

1 UNITED STATES PATENT AND TRADEMARK OFFICE

2 *****

3 BEFORE THE PATENT TRIAL AND APPEAL BOARD

4 *****

5 MEDTRONIC, INC.,

6 Petitioner,

7 v.

8 MOSKOWITZ FAMILY LLC,

9 Patent Owner.

10 *****

11 IPR2026-00121

Patent 11,864,755

12 *****

13 REMOTE DEPOSITION OF

14 BRAD CULBERT

15 Wednesday, July 1, 2026

16 10:03 a.m. to 4:41 p.m. (Eastern)

17 Pages 1 to 148

18 JOB NO.: MW 8290329

19 REPORTED BY: Merilee S. Johnson, RDR, CRR, CRC, RSA

A P P E A R A N C E S

(All appearing via remote videoconference)

ON BEHALF OF THE PETITIONER:

PAUL HASTINGS LLP

BY: Young J. Park, Esq.

200 Park Avenue

New York, New York 10166

Phone: (212) 318-6000

Email: youngpark@paulhastings.com

ON BEHALF OF THE PATENT OWNER:

AVANTECH LAW, LLP

BY: Ashley LaValley, Esq.

Eric Zelepugas, Esq.

80 South Eighth Street

Suite 900

Minneapolis, Minnesota 55402

Phone: (855) 750-9951

Email: lavalley@avantechlaw.com

Email: zelepugas@avantechlaw.com

I N D E X

WITNESS: BRAD CULBERT	PAGE
Examination by Ms. LaValley.....	5
Examination by Mr. Park.....	143

CAUTION or INSTRUCTIONS NOT TO ANSWER:

Page 16, Line 9
Page 18, Line 25
Page 20, Line 7
Page 20, Line 15
Page 30, Line 7
Page 40, Line 12

SPECIAL INSTRUCTIONS or REQUESTS: (None.)

E X H I B I T S

PREVIOUSLY MARKED EXHIBITS FIRST REFERRED TO: PAGE

Exhibit 1002 Declaration of Mr. Brad Culbert 23
in Support of Petition for
Inter Partes Review of
U.S. Patent No. 11,864,755

Exhibit 1003 Brad Culbert Curriculum Vitae 41

Exhibit 1008 U.S. Patent Application 120
Publication 2003/0045877,
published March 6, 2003

Exhibit 1009 U.S. Patent Application 134
Publication 2004/0059271,
published March 25, 2004

Exhibit 1010 U.S. Patent No. 7,056,343, 84
June 6, 2006

Exhibit 1051 Exhibit J1 61

REPORTER'S NOTE: All quotations from exhibits are
reflected in the manner in which they were read into
the record and do not necessarily indicate an exact
quote from the document.

1 (PROCEEDINGS, July 1, 2026, 10:03 a.m.)

2 COURT REPORTER: We're on the record in
3 the matter of Medtronic, Inc., versus Moskowitz
4 Family LLC.

5 Counsel, please state your appearances
6 for the record and who you're representing,
7 beginning with the noticing attorney.

8 MS. LaVALLEY: My name is Ashley
9 LaValley, and I'm from Avantech Law, LLC, and I
10 represent the patent owner, the Moskowitz Family,
11 in this proceeding.

12 MR. PARK: Young Park from Paul
13 Hastings LLP representing petitioner, Medtronic, as
14 well as the witness, Mr. Brad Culbert.

15 BRAD CULBERT,
16 duly affirmed, was examined and testified as follows:

17 EXAMINATION

18 BY MS. LaVALLEY:

19 Q. Good morning, Mr. Culbert.

20 A. Good morning.

21 Q. Can you please state your full name and
22 address for the record.

23 A. Brad Culbert, 22533 Petra, Mission Viejo,
24 California 92692.

25 Q. And where are you testifying from today,

1 Mr. Culbert?

2 A. At the office of Paul Hastings in
3 Washington, D.C.

4 Q. Who is in the room with you?

5 A. Mr. Young Park.

6 Q. And is Mr. Park Medtronic's counsel?

7 A. Yes, that is correct.

8 Q. Is anyone else in the room with you?

9 A. No, there is not.

10 Q. And what device are you using to take the
11 deposition today?

12 A. (No response.)

13 MR. PARK: Do you understