote?

10 A It does.

11 Q Would a POSITA have understood the recited
12 clause to mean that the power socket is capable of
13 being supplied with power with the power socket's
14 electrical connection with the second connector?

15 A I don't think they necessarily would. I
16 mean, again, the patent owner could have recited that
17 and didn't.

18 If it had been an issued claim, I might
19 take a different perspective saying that the patent
20 office had assumed as much. But it's not an issued
21 claim.

22 Q Would a POSITA have understood the plain
23 meaning of the following clause, quote, when the
24 power socket on the first side of the body is
25 supplied with power, unquote, to mean that there is

1 a time at which the power socket is capable of being
2 supplied with power?

3 A Again, I don't want to give you a legal
4 opinion on this, but I think the answer is no.

5 I think that's a conditional statement
6 that tells you what the response would be if and
7 when the power socket on the first side of the body
8 is supplied with power via the power socket's
9 electrical connection with the second connector.

10 Q Dr. Wolfe, do you know the difference
11 between the word "if" and the word "when"?

12 A If a number of contexts I do.

13 Q What does if mean?

14 A Again, it depends on the context.

15 Q Have you heard of the statement that it is
16 not a matter of if, it's a matter of when?

17 A I have.

18 Q What does that statement mean?

19 A That means that the person who's making this
20 statement thinks that the thing they are talking about
21 is inevitable.

22 Q Does substitute claim 6 or 7 use the word
23 "if" or the word "when"?

24 A It uses the word "when."

25 Q Given what you just said, would the POSITA

1 have understood substitute claim 6 or 7 to mean that
2 the power socket being supplied with power is
3 inevitable?

4 A I don't think so. I don't think that's the
5 context in which one writes this type of claim.

6 Q But substitute claim 6 or 7 does use the
7 word "when"; correct?

8 A It does.

9 Q It therefore means that the power socket
10 must be capable of being supplied with power given
11 that claims 6 or 7 is using the word "when";
12 correct?

13 A I wouldn't read it that way. I'm sure
14 there's guidance about these types of clauses in the
15 patent office and I trust that the PTAB can interpret
16 it consistently with the law.

17 Q Dr. Wolfe, is it your position that the
18 POSITA reading substitute claim 6 or 7 would not
19 have expected the power socket to have the ability
20 of being supplied with power?

21 MR. WEBER: Objection, form.

22 THE WITNESS: It's my opinion that the
23 claim is silent on it. But, again, the PTAB
24 will determine the scope of the claim.

25

1 BY MR. CHEN:

2 Q So you don't know?

3 MR. WEBER: Objection to the form.

4 THE WITNESS: I have an opinion, but I
5 think in the end, it's a matter of law.

6 BY MR. CHEN:

7 Q Why do you think it's a matter of law?

8 A My understanding is that claim
9 interpretation is a matter of law.

10 Q That what?

11 A My understanding is that the claim scope is
12 a matter of law.

13 Q Did you mean claim construction?

14 A Claim scope, the scope of the claim. Claim
15 construction is usually part of that.

16 Q So are you saying that whether something
17 is covered by a claim is a matter of law?

18 A My understanding is that the scope of the
19 claim is determined by claim construction and that
20 claim construction is a matter of law.

21 And I'm not a lawyer, that's my
22 understanding.

23 Q What is your understanding of the phrase
24 "if and when"?

25 MR. WEBER: Objection, form.

1 THE WITNESS: It depends on context.

2 BY MR. CHEN:

3 Q If I say the following: If and when I go
4 to the market, I will buy an apple, does that phrase
5 mean that I will go to the market for sure?

6 A I don't think so. But again, different
7 people may use it differently.

8 Q If I say: When I get up tomorrow morning,
9 I will go to work, does that mean I will get up
10 tomorrow morning?

11 A Unfortunately, it does not. I hope you do,
12 but it does not.

13 Q Even if say -- I use the word "when," if I
14 say, "When I get up tomorrow morning, I will go to
15 work," I'm not talking about whether it will happen,
16 I'm talking about the meaning of the sentence.

17 When I say, "When I get up tomorrow
18 morning, I will go to work," do I mean that I will
19 get up tomorrow morning or do I mean that maybe I
20 won't get up tomorrow morning?

21 A I don't know what you mean.

22 But if I say, "When I'm 90, I'm going to
23 go on a vacation to Italy," I'm not presuming that I
24 am going to make it to 90.

25 Q Really? So when you say that -- okay. So

1 whether you are presuming something, it is different
2 from how the language of English works.

3 I understand what you're saying that when
4 you say, "When I make it to 90, I'll go to Italy,"
5 you're not making the assumption that you will
6 definitely make it to 90, but that's because like,
7 you know, many, many years away.

8 But if we're talking about like tomorrow
9 morning, if I say, when I -- how about this, let me
10 ask you this way:

11 If I say, "When I get up tomorrow morning,
12 I'm going to work," do I expect to get up tomorrow
13 morning?

14 A Maybe you do, maybe you don't.

15 If I say, "I'm going to buy you a house
16 when pigs fly," I don't expect that to happen.
17 Everything depends on context.

18 And I'm not even sure that my opinion on
19 this matters at all because I believe that these
20 kinds of clauses are governed by statute and case
21 law.

22 Q No, that's fine, but I'm asking about the
23 plain meaning of English.

24 Like if you hear me say, "When I get up
25 tomorrow morning, I'm going to work," would you

1 understand the plain meaning of that sentence to
2 mean that I will get up tomorrow morning and go to
3 work?

4 A I think that's your intent.

5 Q By understanding the plain meaning of that
6 sentence; right?

7 A In context.

8 Q So in substitute claim 6 or 7, the clause
9 "when the power socket on the first side of body is
10 supplied with power via the power socket's
11 electrical connection with a second connector,"
12 should have the plain meaning that the power socket
13 will at some point be supplied with power via the
14 power socket's electrical connection with the second
15 connector; right?

16 A I --

17 MR. WEBER: Objection --

18 THE WITNESS: I don't think so. The
19 patent owner had the opportunity to tell us
20 that and they didn't. Again, it all depends on
21 context.

22 If my boss tells me, "When students cheat,
23 we will expel them," I don't think there is a
24 presumption that students are going to cheat.
25 It's a conditional.

1 And I think that this is written in the
2 same way where the actual claim language tells
3 me what happens under certain conditions and is
4 silent as to what happens under other
5 conditions.

6 Certainly these claims were drafted very,
7 very recently with a complete understanding of
8 what the scope was intended to be.

9 If the patent owner wanted to say that the
10 power socket was capable of something, they
11 could have just added that to the claim.

12 MR. CHEN: Okay. We've been on the record
13 more than an hour, so let's take a break.
14 Let's go off the record.

15 (Recess taken.)

16 BY MR. CHEN:

17 Q Dr. Wolfe, PDF Page 68 of your
18 declaration, Exhibit 1044, what did you map to the
19 second connector of the second illumination fan in
20 substitute claim 6 or 7?

21 A It would be connector CND on fan unit
22 second.

23 Q Is there a CND in Figure 14 of -- strike
24 that.

25 Dr. Wolfe, is there a CND of -- to fan

1 unit second in Figure 14 of Tsuji as reproduced on
2 PDF Page 68 of your declaration, Exhibit 1044?

3 A Not labeled that way, but all the fan units
4 are fan unit 10 and just one of them has all the parts
5 illustrated.

6 The signals on D are illustrated there, or
7 at least some of them are. And the text that I
8 cited makes clear that all the fan units 10 have the
9 same physical components. That's why they all have
10 the same number.

11 Q Do you agree that PDF Page 68 of
12 Exhibit 1044, which is your declaration, there is no
13 showing of any connection between CNC as in cat of
14 the first fan unit 10 on the left to any CND as in
15 dog of the second fan unit on the right?

16 A No. My understanding of patent owner's
17 position from the previous filing was that the
18 connections were cited in new claim 6 and 7 could be
19 indirect connections.

20 And there's certainly an indirect
21 connection between CNC on fan unit first and CND on
22 fan unit second.

23 Q Is this shown on Page 68 of your
24 declaration, which is Exhibit 1044?

25 A It's taught to a person of ordinary skill in

1 the art. They are shown three fan unit 10s, other
2 drawings show how they are connected and the interior
3 components of each fan unit 10 are illustrated.

4 And many signals pass through across all
5 the CNC and CND connectors, including DCC, ground,
6 AL, S0 and then some others pass through some
7 circuits.

8 Q Dr. Wolfe, do you understand that SATA is
9 designed to provide high throughput for data?

10 A I think there are a number of considerations
11 for SATA, one of them is that it is capable of higher
12 throughput than some previous protocols.

13 Q Have you ever seen SATA connection used to
14 power illumination fans ever?

15 A Sometimes there are what are called modular
16 connectors where you can decide which cable to connect
17 and you can either connect it for SATA power or for a
18 modular fan.

19 But just based on custom, the connectors
20 have the same functionality, but they're usually a
21 different form factor.

22 Nothing in the claims requires that the
23 power connector have a specific form factor.

24 Q That is not my question. My question is
25 simpler.

1 Dr. Wolfe, have you ever seen an
2 implementation of SATA used to power and control
3 illumination fans in your life?

4 A Not directly, but the signals are still
5 12 volts in ground. They are -- or sometimes it's
6 5 volts in ground.

7 Q So the answer is no?

8 A I have not seen a literal implementation
9 of a SATA connector connected to an illumination fan,
10 no.

11 Q Did you include any documentation cited in
12 your declaration that shows the use of SATA in any
13 illumination fan?

14 A No. I've never suggested that SATA would be
15 used in an illumination fan.

16 I have suggested that a person of ordinary
17 skill would use the teachings which they would know
18 from the SATA documentation to decide that it was a
19 design choice between having one and two connector
20 housings for a set of power and signal connectors.

21 Q In substitute claim 7, there is this
22 requirement that the electrical terminal is round;
23 right?

24 A It's actually more than that. It's very
25 weird, it's that on the first connector, the first

1 flat surface comprises a first electrical terminal
2 that is round, which again, I didn't bring that up in
3 my report, but that's not disclosed in the spec.

4 Q Do we agree that you did not provide any
5 testimony in your declaration that the limitation of
6 the electrical terminal being round is or is not
7 supported by the specification; correct?

8 A I did not address that issue. There were
9 plenty of issues here already to address.

10 Q Please go to PDF Page 27 of your
11 declaration.

12 So in Paragraphs 49 through -- actually,
13 49. So in Paragraph 49 of your declaration, you
14 mentioned NZXT AER, NZXT fans; correct?

15 A Yes.

16 Q Okay.

17 A More specifically, a published review of the
18 fan.

19 Q Okay. Dr. Wolfe, did you combine NZXT fan
20 with any other prior art references in your
21 declaration, which is --

22 A No. I used the review and the manual from
23 the NZXT fan to illustrate that a person of ordinary
24 skill in the art would have already been familiar at
25 the time of fans that had two connectors on the same

1 side of the fan under any of the constructions
2 proposed in this matter.

3 MR. CHEN: Sorry, Lynne, the realtime
4 doesn't seem to be updating. I'm not getting
5 the latest.

6 Okay. It's loading now, sorry.

7 Q So there is like a little bit of
8 discrepancy above, so just let me quickly ask the
9 question again.

10 Dr. Wolfe, did you combine the NZXT fan
11 with any other prior art references in your
12 declaration, which is Exhibit 1044?

13 A No, I did not.

14 I used the published review and the manual
15 of the NZXT fan to illustrate what a person of
16 ordinary skill in the art would have been familiar
17 with at the time, including the incorporation of two
18 connectors on the side of an illumination fan under
19 any other constructions that have been suggested in
20 this matter.

21 Q Would a POSITA have considered either of
22 those two connectors on an NZXT fan to be a power
23 socket?

24 A I did not investigate that. That's not the
25 purpose that I used it for.

1 Q Would it be accurate to say that the
2 purpose of your citation to the NZXT fan is to show
3 that on the same side of an illumination fan, you
4 can have two connectors?

5 A I explained what the purpose of it was. I
6 mean, part of it is that the other side of an
7 illumination fan, you could have two connectors.

8 Q But you're not using the NZXT fan to show
9 that on the same side of an illumination fan, you
10 can have a power socket and a connector; correct?

11 A I think a person of ordinary skill would
12 understand that you could have two connectors, whether
13 one of them was a power socket or not.

14 Q So the point is to show that you can --
15 strike that.

16 Dr. Wolfe, the point of showing the NZXT
17 in your declaration is to demonstrate that you can
18 have two connectors on the same side of the
19 illumination fan; correct?

20 A I already testified as to why I cited to
21 those documents, but an aspect of it is that a person
22 of ordinary skill in the art would have understood
23 that it was commonplace to have two connectors in two
24 housings on the side of an illumination fan or on the
25 same side, no matter how that's construed.

1 Q But the point is not to show that the
2 illumination fan can have a power socket and a
3 structurally distinct and separable connector on the
4 same side of an illumination fan; correct?

5 MR. WEBER: Objection, form, asked and
6 answered.

7 THE WITNESS: I think a person of ordinary
8 skill would have clearly understood that one of
9 the -- that the two connectors that are shown
10 in the NZXT documents are structurally distinct
11 and that one of them certainly could have been
12 a power socket.

13 It was a very common kind of a connector
14 to have on an illumination fan. In fact, every
15 illumination fan I'm familiar with had one.

16 Also now that you brought it up, some of
17 the NZXT fan products did use a set of cables
18 for power.

19 BY MR. CHEN:

20 Q Do you have any documentation to show
21 that?

22 A No. It wasn't relevant to any of the
23 opinions in my declaration, but you asked about it.

24 Q So you have no evidence to support your
25 statement that NZXT fan uses SATA connections?

1 MR. WEBER: Objection, form, asked and
2 answered.

3 THE WITNESS: No, I did not rely on that
4 for any of my opinions.

5 BY MR. CHEN:

6 Q Dr. Wolfe, do you have any evidence to
7 support your statement that the NZXT fan uses SATA
8 connections?

9 MR. WEBER: Objection, form, asked and
10 answered.

11 THE WITNESS: That's the same question as
12 the last one.

13 BY MR. CHEN:

14 Q You did not answer my question last time,
15 so I'm going to ask it again.

16 Dr. Wolfe, do you recall that you
17 testified NZXT fan uses SATA connections?

18 A I did testify that there are some NZXT fans
19 that I recall using a SATA connection for power.

20 Q In your recollection, did NZXT fans using
21 SATA for data?

22 A Not that I can recall.

23 Q Do you have any evidence to support your
24 statement that the NZXT fans use a SATA connection
25 for power?

1 MR. WEBER: Objection to form, asked and
2 answered.

3 THE WITNESS: No, I did not rely on that
4 in my declaration. That's just in response to
5 a question that you asked me today.

6 BY MR. CHEN:

7 Q In the case where you believe you saw an
8 NZXT fan use a SATA connection for power, did the
9 NZXT fan have two structurally distinctive power
10 connections?

11 MR. WEBER: Objection to form.

12 THE WITNESS: It had two structurally
13 distinct connectors on the side of fan. But
14 again, I didn't rely on whether or not they
15 both had power.

16 Again, I only used it to show the
17 knowledge of a person of ordinary skill in the
18 art that I described before.

19 BY MR. CHEN:

20 Q I'm not talking about that. I am talking
21 about SATA connection that you just testified that
22 you believe an NZXT fan used. So let me ask you
23 again.

24 In the case where you believe you saw an
25 NZXT fan use a SATA connection for power, did that

1 NZXT fan have two structurally distinctive power
2 connections when using SATA?

3 MR. WEBER: Objection to form, asked and
4 answered.

5 THE WITNESS: I don't recall.

6 BY MR. CHEN:

7 Q Why would an NZXT fan use SATA connections
8 for power but not for data?

9 A I don't know why they made that decision,
10 but as I mentioned, the power is essentially identical
11 between a fan connector and a SATA connector while the
12 data is not.

13 Q But you cite SATA connections to show that
14 there could be two housings because of separate data
15 and power connections; correct?

16 A Yes. The use of two housings does not
17 depend on the format of the data being sent on the
18 wire.

19 Q But if a -- strike that.

20 If an NZXT fan uses only SATA power, why
21 would it have two separate housings for power?

22 A I don't think I ever testified that it did.
23 And in any case, I wouldn't speculate as
24 to why that company made that decision.

25 Q Where did you see the NZXT fan use SATA

1 connections for power?

2 A When I was reviewing various data sheets in
3 preparing my report.

4 Q Where are those data sheets?

5 A Online. I told you already I did not rely
6 on them.

7 Q So, again, you don't have any evidence in
8 your possession to make that statement; correct?

9 MR. WEBER: Objection, form.

10 THE WITNESS: You asked me what my
11 knowledge was. You asked me if I knew of
12 anything. No, I don't have any evidence of my
13 knowledge, no.

14 BY MR. CHEN:

15 Q Either way, Dr. Wolfe, you do not believe
16 that SATA data connections were used for the NZXT
17 fans; correct?

18 A I'm not aware of a literal SATA data
19 connection being used in the NZXT fan.

20 Q Dr. Wolfe, do you believe that substitute
21 claims 6 and 7 have the same scope?

22 MR. WEBER: Objection to form.

23 THE WITNESS: I think they may. If, in
24 fact, the flat surface is merely aesthetic,
25 then I believe they have the same scope. But

1 again, that's a legal determination that the
2 PTAB will have to make.

3 BY MR. CHEN:

4 Q What about the electrical terminal being
5 round in claim 7, would that change your view?

6 A So that's problematic in so many ways.

7 The literal way the claim is written, the
8 electrical terminal being round is part of the flat
9 surface. That's not disclosed in the '336 patent
10 and Dr. Tuckerman testified that he doesn't believe
11 that it's part of the claim, that he believes that
12 it can be extended from the flat surface or recessed
13 below the flat surface.

14 So I'm not even sure how to read that
15 claim language if it doesn't mean what it says.

16 But to the degree that the electric -- I
17 do think that the fact that the electrical terminal
18 would have to be round would further limit the scope
19 of the claim, but I think that both Dr. Tuckerman
20 and I agree that the majority of electrical
21 terminals in the prior art were round. So it can't
22 be something that distinguishes the claim.

23 Q In summary, you still believe that
24 substitute claims 6 and 7 have the same scope;
25 correct?

1 A Again, I believe it's a legal issue, but
2 there is no functionality attributed to the surface
3 being flat, there is no functionality attributed to
4 the terminal being round.

5 They appear to me to be cosmetic, but,
6 again, the board can make a determination on that.

7 Q What is your determination in this
8 respect?

9 A Well, as I noted in my report, and I'm not a
10 legal expert, I have read the relevant section of the
11 MPEP, and based on that, these appear to me to be
12 cosmetic or aesthetic elements.

13 But I have not read all the case law and I
14 will let someone who has render a legal opinion and
15 abide by it.

16 Q What is your opinion? That is my
17 question.

18 So let's go to PDF Page 15 of your
19 declaration.

20 A Okay.

21 But I told you my opinion. My opinion is
22 that based on my understanding of the law, I believe
23 that those are cosmetic elements as they've been
24 described in the claim.

25 Q Dr. Wolfe, is it your opinion that

1 substitute claims 6 and 7 have the same scope?

2 MR. WEBER: Objection --

3 THE WITNESS: If my understanding of the
4 law is correct, I believe that the way the
5 claim has been written, those are cosmetic
6 elements and would not impact the scope of the
7 claim.

8 But none of my opinions depend on that. I
9 have provided opinions as if they were critical
10 limitations as well.

11 The specification doesn't articulate any
12 reasoning whatsoever as to why part of the
13 connector would be flat or why the electrical
14 terminals would be round. They are just
15 observations from a drawing.

16 BY MR. CHEN:

17 Q Dr. Wolfe, is it your position that a
18 drawing of a patent cannot support its claim?

19 A No, that's not my opinion.

20 Q Is it your opinion that a patent's
21 drawings cannot support its claims without
22 corroborating text in the specification?

23 MR. WEBER: Objection, form.

24 THE WITNESS: That's not my opinion
25 either.

1 BY MR. CHEN:

2 Q What is your opinion then?

3 MR. WEBER: Objection, form.

4 THE WITNESS: I gave you my opinion that
5 in this particular patent, there is no
6 indication that, one, the identified surface
7 is, in fact, flat; or, two, that the round
8 connectors are a part of that surface; nor,
9 three, that either of those factors are
10 anything more than cosmetic.

11 BY MR. CHEN:

12 Q PDF Page 7 of your declaration, you have a
13 figure that shows a red portion and a blue
14 portion of the embodiment in Figure 1 of the '336
15 patent.

16 Do you see that?

17 A Yes, this is the same figure and the same
18 testimony that I provided in my last declaration and
19 deposition.

20 Q How do you determine which part is the
21 left and which part is the right?

22 A Just by the position that it appeared one
23 time. I'm just describing the left side of the
24 drawing and the right side of the drawing.

25 Q Whether something is on the right or left

1 is arbitrary; correct?

2 A I'm sorry, I missed that word.

3 Q Arbitrary.

4 A Arbitrary?

5 At any given time, I mean, the patent has
6 the same problem. It talks about the top. If I
7 just turn the fan upside down, if you read that
8 completely literally, then the fan wouldn't infringe
9 anymore.

10 Q Does the claim -- strike that.

11 Does substitute claim 6 or 7 have a way
12 for a POSITA to determine which side is on the left
13 or right?

14 A No. Again, that's just for my assistance in
15 understanding my drawing. You just draw a line down
16 the middle of the fan and you have two sides. That's
17 all that's required by the claim.

18 In fact, that's even clearer the way it's
19 written in claim 6 and 7 where it's two sides of the
20 center fan.

21 Q Is it your opinion that the body of the
22 first illumination fan claimed in substitute claim 6
23 or 7 have only two sides?

24 A It's semantic, right. I mean, whenever you
25 have something, it's got a left side and a right side.

1 But if you were to turn it, it would have different
2 sides. I'm just using the plain and ordinary meaning.

3 Q In your opinion, can the body of the first
4 illumination fan as claimed in substitute claim 6 or
5 7 have more than two sides?

6 A Again, it depends on the semantics.

7 I mean, one has to read the claim for it
8 to have any meaning in a way that it is analyzed
9 from a single position.

10 If you were to take an infringing fan and
11 you were to put it up on its edge so that the top
12 was the top edge and the fan was blowing
13 horizontally, if you tried to read this claim too
14 literally, that wouldn't all of a sudden no longer
15 be an infringing fan.

16 I think that the only reasonable way to
17 read the claim is that you can position the fan such
18 that all of the parts read on it.

19 And I've explained very clearly in my
20 testimony over and over and over again that under
21 the ordinary meaning of "side," or at least one of
22 the ordinary narrow meanings of "side," the one that
23 I think is most applicable here, if you lay the fan
24 down flat, it has a left side and a right side.

25 Q How would you determine in what

1 orientation to draw the centerline when you divide
2 the body of the first illumination fan as claimed in
3 claim 6 or 7?

4 A I think it's at your discretion because the
5 claim doesn't specify. So I think as long as there is
6 a way to do it, that's good enough.

7 I mean, again, these claims were written
8 very recently after this issue was wide out in the
9 open. There could have been a -- the claim could
10 have been changed to talk about a lateral surface
11 and an opposite lateral surface, but the patent
12 owner chose not to do that.

13 Q Dr. Wolfe, is it your position that
14 the centerline can be in any orientation for the
15 body?

16 A I have not considered that. It would
17 certainly be obvious in the orientation I illustrated
18 on Page 7 of the PDF.

19 Q So you don't know?

20 MR. WEBER: Objection, form.

21 THE WITNESS: I haven't not considered
22 every possibility. The simplest ordinary
23 possibility is the one that's illustrated on
24 Page 7.

25 MR. CHEN: Can we take like a five,

1 ten-minute break.

2 (Recess taken.)

3 BY MR. CHEN:

4 Q Dr. Wolfe, did you talk to anyone during
5 the break?

6 A I let the cleaning staff into my office.

7 Q Did you review any documents during the
8 break?

9 A I did look through Exhibit 1044.

10 Q Did you use the internet?

11 A No.

12 Q Dr. Wolfe, do you recall earlier you
13 testified that you never saw any evidence showing
14 NZXT fans using both the SATA data and power
15 connections?

16 MR. WEBER: Objection, misstates the
17 testimony.

18 THE WITNESS: I don't recall any.

19 BY MR. CHEN:

20 Q Have you seen any illumination fan using
21 both the SATA data and power connections?

22 A I don't ever recall seeing that.

23 MR. CHEN: I have no further questions.

24 MR. WEBER: Okay. Thanks, Kyle. Let me
25 take three minutes to look through to see if I

1 have anything.

2 (Recess taken.)

3 MR. WEBER: I don't have any questions for
4 Dr. Wolfe. Read and sign.

5 MR. CHEN: Okay. Great. Then we can
6 conclude. Thank you.

7 (Proceedings concluded at 8:20 p.m.)

8 ///

9 ///

10 ///

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1 I, LYNNE M. LEDANOIS, a Certified Shorthand
2 Reporter of the State of California, do hereby
3 certify:

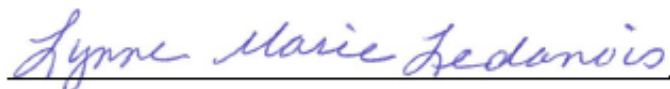
4 That the foregoing proceedings were taken
5 before me at the time and place herein set forth;
6 that a record of the proceedings was made by me
7 using machine shorthand which was thereafter
8 transcribed under my direction; that the foregoing
9 transcript is a true record of the testimony given.

10 Further, that if the foregoing pertains to the
11 original transcript of a deposition in a Federal
12 Case, before completion of the proceedings, review
13 of the transcript [] was [x] wasn't requested.

14 I further certify I am neither financially
15 interested in the action nor a relative or employee
16 of any attorney or party to this action.

17 IN WITNESS WHEREOF, I have this date subscribed
18 my name.

19
20 Dated: November 11, 2025
21

22 
23

24 _____
LYNNE M. LEDANOIS

25 CSR No. 6811

1	246:12,25 247:2,6,9 248:8,11 249:8 249:13 250:10 250:14 251:22 254:8 255:23 256:3 258:17 265:11,14 266:1,7,14 270:12 271:18 272:1 273:16 274:8,17,23 275:2,6,24,25 276:14,23 277:22 279:20 279:24 280:8 281:13,24 282:11,21 290:20 291:16 294:15 295:1 298:17 299:4 300:24 301:10 301:20 302:7 302:23 304:3 304:14,20 312:9,16 313:20,24 315:15,19 316:21 317:9 317:19,20,23 318:4 339:18 340:2,12,24 344:12 358:9	1045 281:18 105 273:4 274:4 277:15 10s 341:1 11 273:2 277:11 360:20 118 247:9 265:10,14,25 266:6 294:22 12 281:16 316:25 342:5 14 252:2 253:6 254:2,4 301:6 301:9,19 302:6 313:18,22 314:10,12,13 314:16,18 315:18 339:23 340:1 15 283:1,9 316:25 352:18 17 273:7 278:1 18 265:23 273:7 277:25 1900 242:16 191 273:2 274:19 276:25 277:4,10,11 194 273:6 277:17,25 278:10 196 273:7 277:25 278:10 281:9,12,17	197 281:4 1:06 241:16 244:2 2 200 269:20,24 2002 249:19 2003 303:8 2006 249:20 273:4 274:4 277:15 2018 285:9 2019 285:8,9 2022 240:16 241:17 2025 244:1 360:20 2037 297:14 2052 251:1,24 252:4 253:7 254:16 255:11 255:21 257:2 260:18 261:8 261:19,23 263:24 264:6 267:3,21 2144.04 249:25 251:13 22 242:7 24 249:11,20 250:9 304:2 240-360 240:17 25 249:20,21 250:12,16
1 247:23,24 283:25 284:2,3 284:22 285:5 286:17,19 354:14 10 240:16 241:17 244:1 301:11,21 302:9 304:22 312:10,15 313:21 314:8 340:4,8,14 341:3 10,690,336 240:11 241:11 100 269:17,24 270:2 1001 244:22 283:23,25 284:2,23 287:13,15,21 287:25 288:6 288:11 290:11 1004 250:7 265:23 284:13 1007 288:19 300:24 1031 244:22 276:14 317:4,8 317:21 1044 244:23 245:23,25			

251:21 254:7 255:22 256:2,4 256:9 258:16 258:18 260:14 266:13 268:6 270:11 271:10 271:17,25 304:13,20 26 249:21 304:10 27 343:10 28 257:1 29 251:1 252:3 253:7 254:17 255:10 257:6 264:5 267:21 29th 246:9	295:2 296:17 297:19,24 298:4,11,22,23 299:18,20 300:3 313:8 314:25 315:4 351:9 354:14 36 290:25 38 294:21 39 294:25 298:17 299:4	5 5 284:23 287:5 288:12,14,17 289:8,11,14,16 289:18 290:5 299:6 300:24 301:3 304:9 342:6 50 269:15 520 261:1 58 291:24 59 248:19,22 249:7 5th 242:17	321:9 322:3,7 322:11,24 323:8,14,20 324:4,11,16,21 325:1,12,22 326:7,13,18,21 326:23 327:2,9 327:16 328:1,7 330:17 331:3,5 331:15,19,22 331:24 332:5 333:22 334:1,6 334:11,18 338:8 339:20 340:18 350:21 351:24 353:1 355:11,19,22 356:4 357:3 63 294:14,21 650.289.7887 242:19 67 294:17 68 339:17 340:2,11,23 6811 240:24 241:18 360:25 6954 360:23
3	4	6	7
3 240:17 295:2 296:17 297:7,8 297:12 298:17 299:20 30 251:1 252:3 253:8 254:17 255:11 257:3,6 264:6 267:21 33 290:25 336 249:18 264:9 273:12 273:23 278:16 284:6 285:3,5 285:12,21 286:6,17,19	4 242:6 273:2 277:11 284:25 285:5 287:2,12 287:15,16,20 287:24 288:2,4 288:6,7,11,19 289:9,24 290:11,15 296:23 298:24 40 249:20 415.983.1190 242:9 45 302:20,22 48 301:9,20 302:7 312:9,15 313:19,23 315:14,19 49 343:12,13,13	6 247:8 248:25 251:19 276:12 285:7 290:21 291:10,22,23 292:3,6,16 293:2,16,19,24 294:3,7 295:6 296:19 297:21 298:1 300:2,9 300:13,19 301:3,12,22 302:11 310:7 310:16 312:12 313:25 314:4 316:11 317:16 317:25 318:13 319:3,11,17 320:5,7 321:5	7 248:25 249:1 250:16 251:3,3 251:18 255:19 257:5,5 276:12 290:5,22

291:10,22,23 292:3,6,16 293:2,17,19,24 294:3,8 295:7 296:19 297:21 298:1 300:2,9 300:19 301:3 301:12,22 302:11 310:8 310:16 312:12 313:25 314:4 316:11 317:16 317:25 318:14 319:3,11,17 320:5,7 321:5 321:9 322:3,7 322:11,24 323:8,14,20 324:4,11,16,21 325:1,12,22 326:7,13,18,22 326:23 327:3 327:10,17 328:2,7 330:17 331:3,5,15,19 331:22,24 332:5 333:22 334:1,6,11,18 338:8 339:20 340:18 342:21 350:21 351:5 351:24 353:1 354:12 355:11 355:19,23	356:5 357:3,18 357:24 70 272:16,22 273:15 274:8 274:16,22 276:23 277:21 277:23 279:15 279:19,23 280:7 281:12 281:23 282:20 72 300:22,23 750 317:3 7727138 240:25 8 88 308:12 8:20 359:7 9 9 281:16 90 336:22,24 337:4,6 94111 242:8 94303 242:18 a a.k.a. 240:4 241:4 abide 263:5 352:15 ability 265:8 272:5 334:19 able 261:3 269:5 286:7,20	above 344:8 acceptable 264:17 access 245:16 accordance 284:4 287:17 accurate 279:20,24 280:5 345:1 accurately 280:1 acquire 261:22 action 360:15 360:16 active 262:23 actual 250:23 259:5 297:7 299:8 339:2 actually 247:14 252:13,14 253:22 254:5 255:3 267:4,22 271:3 281:2 282:19 289:20 294:16,22 299:8 301:16 310:23 311:8 313:14 314:23 317:22 326:2 342:24 343:12 add 271:11 324:6 added 247:23 248:3 339:11	additional 249:2,4 274:5 additionally 249:17 address 318:3 321:25 343:8,9 addressed 317:20 admit 268:19 282:18 admits 272:24 277:8 admitted 273:2 277:13 aer 343:14 aesthetic 249:19,23,25 251:9,11,13 266:21 350:24 352:12 affect 244:17 agree 305:6 331:14 340:11 343:4 351:20 agreeable 289:7 ahead 262:17 262:24 320:15 al 341:6 alternative 310:10 alto 242:18 ambiguous 288:24 289:12
--	--	---	---

amend 246:3 291:20,21 amended 249:1 291:23 318:3 america 265:17 analysis 259:8 288:23 analyze 321:24 analyzed 356:8 andrew 240:15 241:15 244:4 246:1 anew 312:4 331:1 annotated 295:2 297:13 298:16 304:14 304:17 308:1 answer 260:1 261:2 265:7 271:7 272:7 281:20 291:25 293:22 311:20 327:22 333:4 342:7 347:14 answered 260:22 261:15 264:4 267:7 270:14 271:5,7 272:3,4,12 299:13 300:5 312:1 346:6 347:2,10 348:2 349:4	answering 244:14 275:8 330:16 answers 293:11 antecedent 292:12,22 anybody 246:13 anymore 355:9 apologies 321:6 327:25 apologize 261:5 262:20 294:20 299:2 302:2 311:6 apparatus 315:21 appeal 240:2 241:2 appear 251:8 255:5 257:5 266:20 273:25 306:4 352:5,11 appearance 284:4 appeared 354:22 appears 250:22 251:18 257:18 259:6 267:13 apple 336:4 applicable 356:23	applied 257:25 258:2,5 259:9 260:17 261:8 268:2 270:20 288:23 applies 267:1,8 apply 257:22 applying 268:14 arbitrary 355:1 355:3,4 area 295:21 318:20 319:8 320:10 321:18 322:4,13,14,25 323:2,22,23 arm's 245:4 art 249:24 250:4,6 251:12 251:17 284:10 284:16,19 303:18 325:18 341:1 343:20 343:24 344:11 344:16 345:22 348:18 351:21 articulate 353:11 ascribe 256:22 asked 260:21 261:14 264:4 267:6 270:13 271:4 272:2,11 299:12 329:18	346:5,23 347:1 347:9 348:1,5 349:3 350:10 350:11 asking 258:24 259:1 279:25 280:5 291:15 311:21,22,25 317:22 325:7,8 337:22 aspect 345:21 assembled 287:17 assertion 257:8 assistance 275:7 355:14 assume 288:7 291:13 329:19 assumed 258:1 327:6 332:20 assuming 286:4 assumption 259:16 293:13 330:15 337:5 assumptions 260:10 attempt 260:6 262:4 attention 282:13 attorney 266:2 275:18 360:16 attribute 251:4 253:11 254:10
---	---	--	---

257:20 266:16 attributed 352:2,3 available 290:20 avenue 242:16 aware 247:4 250:11 251:23 274:13 282:12 294:11 329:23 350:18	basis 259:1 266:24 267:1 269:3 273:18 273:19,21 277:20 278:6 278:19 279:18 279:22 280:6 292:1,13,14,22 behavior 318:19 belief 265:20 believe 244:18 249:9,9 250:22 259:6 266:2,23 267:13 278:9 280:14 281:1 290:23 293:3 297:23 307:24 309:24 318:16 337:19 348:7 348:22,24 350:15,20,25 351:10,23 352:1,22 353:4 believed 265:20 believes 351:11 best 265:8 266:10,11 272:5 275:12 bidirectional 322:16 bit 287:3,3 292:19 302:14 344:7	blowing 356:12 blue 298:18,25 299:2,5,8,11 354:13 board 240:2 241:2 265:3 266:25 352:6 bodies 287:17 body 284:4 286:9,18 288:22 289:19 290:5,10,15 295:5,13,17,18 295:21,25 296:1,3 319:21 321:18 332:7 332:24 333:7 338:9 355:21 356:3 357:2,15 bold 247:11 291:3 boss 338:22 bottom 247:11 247:21 257:2 291:4 boy 310:20 311:16 break 282:25 283:1,13 302:14 316:7 339:13 358:1,5 358:8 brief 244:11 276:12 316:23	briefly 245:1 bring 343:2 broad 260:9 261:9 broadest 259:10 broadly 257:25 brock 242:5 262:9 263:25 320:11 brought 346:16 bunch 307:21 business 244:21 buy 336:4 337:15 bweber 242:10
b			
b 313:14 back 252:10 266:13 281:23 283:12 304:16 307:8 315:2 317:19 backtrack 328:22 bad 264:2 ballpark 316:25 based 250:21 252:25 267:13 274:15 276:24 293:5,10,11 294:6 305:17 317:14 341:19 352:11,22 bases 273:14 basically 309:3 313:13			
			c
			c 242:1 313:14 313:14,15 cable 341:16 cables 346:17 california 241:16 242:8 242:18 360:2 call 248:7 284:15 289:10 290:2,2,4,9 291:23 307:22 called 282:13 341:15 calling 305:2

calls 246:21	315:22 319:19	chen 240:8	347:13 348:6
capable 324:22	325:25 339:3	241:8 242:13	348:19 349:6
326:23 327:4	certainly	242:15 243:3	350:14 351:3
327:12,19	260:17 265:5	244:7 253:3,21	353:16 354:1
328:4,10,13	282:14 287:2	255:8,20	354:11 357:25
331:16 332:12	308:5 339:6	256:13 259:18	358:3,19,23
333:1 334:10	340:20 346:11	260:12 261:1,4	359:5
339:10 341:11	357:17	261:21 262:6,9	chien 242:13
careful 275:8	certified	262:18,25	chip 329:10
case 249:22	240:24 241:18	263:11,17,22	choice 303:10
276:3 307:14	360:1	263:25 264:19	303:14 342:19
337:20 348:7	certify 360:3,14	267:15 268:3	choices 304:12
348:24 349:23	change 351:5	268:18 269:1	chose 357:12
352:13 360:12	changed	270:6 271:1,13	cien 240:8
cases 269:8,12	357:10	271:21 272:6	241:8
269:15 270:2	changes 250:1	272:15 275:21	circuit 307:9
276:2 308:19	251:13	276:22 280:10	308:15,16
308:19 309:17	characteristics	282:25 283:7,9	circuitry 308:2
cat 340:13	318:18 324:7	283:11 286:15	circuits 341:7
catalogs 283:21	characterizati...	287:8 289:5	circumstances
center 242:6	277:1,24 278:9	294:13 298:2	319:20 325:25
247:21,25	280:25	299:16 300:10	citation 256:6,8
252:9,9 257:2	characterizati...	302:1,13,17,19	345:2
291:2 295:21	280:14	304:1 305:2,5	citations
296:2 318:19	characterize	306:19 313:12	274:19 276:17
320:9 321:17	288:16 307:16	315:6,13 316:6	cite 253:5 256:1
322:8 323:10	charlie 313:10	316:10,18	258:15 267:16
323:16 324:3	313:11	317:15 319:1	267:20 271:2
355:20	cheat 338:22,24	320:23 325:21	349:13
centerline	check 278:11	329:2,12,24	cited 248:9
357:1,14	301:13	330:23 335:1,6	253:8 255:1,17
central 323:11	checking	336:2 339:12	255:21 267:23
certain 252:10	301:17	339:16 344:3	281:7,12 340:8
258:10 279:10		346:19 347:5	340:18 342:11

345:20 citing 249:19 citizen 266:3 claim 249:1,23 250:16 251:2 251:11,18,19 254:10,22,23 255:19 256:20 256:24 257:4 257:21 258:5 258:19 260:8 264:16 267:2,9 270:16 273:5 276:12,13 277:16 290:19 290:21 291:10 291:11 292:3,4 292:6,6,16,17 292:25 293:2,4 293:16,17,19 293:20,21,24 294:3,3,7 295:6,12,16 296:19 297:21 298:1 300:1,2 300:9,13,19 301:3,12,22 302:11 310:16 312:12 313:25 314:4 315:21 316:1,11 317:16,23,25 318:13 319:3,5 319:7,11,17,19	320:7,16,20 321:5,9,12,14 321:23,25 322:3,7,11,15 322:19,24 323:8,14,17,20 323:24 324:4,7 324:11,16,21 325:1,12,22 326:13,18,20 326:21,23,25 327:2,7,7,9,16 327:21,24 328:1,7,16 329:15,19,20 330:1,2,5,7,8 330:10,12,13 330:14,17,22 331:3,5,6,8,9 331:10,15,19 331:22,24 332:5,18,21 333:22 334:1,5 334:6,18,23,24 335:8,11,13,14 335:14,14,17 335:19,19,20 338:8 339:2,11 339:20 340:18 342:21 351:5,7 351:11,15,19 351:22 352:24 353:5,7,18 355:10,11,17	355:19,22 356:4,7,13,17 357:3,5,9 claimed 250:3 250:22 251:5 251:16 253:12 257:18 266:16 279:11 292:24 293:4,6 294:7 295:6 296:13 296:18 300:19 301:2 302:10 312:12 313:24 314:3 316:17 318:20 322:20 327:4 328:19 330:11 331:8 355:22 356:4 357:2 claiming 330:4 claims 248:25 249:1,10 291:12,14,19 291:22,23 298:15 310:7 317:20 318:3 320:5 326:7 334:11 339:6 341:22 350:21 351:24 353:1 353:21 357:7 clara 241:16 244:21	clarification 313:9 clarify 280:4 285:7 291:18 clarity 247:15 313:12 clause 332:12 332:23 338:8 clauses 334:14 337:20 clean 292:15 293:25 301:18 cleaning 358:6 clear 247:10 248:5 257:4 258:23 268:7 268:24 285:19 288:14 289:21 311:9 312:2,3 325:4 328:21 340:8 clearer 355:18 clearly 250:20 252:23 267:12 273:11 278:15 288:21 311:2 346:8 356:19 client 275:18 close 332:4 closer 287:3 cna 310:9,18 311:4,11,15,21 311:22,25 312:5 313:1,2
--	---	--	--

315:1,16,19 316:3 cnb 310:9,20 311:16 315:16 315:19 316:3 cnc 310:2,12 311:14,20 312:1,16,22 313:3,5,10 314:15 315:2 315:15,24 340:13,21 341:5 cnd 310:17,19 311:5,6,8,12,18 312:6,18,21 313:1,2,4 314:17 315:1,1 315:23,25 339:21,23,25 340:14,21 341:5 coach 262:10 colored 298:20 combine 303:18 343:19 344:10 come 297:2 comes 298:24 coming 314:25 commencing 241:16 common 346:13	commonplace 345:23 communication 275:19 communicati... 275:15 company 349:24 compensation 317:2 competitive 309:1 complete 339:7 completely 265:7 325:4 355:8 completion 360:12 complex 308:14 complexities 292:8 complicated 292:19 component 310:4,6,14 components 307:10,15,16 309:7,13,22 340:9 341:3 comprise 261:10 comprises 343:1	comprising 249:3,5 250:18 250:19 251:5,6 253:12,13 254:10,11,24 258:21 266:17 266:18 331:6 computer 285:15,18,23 308:24 concept 308:14 conclude 359:6 concluded 359:7 conclusion 268:13,24 270:22 288:3 325:6,7 conditional 333:5 338:25 conditions 339:3,5 conducting 250:23 255:4 conferencing 246:18 configuration 299:18 316:13 316:16 confused 253:5 connect 312:21 312:23 313:2 320:21 325:2 325:12 341:16	341:17 connected 294:8 295:14 296:1 305:14 305:16 306:8 306:16 307:2,4 307:17,19,23 308:3,9 309:15 314:24 315:3 315:11,16,20 322:3,8 327:12 327:19 328:4 328:13 331:12 341:2 342:9 connecting 324:22 328:10 328:14 connection 295:20 310:19 311:5,12 312:6 312:17 314:17 315:25 318:22 319:23 321:16 322:14,16,17 323:1,3,4,11,12 323:13,23 324:1 326:6 332:2,8,14 333:9 338:11 338:14 340:13 340:21 341:13 347:19,24 348:8,21,25 350:19
---	--	--	--

connections 305:19,22 306:1,2,7,9,14 306:14,15,16 309:20,20 340:18,19 346:25 347:8 347:17 348:10 349:2,7,13,15 350:1,16 358:15,21	287:5 288:11 288:14,17 289:8,11,14,16 289:18 290:13 290:16 295:13 295:14,20,25 296:1,10,23,23 297:4,8 299:3 299:5 303:1,8 303:18 304:3 304:15,22,23 304:24 305:7 305:10,11 306:5 308:6,7 309:23 310:2,9 310:15 318:11 318:23 319:24 321:17 324:1 324:19,20,22 324:25 325:2 325:11,13 326:6 327:11 327:12,19 328:4,10 332:2 332:9,14 333:9 338:11,15 339:19,21 341:23 342:9 342:19,25 345:10 346:3 346:13 349:11 349:11 353:13	285:13,17,22 285:25 286:1,3 289:2 297:12 303:16 304:5 305:9,13,14 307:21 308:6 309:19,21 310:12 341:5 341:16,19 342:20 343:25 344:18,22 345:4,7,12,18 345:23 346:9 348:13 354:8	construed 345:25 contact 281:21 contend 260:19 261:11 263:18 contended 262:1 contending 259:16 contends 251:7 252:16 253:14 254:12 256:15 257:8 258:8 259:2 260:14 266:19 267:17 269:4 270:9 271:23 contention 258:25 267:5 267:11,23 268:5 271:3,17 contents 275:18 context 288:3 307:19 308:4 308:10 309:6 309:16 329:6 333:14 334:5 336:1 337:17 338:7,21 contexts 333:12 contingent 246:3
connector 249:2,4 250:17 250:19,24,25 251:8 252:17 252:18 253:15 253:20 254:13 254:24 255:4 256:17 257:10 257:24 258:9 259:3,13 260:15 261:10 261:13 263:20 264:14,15 266:20 267:18 267:24 268:14 268:17 269:5 270:11,20 271:25 273:6 273:13 277:16 278:16 282:17 284:23 285:6 285:10,11 286:8,20,24	connectors 273:1 277:10	consider 325:19 considerations 341:10 considered 246:22 310:1 325:9 344:21 357:16,21 consistent 255:2 consistently 261:9 288:8 334:16 construction 262:4 293:1,4 335:13,15,19 335:20 constructions 344:1,19	

contrast 281:20 control 342:2 conversations 275:9 convey 271:10 conveyed 270:25 copied 276:2,11 276:13,16 304:5 copy 274:21 275:14 276:6 corner 287:3,4 287:5 correct 247:3 248:2,3 249:8 250:9 251:20 255:12 265:18 266:9,10 268:9 268:20 277:18 278:4,5 279:14 279:20 280:20 280:24 284:6 299:7,22 300:13 305:20 305:23,24 312:13 315:16 330:8 334:7,12 343:7,14 345:10,19 346:4 349:15 350:8,17 351:25 353:4 355:1	correctly 266:22 294:18 310:3 corresponds 300:16,18 corroborate 303:4,24 corroborated 274:2 corroborating 353:22 cosmetic 352:5 352:12,23 353:5 354:10 coughed 287:10 counsel 247:23 275:1,3,7,9,14 283:19 counts 291:21 couple 245:14 course 282:15 court 240:24 cover 275:4,23 300:3 covered 264:22 297:20 335:17 criteria 257:22 critical 353:9 csr 360:25 custom 341:19	d d 242:15 243:1 310:22,23 340:6 data 303:3,8 341:9 347:21 349:8,12,14,17 350:2,4,16,18 358:14,21 date 360:17 dated 360:20 dcc 341:5 decide 341:16 342:18 decision 349:9 349:24 declaration 246:1 247:1,6 247:17 248:7 249:7,12 250:10,13 251:21,25 252:1,2,4 253:7 254:8 255:24 256:3 258:11,13,16 259:21 263:23 265:11 266:6 266:11,14 267:2 270:11 270:18,24,25 271:18,25 272:17 273:17	274:9,16,24 275:13,25 276:1 277:22 279:19,24 280:7,18 281:14,24 282:10,21 284:11 290:21 291:24 294:15 295:1 300:11 300:23 301:10 301:20 302:8 302:21,23 303:17 304:2 304:11,13,21 312:10,16 313:19,23 315:14 316:20 316:24 317:5,8 317:9 339:18 340:2,12,24 342:12 343:5 343:11,13,21 344:12 345:17 346:23 348:4 352:19 354:12 354:18 declare 265:16 definitely 337:6 definition 284:9 definitively 281:20
---	---	---	--

degree 266:3 351:16 deleted 317:7 demonstrate 345:17 depend 349:17 353:8 depends 286:22 306:3 307:18 308:9,15 309:6 309:16 315:4 315:11 323:3 323:12 333:14 336:1 337:17 338:20 356:6 depicting 284:3 287:16 depo 246:22 274:19 deposition 240:14 241:15 246:6,7,14 253:1,4 258:14 258:15 259:14 260:16,23 261:6,17 273:1 273:6 274:15 276:25 277:4 277:10,17,24 278:25 280:19 280:24 281:5 281:10,17 282:20 354:19 360:11	depositions 244:10 depth 286:23 describe 257:22 described 250:6 298:21 314:6 348:18 352:24 describes 298:23 describing 289:15 354:23 description 259:9 288:25 289:13 297:24 300:7 design 249:25 251:13 303:10 303:14 304:11 342:19 designed 341:9 designer 329:10 details 287:7 determination 280:2 351:1 352:6,7 determine 273:11 278:15 279:10 334:24 354:20 355:12 356:25	determined 335:19 device 307:9,15 308:8 devices 308:20 309:2 diagram 284:3 287:16 297:7 difference 248:24 249:10 270:3 333:10 different 271:6 306:25,25 307:10 315:7 332:19 336:6 337:1 341:21 356:1 differently 336:7 difficult 263:15 diode 316:5 direction 360:8 directional 322:17 323:3 directly 315:16 320:21 342:4 disclose 273:12 278:16 297:20 299:18 disclosed 294:11 298:14 305:11 320:3 320:18 343:3 351:9	disclosure 295:8 296:11 299:8,10,24 312:22 313:8 discrepancy 344:8 discretion 357:4 discuss 294:22 discussion 272:25 277:9 305:4 discussions 246:19 276:13 distinct 346:3 346:10 348:13 distinctive 348:9 349:1 distinguish 249:24 250:3 251:12,16 distinguishes 351:22 divide 357:1 document 248:4 252:21 253:18 257:4 303:21 304:17 306:21 documentation 342:11,18 346:20 documents 245:2,3,5,10,17
---	---	---	--

245:20 275:10 276:2,6,16 283:15 345:21 346:10 358:7 dog 310:22,23 311:7,8,13,18 312:7,18 314:17 340:15 doing 244:8 262:15 263:8 265:9 dr 244:8 245:23 246:1 247:8 249:6,17 250:20 251:4 251:25 252:4,8 252:15,16 253:11 254:2,4 254:5,9 255:1 255:19 256:2,7 256:15 257:1,8 257:17 258:8 258:16,24,25 259:2,19,20 260:6 261:11 261:25 262:8 262:16,19 263:9,12,18,18 264:6,20,23 265:1,24 266:16 267:22 269:8 270:9 271:2,3,14,16 271:23 272:24	273:2,9,19,20 274:1,3,7,14,15 274:19,22 275:5,19,22 276:25 277:4,8 277:13,24 278:13,20,24 278:24 279:2 279:12 280:1,6 280:18,19 281:3,4,9,10,17 281:25 282:18 283:12,23 284:22 285:3 285:12,21 287:19,23 289:23 290:3 290:13,19 291:10 292:3 292:16 293:16 293:19 294:2,6 295:4 296:14 296:16 297:19 298:3,10 299:17,25 300:2,11,17 301:19 302:6 302:20,22 303:17 305:6 306:6 309:22 310:4,6 311:4 311:11,16 312:5 313:17 313:21 314:2,7	316:11,19,23 317:25 319:10 319:15 320:6 320:13,24 321:1,3,7 322:2,6,10,22 323:5,7,14,19 324:2,10,20,25 325:10,22 326:7 328:1,7 328:15,21,23 331:2,14,24 332:5 333:10 334:17 339:17 339:25 341:8 342:1 343:19 344:10 345:16 347:6,16 350:15,20 351:10,19 352:25 353:17 357:13 358:4 358:12 359:4 drafted 339:6 draw 289:20 355:15 357:1 drawers 245:7 drawing 289:17 297:14 353:15,18 354:24,24 355:15 drawings 273:12 278:15	288:8 341:2 353:21 drawn 312:8 drive 313:4,5 driven 295:22 296:4 321:19 323:16 driving 297:1 297:17 299:9 299:11 311:23 dropped 283:20 duly 244:5
e			
e 242:1,1 243:1 243:1 earlier 248:11 311:20,25 358:12 earth 308:18,22 308:25 east 242:18 easy 286:13 edge 356:11,12 effect 291:20 either 299:25 303:1,15 309:25 310:9 326:16 341:17 344:21 350:15 353:25 354:9 elaborate 257:13			

electric 323:1 351:16	embarcadero 242:6	347:6,23 350:7 350:12 358:13	260:18 261:1,8 261:19,23
electrical 281:21 295:20 308:20 310:19 311:5,12,17 312:6,17 314:17 318:22 319:23 321:16 322:13,21 323:10,22,25 326:6 332:2,8 332:14 333:9 338:11,14 342:22 343:1,6 351:4,8,17,20 353:13	embellish 279:17	exact 279:5 282:19	263:24 264:6 265:11,14 266:1,7,14 267:3,21 270:12 271:18 272:1 273:4,16 274:4,8,17,23 275:2,6,24,25 276:14,14,23 277:15,22 279:8,20,24 280:8 281:13 281:18,24 282:11,21 283:4,23,25 284:2,13,23 287:13,15,21 287:25 288:6 288:11,19 290:11,20,25 291:3,16 294:15 295:1 297:14 298:17 299:4 300:24 301:10,20 302:7,23 304:3 304:14,20 312:9,16 313:20,24 315:15,19 316:21 317:4,8 317:19,20,23
electrically 305:14,16 306:8,16 307:17,19,23 308:3,9 309:15	embodiment 284:5 286:16 287:18,20,24 288:5,13,18 289:3,9 294:11 297:20,25 300:3,7 354:14	exactly 316:22	
element 249:3 249:5 257:21	embodiments 294:10 320:17 320:18 321:25 324:8,8 327:1 327:3,7,10,15 327:17 328:2,6	examination 243:2 244:6	
elements 249:18,23 250:5,24 251:3 251:11 255:4 257:5 276:13 290:5 352:12 352:23 353:6	employee 360:15	example 248:6 249:25 250:25 251:12 276:11 286:16 308:21 308:24	
email 262:15 283:18,20	engineering 322:22	examples 287:1 303:5,14	
	english 337:2 337:23	except 247:22 275:3 316:3	
	entire 276:1	executor 260:20	
	equivalent 313:7	exemplary 301:5	
	errors 282:12	exhaustively 271:9	
	especially 309:18	exhibit 244:22 245:23,25 246:12,25 247:2,6,9,11 248:1,7,11 249:8,13,19,20 250:7,10,14 251:1,22,24 252:4,11,12 253:7 254:8,16 255:11,21,23 256:3 257:2,6	
	esq 242:5,15		
	essentially 349:10		
	evidence 255:17 346:24		

318:4 339:18 340:2,12,24 344:12 358:9 exhibits 245:6 248:8,12 exist 331:12 expect 324:2 337:12,16 expected 258:6 334:19 expel 338:23 experience 330:4 experienced 258:3 experimentat... 286:10 expert 258:3 273:9 278:13 278:20 330:3,9 352:10 explain 259:12 270:16 explained 267:12 271:9 279:6 345:5 356:19 explaining 254:20 explicit 288:2 exposed 296:22 297:4,13,14 extended 351:12	f f 243:1 fact 251:7 253:14 254:12 257:23 266:19 267:17 268:8 268:11,20 269:4 270:3,8 271:2,15,15,22 272:7 303:12 307:24 346:14 350:24 351:17 354:7 355:18 factor 341:21 341:23 factors 286:23 354:9 facts 265:2 270:23 factual 266:24 267:1 269:3 273:14,18,19 273:21 277:20 278:6,19 279:18,22 280:6 fair 268:4 269:23 280:15 281:1 false 265:21 274:7,10 familiar 343:24 344:16 346:15	fan 286:8,13,18 286:24 287:19 287:23 288:2,5 288:10,12,18 288:22 289:8 289:19 290:5 290:10,15 291:11 292:4,7 292:17,21 293:3,17,20,24 294:4,7,8 295:5,6,9,9,14 295:18,21,22 295:25 296:2,2 296:4,7,8,13,15 296:17,18,24 296:25 297:1,3 297:5,9,10,15 297:17,17 298:4,5,11,12 298:18,19,20 298:25 299:1,5 299:9,9,11,11 299:21 300:15 300:16,17,18 301:2,5,11,22 302:10 310:15 312:10,12,15 313:2,3,4,5,17 313:21,24 314:3,8,9,9,11 314:13,16,18 315:15,25 316:12,13	317:17 318:1,5 318:6,20 319:3 319:7,11,16,22 320:5,7,9,10 321:4,8,17,19 322:3,7,8,11,23 323:8,10,11,16 323:20 324:3,5 324:21,23 325:1,3,11,14 325:24 326:9 326:14,18 327:11,13,18 327:20 328:3,5 328:9,11 331:4 331:16,22 339:19,21,25 340:3,4,8,14,15 340:21,22 341:1,3,18 342:9,13,15 343:18,19,23 344:1,10,15,18 344:22 345:2,3 345:7,8,9,19,24 346:2,4,14,15 346:17,25 347:7,17 348:8 348:9,13,22,25 349:1,7,11,20 349:25 350:19 355:7,8,16,20 355:22 356:4 356:10,12,15
--	---	---	---

356:17,23	313:18,22	291:11 292:4	342:25 343:1
357:2 358:20	314:10,12,13	294:7 295:5,9	355:22 356:3
fan's 286:9	314:16,18	295:13,13,17	357:2
299:2	315:18 339:23	295:18,22,24	five 357:25
fans 285:15,18	340:1 354:13	295:25 296:7	flat 249:3,5
285:23 286:5	354:14,17	296:13,18,25	250:18,19,23
297:11 299:19	figures 273:23	297:17 298:19	251:6,6 252:17
301:7 341:14	304:10 307:25	299:2,5 300:16	253:12,13
342:3 343:14	filed 246:10	300:18 301:2,8	254:11,11,24
343:25 347:18	filing 285:4,13	301:11,11,21	255:7 256:16
347:20,24	285:22 286:7	301:21 302:9,9	256:21,23
350:17 358:14	340:17	302:10 309:23	257:9,18,23
federal 360:11	financially	310:2,15	258:8,21 259:2
feel 284:11	360:14	312:11,11,15	260:14,19
field 285:14,15	find 269:3	313:4,5 314:3	261:12 263:19
285:18,23	289:6 290:1,24	314:7,8,11,15	264:7,8,17
286:1,4,4	fine 245:19	314:18 315:15	266:17,18
fifty 248:20,21	263:2,12	316:12,24	267:24 268:14
figure 253:21	265:22 283:6	317:17 318:1,4	268:15,16
253:25 283:3	290:7,12	319:2,11,16,21	269:6 270:10
283:25 284:2,3	292:14 293:8	319:22 320:4,7	270:17,18,19
284:22 285:5	337:22	320:10 321:4,8	271:24 273:6,9
286:17,19	finish 263:25	321:18 322:3,7	273:10,12,25
287:12,15,16	finite 309:9	322:11,23	277:16 278:4
287:20,24	first 249:2,3	323:8,20 324:5	278:13,16,21
288:2,6,11,19	250:17,18	324:20,21,25	279:3,10,14
289:9,24	251:5 253:12	325:1,11,11,23	280:23 281:22
290:11,15	254:11,24,24	326:8,13,17	282:1,4,17
294:23 295:2	258:21 264:7	327:11,11,18	343:1 350:24
296:17 297:7,8	266:17 268:14	328:3,9 331:4	351:8,12,13
297:12 298:17	268:15 270:17	331:16,21	352:3 353:13
299:20 300:24	273:18 274:14	332:7,24 333:7	354:7 356:24
301:3,6,9,19	275:23 276:24	338:9 340:14	flaws 299:14
302:6 304:9,22	277:3 280:4	340:21 342:25	

floor 242:7,17 flush 289:11,13 290:6 fly 337:16 following 291:8 331:25 332:23 336:3 follows 244:5 foregoing 265:18 360:4,8 360:10 form 254:18 255:13 256:10 259:4,25 260:21 261:14 261:24 264:4 267:6,25 268:10,21 270:13 271:4 271:19 272:2 272:11 276:8 282:22 286:11 286:21 288:20 294:9 297:22 299:12 300:4 301:23 303:20 306:17 314:20 315:9 316:14 317:11 318:15 320:14 325:15 328:25 329:17 330:18 334:21 335:3,25 341:21,23	346:5 347:1,9 348:1,11 349:3 350:9,22 353:23 354:3 357:20 format 349:17 forming 255:18 255:22 256:8 forth 264:6 360:5 foundation 269:7 280:4 305:18 francisco 242:8 free 284:11 fresh 302:5 front 245:21 260:17,24 261:7 284:14 full 253:20 fully 244:14 function 249:18 250:2 251:15 317:17 318:2,13,17,24 319:12 320:8 324:12,13,15 325:2,5,17,19 328:17,17,19 329:15,16,20 329:21,21 330:2,2,4,6,8 330:11,13,13 330:17,20,21	331:5,7,8,9 functionality 251:5 253:12 254:10 256:23 257:20 266:17 341:20 352:2,3 functions 325:12 further 258:4 275:14 287:4 295:24 351:18 358:23 360:10 360:14	269:24 270:2 go 245:12 248:17 249:11 262:16,24 266:13 272:16 281:23 283:23 283:25 287:12 302:20 311:2 317:4 320:15 322:12,25 323:9,21 324:3 336:3,5,9,14,18 336:23 337:4 338:2 339:14 343:10 352:18 going 261:3 263:5 290:18 293:9 309:9 315:1 336:22 336:24 337:12 337:15,25 338:24 347:15 good 244:9 245:2 302:16 357:6 governed 337:20 great 291:7 359:5 greenberg 242:14 ground 306:12 306:13 307:1,9 307:13,14,22
		g	
		general 308:15 326:1 gesturing 263:12 getting 269:2 344:4 give 281:8 287:1 289:21 296:12,14 311:2 333:3 given 256:6 259:11 270:1 270:15,22 272:13,14 314:7 333:25 334:10 355:5 360:9 giving 269:9,12 269:15,18,21	

308:3,7,9,13,14 308:17,22,25 309:2,7,8,20 341:5 342:5,6 grounds 309:14 gtlaw.com 242:20 guess 244:10 246:9 248:15 256:25 284:7 290:1 guidance 264:12 289:4 334:14	hear 337:24 heard 328:23 329:5 333:15 hearing 311:6 helpful 331:20 hi 244:8 high 341:9 higher 341:11 hold 305:3 hope 336:11 horizontally 356:13 hospital 305:2 hour 302:14 316:7 317:3 339:13 hours 283:3 316:25 house 337:15 housed 306:5 housing 250:25 253:20 303:1,9 304:7,24 306:24 307:1 housings 303:2 303:9,15 304:8 306:25 307:1,5 310:12,13 342:20 345:24 349:14,16,21 huang 300:12 human 263:6	i idea 255:3 identical 349:10 identification 290:8 identified 274:1 354:6 identify 244:19 257:18 272:8 273:10 278:13 278:20 279:3 289:7 300:15 300:17 illuminate 316:1 illumination 249:18 250:5 285:23 286:4,8 286:9,18 287:19,23 288:2,5,10,12 288:18 289:8 290:10,14 291:11 292:4,7 292:17,21 293:3,17,20,24 294:3,7,8 295:6,13,18,21 295:22,23,25 296:2,3,3,5,17 296:24 297:2,9 297:10,15,17	297:18 298:4,5 298:11,12,18 298:19,20 299:19,21 300:18 301:2 301:11,22 302:10 310:15 312:12 313:24 314:3,4,8 316:12,13 317:17 318:1,5 318:20 319:3,8 319:11,16,22 320:5,7,10,10 321:4,8,18,19 321:20 322:3,4 322:7,11,13,14 322:23,25 323:2,8,20,22 323:23 324:5 324:21,23 325:1,3,11,13 325:24 326:9 326:14,18 327:11,13,18 327:20 328:3,5 328:9,11 331:4 331:16,22 339:19 341:14 342:3,9,13,15 344:18 345:3,7 345:9,19,24 346:2,4,14,15 355:22 356:4
h			
half 283:3 hand 287:20,24 288:18 289:9 290:11,15 313:18,22 hao 240:8 241:8 242:13 happen 336:15 337:16 happens 298:13 315:22 319:20,25 320:20 326:4 326:20 328:12 339:3,4 hard 290:18 head 262:10 263:8			

357:2 358:20 illustrate 303:22 304:3 343:23 344:15 illustrated 290:6 296:6,22 297:11 307:25 340:5,6 341:3 357:17,23 illustrating 251:1 illustration 304:5 impact 353:6 implementati... 342:2,8 implemented 305:24 important 255:22 256:8 315:23 impossible 286:14 imprisonment 265:22 include 342:11 includes 249:1 250:17 including 341:5 344:17 incorporation 344:17 incorrect 282:7	indicated 309:24 indication 354:6 indirect 340:19 340:20 indirectly 318:10 indulge 294:1 industrial 240:8 241:8 242:12 inevitable 333:21 334:3 information 265:20 289:17 informed 266:3 infringe 355:8 infringing 356:10,15 inset 289:1 inside 285:11 inspect 274:5 install 286:20 instruct 275:17 intend 265:9 intended 313:6 339:8 intending 262:22 271:10 intent 338:4 interested 360:15	interior 297:13 341:2 internet 358:10 interpret 334:15 interpretation 264:10 268:5 335:9 introductory 244:11 invention 250:3 251:16 284:5 287:18 299:24 inventors 299:23 investigate 344:24 ipr2024-01230 240:11 241:11 irrelevant 315:21 issue 283:4 293:1,4 322:1 343:8 352:1 357:8 issued 332:18 332:20 issues 256:5 343:9 italy 336:23 337:4	j job 240:25 judge 293:7 justification 264:7 juts 304:25 k kchen 242:20 key 304:21,24 kind 303:14 346:13 kinds 276:15 337:20 knew 350:11 know 245:20 257:14 262:12 263:3 268:22 269:10,22,25 292:8 296:9,11 306:18,20,22 307:3 320:12 329:5,20 333:10 335:2 336:21 337:7 342:17 349:9 357:19 knowledge 265:19 266:10 266:11 348:17 350:11,13 known 285:13 285:17,22,25 286:1,3 303:6
---	--	--	--

303:13,23 kyle 242:15 253:19 262:17 262:24 264:3 358:24	335:20 337:21 352:13,22 353:4 laws 265:17 lawyer 335:21 lay 269:7 280:4 356:23 led 276:20 ledanois 240:23 241:17 360:1 360:24 left 287:24 302:9 312:11 314:8,11,16,18 315:16 340:14 354:21,23,25 355:12,25 356:24 leftmost 290:4 290:9,14 legal 265:5 292:8 325:6,7 329:22 330:3,9 333:3 351:1 352:1,10,14 letter 313:15,15 313:16 letters 313:13 li 240:8 241:8 242:12 273:4 274:2 277:14 lian 240:8 241:8 242:12 273:4 274:2	277:14 licensed 240:24 life 342:3 light 250:6 303:11 lights 316:1 likely 288:1 limit 351:18 limitation 249:2,4 251:9 252:24 260:8 266:21 268:2 268:14 269:6 273:5 277:16 292:12 301:6 321:21 326:25 343:5 limitations 250:17,21 258:4 264:8 270:17 292:22 297:25 300:8 324:14 331:13 353:10 limited 256:22 line 252:3 273:7,7 277:25 278:1 297:11 355:15 lines 273:2 277:11 281:16 listener 262:24 literal 342:8 350:18 351:7	literally 288:25 289:2 312:8 313:15 355:8 356:14 little 282:4 292:19 302:14 304:24 344:7 llp 242:4,14 loading 344:6 located 288:4 289:8 290:14 290:16 location 244:19 256:21 288:16 289:16 logic 328:24 329:4,7,9 long 247:16 263:11 303:6 357:5 longer 356:14 look 248:12,17 252:13 281:22 284:11 302:2 304:16 306:22 308:4 310:23 320:17 358:9 358:25 looked 245:13 273:9 278:3 279:14 280:23 282:1 283:21 looking 252:10 252:14 315:5
l			
label 288:7 labeled 284:23 284:25 288:12 288:14,17 298:18 299:6 301:8 304:21 340:3 labeling 298:16 lack 256:18 258:9 271:15 272:7 language 251:7 253:13 254:12 254:22,23 258:19 266:18 267:2,9 270:19 290:19,21 295:15 328:8 329:15 337:2 339:2 351:15 lateral 357:10 357:11 latest 344:5 law 292:18 293:6,10,12,18 322:21 334:16 335:5,7,9,12,17			

lot 317:7	270:9 277:20	329:13 332:12	311:20 343:14
lower 252:9	333:19 337:5	332:16,25	349:10
lynne 240:23	manner 259:10	333:13,18	merely 350:24
241:17 313:12	268:2 270:21	334:1 335:13	method 313:6
344:3 360:1,24	298:21	336:5,9,18,19	middle 295:5,9
m	manual 343:22	336:21 338:2	296:7,10,15,17
m 243:1 360:1	344:14	345:6 351:15	355:16
360:24	map 301:10,21	355:5,24 356:7	minute 316:7
machine 360:7	302:8 309:23	357:7	358:1
made 262:4	310:4,7,14	meaning	minutes 283:1
265:19,20	313:21 339:18	250:21 252:23	302:15 358:25
271:3,16 278:6	mapped 309:25	261:9 332:23	misread 282:24
349:9,24 360:6	310:1,2,9	336:16 337:23	missed 298:6,8
mail 283:16	312:10 314:7	338:1,5,12	355:2
mailman	mappings	356:2,8,21	misspoke
283:20	314:11 315:18	meanings	294:20
majority	market 336:4,5	264:13 356:22	misstates
351:20	material	means 246:18	252:20 253:17
make 256:15	317:14	292:23 333:19	358:16
257:8 263:4	materials	334:9	misunderstand
266:24 267:4	286:25	meant 248:6	282:6
267:22 271:23	matter 247:16	294:16,21	misunderstood
274:7 280:1	333:16,16	measuring	263:2,13 282:2
293:25 297:16	335:5,7,9,12,17	308:16	mode 314:21
308:11 328:8	335:20 344:2	mechanical	315:5,7
336:24 337:4,6	344:20 345:25	250:2 251:15	modular
350:8 351:2	matters 250:1	medication	341:15,18
352:6	251:13 269:17	244:16	moment 251:23
makes 300:14	269:20,24	meet 246:13,17	monday 240:16
340:8	270:2 337:19	meets 297:25	241:17 244:1
making 255:11	mean 258:20	300:8 301:6	months 245:14
260:10 263:7	264:3 306:3,21	mention 263:14	morning 336:8
264:1 269:3	307:18 314:23	mentioned	336:10,14,18
	316:15 322:18	254:20 258:10	336:19,20

337:9,11,13,25 338:2 motion 246:3 291:20,21 motorcycle 311:23 moved 287:2 movements 263:4 mpep 249:25 251:12 352:11 multiple 292:22 305:25 307:15 312:24 muted 320:11 mutually 289:6	259:16 284:12 299:7 311:24 318:5 needed 258:5 needs 245:9 258:20 neither 360:14 never 255:14 267:10 272:9 273:11 278:15 342:14 358:13 new 250:16 251:2,18,19 276:11,18,19 291:23 302:5 317:14 318:3 340:18 newly 249:1 nine 248:20,21 nod 262:9 nodding 262:19 nondirectional 323:4 nonfunctional 257:19 264:15 normal 314:14 320:2 normally 245:8 246:22 309:6 note 256:4 281:6 noted 352:9 notion 328:23	november 240:16 241:17 244:1 360:20 number 247:11 274:20 286:22 288:17 303:4 333:12 340:10 341:10 numbers 247:18,20,20 247:21 248:2,8 248:9,17 252:7 252:8,8,12 291:2,3 numerous 303:14 nzxt 343:14,14 343:19,23 344:10,15,22 345:2,8,16 346:10,17,25 347:7,17,18,20 347:24 348:8,9 348:22,25 349:1,7,20,25 350:16,19 358:14	254:18 255:13 256:10 259:4 259:25 260:21 261:14,24 263:21 264:1,4 267:6,25 268:10,21 270:4,13 271:4 271:19 272:2 272:11 276:8 280:9 282:22 286:11,21 288:20 294:9 297:22 299:12 300:4 301:23 303:20 306:17 314:20 315:9 316:14 317:11 318:15 320:12 320:14 325:15 328:25 329:8 329:17 330:18 334:21 335:3 335:25 338:17 346:5 347:1,9 348:1,11 349:3 350:9,22 353:2 353:23 354:3 357:20 358:16 obligated 262:2 obligating 266:8 obligation 262:8
n			
n 242:1 243:1,1 243:1 313:15 name 360:18 nancy 313:10 313:15 narrow 264:10 356:22 narrower 259:12 262:1,4 323:17 nature 323:12 necessarily 246:16 319:14 332:15 need 248:15 250:23 255:3			
		o	
		o 243:1,1 284:18 oath 264:21 objection 252:20 253:17	

observation 262:21 273:23	283:8,18,22,24 284:1,22	opined 249:17 330:19,20	302:25 303:13 340:25 342:16
observations 353:15	287:11 290:1 290:13 291:7	opinion 255:18 255:22 256:9	343:23 344:16 345:11,22
observed 262:18	293:2,15,16 294:24 299:3	258:1 268:8,12 268:19 270:3	346:7 348:17 356:2,21,22
obvious 250:6 300:14 302:25	302:17 304:19 305:1,17 309:1	273:21 297:19 298:10 299:25	357:22 orientation
303:11 310:11 357:17	311:25 316:8 317:6 321:5	300:6 302:24 303:19 309:1	357:1,14,17 original 279:16
obviously 245:20 293:9	323:5 327:25 328:22 329:25	325:8,16 333:4 334:22 335:4	304:16,18 360:11
october 246:9	336:25 339:12 343:16,19	337:18 352:14 352:16,21,21	ornamentation 250:1 251:14
offhand 261:17	344:6 352:20 358:24 359:5	352:25 353:19 353:20,24	outer 284:4
office 240:1 241:1 244:21	old 291:18 once 246:12	354:2,4 355:21 356:3	own 265:19 273:10 278:14
332:20 334:15 358:6	251:10 272:14 ones 291:3,15	opinions 251:2 265:3 266:10	278:21 279:4 owner 258:20
oh 245:16 246:13 247:25	online 350:5 open 357:9	346:23 347:4 353:8,9	322:18 332:16 338:19 339:9
284:15 287:11 305:1	opened 283:16 opening 274:2	opportunity 259:7,11,14	357:12 owner's 246:3
okay 244:22 245:2,8,16,22	285:11,11 290:16	270:16 274:5 338:19	258:22 276:12 316:23 318:9
246:13 247:13 247:17,25	operate 296:11 operated 314:6	opposite 282:19 357:11	340:16 owners 240:9
248:14,22 249:14 250:15	operation 313:7 314:14	opposition 246:2	241:9 242:13
253:5,22 257:7 261:5 262:22	314:15,22 315:5,7	order 260:7 ordinary	p
262:25 263:11 270:1 280:3	opine 300:11	273:24 284:10 284:15,19	p 242:1,1 284:18
282:25 283:5,7			p.m. 241:16 244:2 359:7

page 243:2 247:8,15,18,20 247:21,22,23 247:24 248:1,1 248:8,9,17 252:2,7,7,8,9 252:12 253:6 254:2,4 257:1 257:2,3 265:10 265:14,25 266:6 273:2,4 273:6 274:4,20 275:4,23,24 276:25 277:4 277:11,15,17 277:25,25 281:4,9,12,17 291:2,3 294:21 294:23,25 298:17 299:4 301:9,20 302:7 304:2,10,13,19 304:20 312:9 313:19 315:14 315:19 339:17 340:2,11,23 343:10 352:18 354:12 357:18 357:24 pages 240:17 247:11 248:10 248:11 251:1 252:3,8 253:7 254:17 255:16	255:21 257:6,7 257:14 264:5 267:21,23 278:10 290:25 291:1 palo 242:18 pan 314:5 panel 293:1 paragraph 248:19,22 249:7,11,15 250:9,12,16 251:21 253:25 254:7 255:22 256:2,4,7,9 258:16,18 260:14 266:6 266:13,15 268:6,23 270:11 271:10 271:17,25 272:16,22 273:15 274:8 274:16,22 276:5,23 277:21,23 279:4,6,15,19 279:23 280:7 281:12,23 282:20 291:24 294:14,17,19 294:21 300:22 300:23 301:7 302:20,22	308:12 343:13 paragraphs 249:20,21 255:10,15 274:25 275:1 317:7 343:12 paraphrased 332:3 parentheses 302:9 312:11 part 264:13,15 335:15 345:6 351:8,11 353:12 354:8 354:20,21 particular 253:24 303:2 309:25 314:21 318:7 319:9 324:18 354:5 parts 340:4 356:18 party 360:16 pass 341:4,6 paste 276:7 pasted 276:2 patent 240:1,2 240:9,11 241:1 241:2,9,11 242:13 246:2 249:19 258:20 258:22 264:9 273:12 276:12 278:16 284:6,8	285:5 286:17 286:19 295:2 296:18 297:20 297:24 298:4 298:11,14,22 298:23 299:15 299:18,20,22 300:3 313:8 314:25 316:23 318:8 322:18 328:16 332:16 332:19 334:15 338:19 339:9 340:16 351:9 353:18 354:5 354:15 355:5 357:11 patent's 285:4 285:13,22 286:6 353:20 patentably 250:3 251:16 pdf 247:20 248:9 252:7 265:10,14,25 266:6 291:1 294:21,25 298:17 299:4 301:9,19 302:7 304:2,13,20 312:9,15 313:19,23 315:14,18 339:17 340:2
--	--	--	--

340:11 343:10 352:18 354:12 357:18 penalty 264:24 265:16 people 336:7 perform 259:7 331:7 performing 318:24 perjury 264:24 265:16 person 246:16 273:24 284:9 284:15,18 302:25 303:13 320:2 330:10 333:19 340:25 342:16 343:23 344:15 345:11 345:21 346:7 348:17 perspective 273:24 329:10 329:11 332:19 pertains 360:10 petitioner's 246:2 petitioners 240:6 241:6 242:3 ph.d. 240:15 241:15 244:4	philosopher 329:11 phone 246:20 photograph 273:11 274:6 276:20 278:14 278:21 279:4,7 photographs 273:3 274:3 276:16,18,19 277:14 photos 281:19 phrase 329:5 335:23 336:4 physical 340:9 physics 322:21 piece 304:24 pieces 255:17 pigs 337:16 pillsbury 242:4 pillsburylaw.... 242:10 pin 306:7,8,13 306:15 pins 303:1,3,3 304:7,8 306:4 306:12,23,24 307:4 309:8 310:11 pittman 242:4 place 303:1 360:5 placed 279:7 287:5	places 286:12 286:13 312:24 plain 250:21 252:23 264:13 270:19 329:15 332:22 337:23 338:1,5,12 356:2 please 244:19 244:25 247:8 248:19,22 249:11,15 250:12 257:13 260:1 261:5 262:9,16 263:3 263:3,9,25 265:10,13 272:22 277:7 281:16 283:23 283:25 284:11 286:17 287:12 293:25 294:14 311:24 312:2 343:10 plenty 343:9 plug 320:1 plugged 318:11 point 308:16 338:13 345:14 345:16 346:1 pointed 303:4,7 303:12 331:20 points 264:14	portion 247:25 273:22 290:2 304:23 311:14 319:7 354:13 354:14 posita 273:11 278:14 284:16 284:18 285:4 286:7,19 303:23 324:2,6 325:8,10 326:21 327:2,9 327:16 328:1,8 330:24,25 331:2 332:11 332:22 333:25 334:18 344:21 355:12 position 253:2 258:7 259:19 261:18 270:23 270:25 299:17 318:9 319:15 320:24 321:1,3 321:7 324:10 326:12,16 328:15 334:17 340:17 353:17 354:22 356:9 356:17 357:13 positioned 289:18 positions 287:6
---	--	---	--

possessed	319:22,23	341:17,23	301:3 325:18
299:23	320:1,1,4,6,8,8	342:2,20	presented
possession	320:9,21,22,25	344:22 345:10	302:24
350:8	321:4,8,9,10,10	345:13 346:2	presumably
possibility	321:13,15,16	346:12,18	287:22
357:22,23	321:16,22,22	347:19,25	presuming
possible 259:10	321:23 322:2,6	348:8,9,15,25	336:23 337:1
283:4 328:6	322:10,12,12	349:1,8,10,15	presumption
power 284:25	322:13,23,24	349:20,21	338:24
285:5 288:4,9	322:25 323:1,5	350:1 358:14	prevent 244:13
295:16,19,19	323:7,9,9,10,15	358:21	previous
296:6,22,23	323:15,19,21	practiced 273:5	282:15 291:19
297:2,4,6,8,12	323:21,22,24	277:15	340:17 341:12
298:4,11,19,24	323:25 324:2,3	preamble	previously
298:24 299:20	324:4,5,11,17	292:11,20	254:20
303:2,8 305:7	324:17 325:23	preambles	principle
305:10,13,22	325:24 326:4,5	292:19	329:22
306:2,8,14,15	326:5,8,9,10,13	preceding	prior 249:24
308:5,6 309:18	326:14,15,17	297:9	250:4,6 251:12
309:19,20,21	326:19,22,24	precisely	251:17 252:1
310:7,10,13,18	327:4,5,18,24	244:20	267:12 303:18
311:5,12,15,17	328:3,9 330:1	prefer 247:15	317:5,8 325:18
312:6,17,21,23	330:16 331:3	preferred	343:20 344:11
312:25 313:3,4	331:11,15,17	320:17	351:21
314:4,12,17,25	331:21,23,25	prep 246:23	probably
315:11,20,24	332:1,1,6,7,8	prepare 246:5	248:11 252:11
317:16,18	332:12,13,13	prepared	253:19
318:1,2,4,5,6	332:24,25	247:22 248:3	problem
318:10,13,21	333:1,2,7,8,8	276:1,4,18	248:14 355:6
318:21,22,23	334:2,2,9,10,19	preparing	problematic
319:2,4,6,8,9	334:20 338:9	252:1 350:3	351:6
319:10,12,12	338:10,10,12	present 262:3	proceed 245:19
319:13,16,17	338:13,14	264:8 266:9	261:5 263:10
319:18,18,21	339:10 341:14	284:5 287:18	293:11

proceeding 284:10	344:14	questions 244:12,14 291:9,25 293:11 358:23 359:3	326:21 327:2,9 327:16 328:1 330:10 331:2 334:18
proceedings 291:13 359:7 360:4,6,12	punishable 265:22		really 271:11 275:8 288:1 289:3 290:18 308:14 315:4 315:10 336:25
produced 245:9	purpose 309:19 344:25 345:2,5	quickly 344:8	
product 274:3	purposes 259:8	quote 278:8 332:6,23	
products 273:4 277:14 346:17	pursuant 265:23	quoted 291:15	
pronouncing 311:1	put 279:15 306:21 329:6 356:11	r	realtime 344:3
pronunciation 302:4	puts 264:6	r 242:1	reask 310:25 317:24
proposed 250:16 251:2 344:2	q	rate 317:1	reason 296:12 296:14,16,21
protocols 341:12	question 247:14 260:2,4 261:2 264:1 265:4,7 271:7 274:10 275:9 275:16 277:5 279:21 280:3 280:13 282:3 285:20 292:15 294:1 298:8 301:16,18 302:3,5 305:15 311:1,2,9,22 312:3 317:24 321:11 326:3 328:18 330:16 341:24,24 344:9 347:11 347:14 348:5 352:17	reach 245:4 reached 270:22 read 246:11 248:22 249:15 250:12 251:24 265:13 266:22 268:6 272:22 277:6 278:24 280:17,21 281:16 330:13 334:13 351:14 352:10,13 355:7 356:7,13 356:17,18 359:4	reasonable 259:15 268:12 288:3 356:16
provide 264:12 273:15 279:23 296:16 341:9 343:4		readily 286:7 286:20	reasoning 353:12
provided 273:4 274:3 275:14 277:14 280:5 284:13 287:7 298:25 312:22 316:4 353:9 354:18		reading 253:20 268:25 279:2 280:22 284:7 293:2 316:23	reasons 247:15 recall 248:10 260:16 261:16 276:9 279:2,5 347:16,19,22 349:5 358:12 358:18,22
ptab 334:15,23 351:2			receive 283:18 298:4,11,19 317:18 319:3,6 319:13,18 321:10
published 303:7 343:17			received 321:5 receives 319:9 321:13,22

receiving 331:17	283:2 285:19	reiterating 254:21	rendering 303:19
recently 339:7	289:21 292:15	relate 257:21	rephrase
357:8	293:25 301:18	related 246:21	253:22 313:20
recess 283:10	302:13 305:4	relates 256:23	325:9
302:18 316:9	306:22 312:2,3	relating 250:1	reply 246:1
339:15 358:2	313:13 316:6	251:14	247:1 249:7,12
359:2	317:13 339:12	relative 360:15	250:13 251:21
recessed	339:14 360:6,9	relatively	254:7 255:23
351:12	recycle 283:21	286:14	256:3 272:17
recite 269:6	red 296:23	relevant 346:22	273:16 274:9
323:14 324:16	297:8 299:6	352:10	274:23 277:22
325:23 326:3,8	354:13	relied 250:2	281:13 294:25
329:19,21	redundant	251:15 255:14	302:8 316:20
331:15,25	312:23,25	255:16,18,25	report 308:1
332:6	refer 247:18	256:12,14,18	343:3 350:3
recited 290:23	252:3	257:11 264:18	352:9
292:11 318:17	reference	270:8	reported
318:19 324:13	262:23 263:9	rely 257:7	240:23
324:15 328:16	308:16 317:24	271:22 300:24	reporter
329:14 330:1	referenced	347:3 348:3,14	240:24 241:18
330:21 331:7	292:12,21	350:5	313:9 360:2
332:11,16	references	relying 255:10	representation
recites 292:20	343:20 344:11	271:16 277:17	265:2 308:11
326:4	referred 248:11	279:22	reproduced
reciting 313:13	256:20 257:3,4	remaining	301:9,19 302:7
recollection	referring	273:22	340:1
275:12 347:20	248:10,18,25	remember	requested
reconsider	refers 270:19	246:20 248:13	360:13
282:14	regarding	310:2 316:22	require 287:6
record 248:23	251:2 255:19	remote 240:14	required
249:16 250:13	272:25 273:5	262:25	316:12 355:17
265:15 272:23	277:9,16	render 352:14	requirement
276:3,10 277:6	292:19		342:22

requires 295:12,16 316:2 341:22 resistance 309:10 respect 246:25 250:9 256:7 280:6 282:23 289:3,18 352:8 respectively 295:22 296:4 321:19 respond 260:7 318:6 319:8 responded 260:9 response 333:6 348:4 responsibility 258:22 rest 256:24 264:16 restrict 255:6 retract 282:7 282:10 reveal 275:18 review 279:12 283:15 343:17 343:22 344:14 358:7 360:12 reviewing 350:2 revised 246:3 291:21	right 247:4 253:8 258:12 279:5 282:12 284:20 287:20 288:10,18 289:9 290:11 290:15 291:20 293:4 295:15 296:24 302:3 308:21,24 311:10 313:18 313:22 314:9 314:13,25 338:6,15 340:15 342:23 354:21,24,25 355:13,24,25 356:24 room 245:6,8 245:11,16 rotate 315:25 rotation 295:23 296:4 297:1 321:20 323:16 round 342:22 343:2,6 351:5 351:8,18,21 352:4 353:14 354:7 s s 242:1 284:18 s0 341:6	samples 274:6 san 242:8 santa 241:16 244:21 sata 303:5,18 304:3,5,6,15 305:6,9,14,19 305:22 306:1,7 306:9 307:6 341:8,11,13,17 342:2,9,12,14 342:18 346:25 347:7,17,19,21 347:24 348:8 348:21,25 349:2,7,11,13 349:20,25 350:16,18 358:14,21 satisfy 269:5 saw 257:16 348:7,24 358:13 saying 259:23 279:3 309:4 329:13 332:19 335:16 337:3 says 254:23 284:8 297:6 319:6,7 328:12 351:15 scheduling 246:21	schematic 284:3 287:16 scope 251:19 270:16 334:24 335:11,14,14 335:18 339:8 350:21,25 351:18,24 353:1,6 screen 244:25 248:16 281:5 281:10 289:24 second 249:4,5 250:18,19 251:6 252:3 253:13 254:11 264:8 266:18 268:15,16 270:17 273:20 277:12,21,23 281:8 289:22 292:7,17,20 293:3,17 295:14,20 296:1,2,3,8,9 296:24 297:1,3 297:10,15,17 298:18 305:3 310:15 311:2 311:24 313:3,3 313:18,22,24 314:4,9,12 316:13 318:23 319:23 321:17
---	---	---	---

324:1,18,22,23 325:2,3,13,13 326:6 327:12 327:13,19,20 328:4,5,10,11 332:2,9,14 333:9 338:11 338:14 339:19 339:19,22 340:1,15,22 section 265:23 311:17 352:10 see 246:24 249:24 250:25 251:12 252:5 252:13,19 253:16 254:14 255:9 257:1 273:8 278:3,17 279:13,16 280:23 281:4,9 281:21,22 282:1 283:22 284:23,25 285:2 287:19 287:23 288:4 288:11,14 289:12,15,16 289:20,23 290:13,16 291:7 293:21 294:16 295:1,8 297:6 305:1 324:13,14	327:21,24 330:24 331:7,8 331:10,13,18 349:25 354:16 358:25 seeing 261:23 358:22 seem 344:4 seems 282:16 seen 341:13 342:1,8 358:20 segment 254:9 254:14,16 304:21 305:7,8 selected 276:4 semantic 355:24 semantics 356:6 sense 263:7 297:16 sent 349:17 sentence 253:10,22 254:19 256:15 273:18,20,22 274:15 276:24 277:3,12,21,23 278:2,12 282:24 336:16 338:1,6 separable 346:3	separate 306:1 306:3,4 307:5 349:14,21 separating 303:2 set 303:16 342:20 346:17 360:5 sets 291:12 seventy 272:18 272:19 shake 262:10 263:8 shape 273:1 277:10 share 256:25 281:2,8 283:4 shared 307:10 307:15 sharing 284:20 289:23 308:3,7 309:2,7,14,19 shaw 242:4 sheets 350:2,4 short 309:2 shorted 309:4,5 309:8,11 shorthand 241:18 360:1,7 show 244:25 257:14 262:2 273:25 304:14 341:2 345:2,8 345:14 346:1	346:20 348:16 349:13 showing 299:10 340:13 345:16 358:13 shown 296:23 299:19 340:23 341:1 346:9 shows 248:15 297:7,14 299:23 304:11 342:12 354:13 side 287:20,24 288:18,22,23 289:9 290:11 290:15 295:17 304:6,7 313:18 313:22 316:4 319:21 332:7 332:24 333:7 338:9 344:1,18 345:3,6,9,18,24 345:25 346:4 348:13 354:23 354:24 355:12 355:25,25 356:21,22,24 356:24 sides 355:16,19 355:23 356:2,5 sign 359:4 signal 304:21 305:7,13,19 306:1,7,13,15
--	---	---	--

308:6 342:20 signals 305:11 340:6 341:4 342:4 signature 360:23 signed 265:14 265:25 silent 319:19 320:16,20 321:24 322:15 323:24 334:23 339:4 simple 269:2 323:13 simpler 341:25 simplest 357:22 simply 254:23 303:10 single 275:6,24 303:1,9 304:7 356:9 sir 263:10 sitting 258:7 situation 292:20 318:24 325:9 situations 315:22 six 271:8 size 286:24 skill 273:24 284:10,15,19 302:25 303:13	340:25 342:17 343:24 344:16 345:11,22 346:8 348:17 slot 283:16 slowly 264:3 small 309:10 socket 284:25 285:5 286:1,2 286:8,20 287:2 288:4,9 295:17 296:6 298:24 310:7,10,13 317:17 318:1,4 318:13,21,23 319:2,8,10,12 319:16,18,21 320:1,4,6,8,22 320:25 321:4,8 321:10,15,22 322:2,6,10,23 323:5,7,15,19 324:3,4,11,17 325:23 326:8 326:13,17,22 327:4 328:3,9 330:17 331:4 331:11,15,21 331:25 332:6 332:12,24 333:1,7 334:2 334:9,19 338:9 338:12 339:10 344:23 345:10	345:13 346:2 346:12 socket's 295:19 318:22 319:23 321:16 322:13 323:1,10,22,25 326:5 332:1,8 332:13 333:8 338:10,14 somewhat 289:11,13 sorry 252:17 254:3 268:15 274:10 280:18 287:9,10 295:14 298:8 305:2,5 310:20 311:23 326:2 332:3 344:3,6 355:2 sort 244:16 sounds 265:5 279:25 302:16 311:1 speak 264:2 speaks 303:21 spec 343:3 specific 256:21 286:23 298:13 321:25 341:23 specifically 246:7 343:17 specification 262:3 264:9	272:25 277:9 294:12 295:9 298:14 300:8 303:5 304:6 305:12 320:3 343:7 353:11 353:22 specify 357:5 speculate 321:24 349:23 spend 316:19 spent 316:24 split 305:10 310:11 staff 358:6 stand 247:5 standing 293:12 stands 268:24 start 312:4 321:6 331:1 started 275:10 275:13 starting 302:5 state 250:20 252:23 258:6 271:16 360:2 stated 247:5 249:6 252:15 253:7,10 259:20 266:15 270:18 271:17 273:8 277:12 278:2,3,12
---	--	--	---

279:13 280:11	323:6 330:25	302:10 310:7	summary
280:23 281:25	331:23 339:23	310:16 312:12	254:19 351:23
282:18 310:11	345:15 349:19	313:25 314:3	supplemental
statement	355:10	316:11 317:16	246:1 247:1
253:25 255:12	structural	317:25 318:13	249:7,12
260:13 265:25	318:18 324:14	319:3,11,17	251:21 253:6
266:25 267:17	331:13	320:7 321:5,9	254:2,7 255:23
269:4 270:9	structurally	322:7,11,24	256:2 272:17
271:23 278:7,9	346:3,10 348:9	323:8,20 324:4	273:16 274:9
282:3,7,8,16	348:12 349:1	324:11,16,21	274:23 277:21
333:5,15,18,20	structure 325:5	325:1,12,22	279:19 281:13
346:25 347:7	325:20 328:16	326:7,12,18,21	294:25 302:8
347:24 350:8	328:17 329:14	326:23 327:2,9	316:20 317:9
statements	330:1,7,8	327:16 328:7	supplementing
258:10 265:18	students	330:17 331:3,4	317:14
265:20,22	338:22,24	331:15,22,24	supplied
266:9	subject 256:19	332:5 333:22	295:19 310:18
states 240:1	subscribed	334:1,6,18	311:4,11,17
241:1 254:9	360:17	338:8 339:20	312:5,17
265:17	substantive	342:21 350:20	314:16 315:24
statute 337:20	246:19 248:24	351:24 353:1	318:2,5,6,9,21
stenographic...	249:10	355:11,22	319:12,17,22
240:23	substantively	356:4	320:8 321:9,15
storage 245:15	279:18	sudden 356:14	321:23 322:12
strange 282:5	substitute	sufficient	322:24 323:9
strength	290:21 291:10	249:24 251:11	323:15,21,25
286:24	291:12,14,18	289:16	324:5,17
strike 253:23	292:3,6,16	suggest 256:20	325:24 326:4,5
254:3,4 285:2	293:2,16,19	suggested	326:9,10,14,15
296:13,15	294:3 295:6	342:14,16	326:18,23
299:3 300:1,16	296:13,18	344:19	327:4 331:23
304:19 310:5	297:20 300:2	suggesting	332:1,7,13,25
310:25 313:20	300:12,19	264:16	333:2,8 334:2
320:5,25 321:1	301:3,12,22		334:10,20

338:10,13	254:11,12,13	syntax 282:4	teaches 300:12
supplies 299:20	254:25 255:7	t	teachings
312:23 315:12	256:16,16,21	t 243:1 284:18	342:17
supply 297:6	256:22,23	take 252:13	technology
312:25 314:4	257:9,9,18,19	276:21 282:25	240:4 241:4
315:20 320:1,9	257:23 258:8,9	283:1,9 302:14	tell 245:10
320:21 327:18	258:22 259:2,3	316:7 332:19	247:16 248:16
327:24	259:13 260:14	339:13 356:10	257:15 263:15
supplying	260:15,19,20	357:25 358:25	273:3 277:13
314:12	261:10,12,12	taken 241:15	286:17 289:17
support 246:2	263:19,19	270:23 283:10	319:25 322:16
259:9 267:16	264:7,8,17	302:18 316:9	326:20 331:11
346:24 347:7	266:18,18,19	339:15 358:2	338:19
347:23 353:18	267:18,24,24	359:2 360:4	tells 333:6
353:21	268:15,16,17	talk 283:13	338:22 339:2
supported	269:5,6 270:10	291:22 357:10	ten 269:11
343:7	270:10,17,18	358:4	302:15 316:7
supports	270:20 271:24	talking 247:10	358:1
282:15	271:24 273:10	253:24 262:13	term 288:23
supposed	273:13,25	263:6 285:7	289:6
331:11	278:14,16,21	291:1,22	terminal
sure 265:4	279:4,10	309:18 317:19	342:22 343:1,6
277:7 280:12	282:17 288:5	327:23 333:20	351:4,8,17
291:17 301:17	288:12,15	336:15,16	352:4
316:15 327:23	289:7,10,13,19	337:8 348:20	terminals
328:18 334:13	290:4,6,8,10,14	348:20	351:21 353:14
336:5 337:18	290:17 297:9	talks 315:22	terms 317:1
351:14	299:6 343:1	319:20 355:6	testified 244:5
surface 249:3,5	350:24 351:9	taught 340:25	257:17 280:1
250:18,19,23	351:12,13	tautology	280:17 282:20
250:24 251:6,6	352:2 354:6,8	328:20,24	313:17 345:20
251:8 252:16	357:10,11	329:14 330:25	347:17 348:21
252:17,18	sworn 244:5		349:22 351:10
253:13,13,14	265:2		358:13

testify 256:5 260:11,13 274:14 276:24 281:25 347:18	343:5 354:18 356:20 358:17 360:9	304:17,17 307:18 308:8 308:11 309:25 310:1,1 316:22 321:11 324:6 326:3 327:6,14 328:12,19 329:18 330:19 332:15 333:4,5 334:4,4 335:5 335:7 336:6 338:4,18,23 339:1 341:10 345:11 346:7 349:22 350:23 351:17,19 356:16,23 357:4,5	303:6,23 316:19,24 333:1 343:25 344:17 347:14 354:23 355:5 360:5
testifying 262:19 264:21 264:24 278:19	text 265:13 272:25 276:11 277:9 289:2,15 340:7 353:22	310:1,1 316:22 321:11 324:6 326:3 327:6,14 328:12,19 329:18 330:19 332:15 333:4,5 334:4,4 335:5 335:7 336:6 338:4,18,23 339:1 341:10 345:11 346:7 349:22 350:23 351:17,19 356:16,23 357:4,5	times 244:11 271:8
testimony 244:17 250:22 252:25 254:22 255:1,2,6,19 256:1,8,18,19 258:13 259:5 259:21 260:6 260:17,24 261:6,17 263:9 265:2 267:14 267:16,20 268:11,13,25 269:9,12,15,18 269:21,24 270:2 271:14 271:20 272:9 272:10,13,14 273:15,19,20 274:8,11 275:5 275:10,22 277:2,17,25 278:10,23 279:3,5,9,13,16 279:23 280:7 280:15,16,25 281:5,17 282:6 293:9 315:8	thank 245:2 246:4 262:11 263:17 275:20 301:15 320:13 359:6 thanks 316:8 358:24 thermaltake 240:4,4,5 241:4,4,5 thing 253:20 320:2,3 333:20 things 245:7,14 255:25 256:11 256:14 257:11 260:11 263:1 276:15 316:3 331:13 think 246:11 252:11 259:15 260:3,5 268:6 268:23 269:14 271:7,9 276:17 276:20 282:16 283:2 285:10 288:1,3 290:5 292:25 300:5	310:1,1 316:22 321:11 324:6 326:3 327:6,14 328:12,19 329:18 330:19 332:15 333:4,5 334:4,4 335:5 335:7 336:6 338:4,18,23 339:1 341:10 345:11 346:7 349:22 350:23 351:17,19 356:16,23 357:4,5 thinks 333:20 third 293:20,23 294:3,8 297:5 thirty 291:5,6,7 thought 258:4 three 245:6 291:6,7 297:11 299:19 341:1 354:9 358:25 throughput 341:9,12 time 250:11 262:16 274:13 275:13 285:3,9 285:12,17,21 286:6 302:25	tiny 287:3,3 today 244:14 258:7 271:14 275:5,22 291:13 348:5 today's 246:5 together 304:9 306:5 307:2,4 314:24 315:3 told 350:5 352:21 tomorrow 336:8,10,14,17 336:19,20 337:8,11,12,25 338:2 took 261:18 276:18 top 355:6 356:11,12 totality 258:13 trademark 240:1 241:1 transcribed 360:8

transcript	312:5 313:19	280:18,19	u
258:15 274:16	313:23 314:6	281:4,10,17	u.s. 240:11
276:25 278:25	314:10,12,19	316:23	241:11
280:19 281:10	340:1	turn 247:8	u.s.c. 265:23
282:24 302:2	tuckerman	248:19 265:10	ultimately
310:24 311:3	249:17 250:20	294:14,19	328:24
360:9,11,13	251:4 252:16	355:7 356:1	unchanged
traurig 242:14	253:11 254:9	two 255:16	276:13
treat 309:11	256:2,15 257:8	257:7,14	unclear 289:1
treated 260:8	257:17 258:8	287:17 291:12	under 262:3
trial 240:2	258:16 259:2	297:12 303:2,9	264:21,24
241:2	259:20 261:11	303:15 304:8	265:16,17
tried 356:13	261:25 263:18	306:24,25	293:18 314:10
true 259:21	264:6 266:16	308:5 309:1,7	325:25 339:3,4
265:18,19,21	267:22 270:9	309:13 310:12	344:1,18
266:9,10 305:9	271:3,16,23	310:13 342:19	356:20 360:8
314:10 327:1,7	272:24 273:1,2	343:25 344:17	understand
360:9	273:6,9 274:1	344:22 345:4,7	260:6 263:1
truism 329:3	274:3,19	345:12,18,23	264:20,23
trust 334:15	276:25 277:8	345:23 346:9	265:1,4,21,24
truthfully	277:10,13	348:9,12 349:1	266:3,4 270:3
244:14 265:7	278:13,20	349:14,16,21	277:5 279:21
try 256:25	280:1 281:25	354:7 355:16	280:11,12
trying 253:21	282:19 351:10	355:19,23	284:17 305:15
253:25 262:10	351:19	356:5	307:6 328:8,18
262:13 268:23	tuckerman's	type 286:1,8,20	329:3,7,9
269:2 275:17	251:25 252:4,8	334:5	330:10 337:3
289:6 290:1	255:1,19 256:7	typed 275:24	338:1 341:8
tsuji 300:12,15	258:25 260:6	types 246:17	345:12
300:18,25	262:8 273:19	286:2 334:14	understanding
301:4 302:6	273:20 274:15	typing 275:13	249:23 251:10
309:22 310:6	277:4,24		253:1 254:21
310:14,18	278:24 279:2		258:12 261:18
311:4,11,16	279:12 280:6		

261:22 265:6 266:5,8 278:22 279:7 280:15 292:10,18,23 293:6,10,12,18 293:23 294:2,5 294:6 295:4 298:3 306:6 308:13,17 314:2 317:12 318:8,12 322:22 328:22 329:25 330:7,9 335:8,11,18,22 335:23 338:5 339:7 340:16 352:22 353:3 355:15 understood 263:16 280:22 285:4 325:10 326:22 327:3 327:10,17 328:2 331:3 332:11,22 334:1 345:22 346:8 undue 286:10 unfortunately 336:11 unintentional 262:20 unit 301:5,11 301:21 302:9	312:10,15 313:3,3,4,5,18 313:21 314:8,9 314:11,13,16 314:18 315:15 339:21 340:1,4 340:14,15,21 340:22 341:1,3 united 240:1 241:1 265:17 units 340:3,8 university 242:16 unknown 289:12 unquote 332:9 332:25 unrelated 264:16 updating 344:4 upside 355:7 usa 240:5 241:5 use 245:20 247:19,20 248:1,8,15 261:19 268:1 286:7,13 298:16 310:12 317:23 333:22 334:6 336:7,13 342:12,17 346:17 347:24 348:8,25 349:7 349:16,25	358:10 used 247:21,25 267:10 277:3 288:7 303:15 303:22 307:20 341:13 342:2 342:15 343:22 344:14,25 348:16,22 350:16,19 uses 333:24 346:25 347:7 347:17 349:20 using 286:16 334:11 345:8 347:19,20 349:2 356:2 358:14,20 360:7 usually 307:11 309:10 335:15 341:20	various 350:2 verbatim 290:23 version 291:19 303:7 304:14 vi 249:5 251:3 257:5 video 263:15 videotaped 241:15 view 300:12 308:2 309:14 351:5 voltages 308:16 volts 342:5,6 volume 240:17
		v	w
		v 240:7 241:7 249:3 251:3 257:5 vacation 336:23 vague 303:20 valid 327:8 variety 286:2 304:11	want 257:15 275:8 277:5 290:7 333:3 wanted 263:14 290:9 294:22 322:19 339:9 way 247:19 248:16 255:7 256:20 260:18 264:11 267:1,8 268:16 288:22 290:1 298:13 298:24 299:23 309:25 318:7 319:9 321:23 324:18 334:13

337:10 339:2	317:11 318:15	276:9 281:19	275:5,19,22
340:3 350:15	320:13 325:15	282:23 283:8	278:24 281:3,9
351:7 353:4	328:25 329:8	286:12,22	282:18 283:12
355:11,18	329:17 330:18	288:21 294:10	283:23 284:22
356:8,16 357:6	334:21 335:3	297:23 299:14	285:3,12,21
ways 305:25	335:25 338:17	300:5 301:24	287:19,23
351:6	346:5 347:1,9	303:22 306:18	289:23 290:3
we've 264:22	348:1,11 349:3	313:10 314:21	290:13,19
283:2 302:13	350:9,22 353:2	315:10 316:15	291:10 292:3
316:6 339:12	353:23 354:3	317:12 318:16	292:16 293:16
weak 311:6	357:20 358:16	320:11,16	293:19 294:2,6
weber 242:5	358:24 359:3	325:16 329:1,9	295:4 296:14
252:20 253:17	weird 342:25	329:18 330:19	296:16 297:19
254:18 255:13	welcome	334:22 335:4	298:3,10
256:10 259:4	283:12	336:1 338:18	299:17,25
259:25 260:21	whatsoever	346:7 347:3,11	300:2,11,17
260:25 261:14	353:12	348:3,12 349:5	301:19 302:6
261:24 262:12	whereof 360:17	350:10,23	302:20,22
262:22 263:5	wide 357:8	353:3,24 354:4	303:17 305:6
263:16,21	willful 265:21	357:21 358:18	306:6 309:22
264:2 267:6,25	winthrop 242:4	360:17	310:4,6 311:4
268:10,21	wire 323:13	wolfe 240:15	311:11,16
270:4,13 271:4	349:18	241:15 244:4,8	312:5 313:17
271:19 272:2	witness 252:22	245:23 246:2	313:21 314:2,7
272:11 275:16	254:19 255:14	247:8 249:6	316:11,19
276:8 280:9	256:11 259:5	252:15 254:2,4	317:25 319:10
282:22 283:6	260:1,3,23	254:5 257:1	319:15 320:6
286:11,21	261:2,16,25	258:24 259:19	320:13,24
288:20 294:9	262:10 264:5	262:16,19	321:1,3,7
297:22 299:12	267:8 268:1,11	263:12,18	322:2,6,10,22
300:4 301:23	268:22 270:5	264:20,23	323:5,7,14,19
302:16 303:20	270:15 271:6	265:1,24 269:8	324:2,10,20,25
306:17 314:20	271:20 272:4	271:2,14 274:7	325:10,22
315:9 316:8,14	272:13 275:17	274:14,22	326:7 328:1,7

328:15,21,23	writes 334:5
331:2,14,24	writing 275:11
332:5 333:10	316:20
334:17 339:17	written 246:8
339:25 341:8	258:20 259:8
342:1 343:19	297:24 300:7
344:10 345:16	323:18 339:1
347:6,16	351:7 353:5
350:15,20	355:19 357:7
352:25 353:17	wrong 282:2
357:13 358:4	299:24
358:12 359:4	wrote 254:17
wolfe's 263:9	274:25 275:6
word 275:6,24	317:8
276:4 298:6,8	x
307:19 333:11	x 243:1,1
333:11,22,23	360:13
333:24 334:7	y
334:11 336:13	years 337:7
355:2	yellow 295:5
words 259:12	298:20 299:1,9
261:20,23	299:11
264:11 267:10	z
268:1 330:12	zoom 246:17
331:10,18	
work 336:9,15	
336:18 337:12	
337:25 338:3	
works 311:14	
337:2	
write 274:22	
275:1,3 330:5	
330:6	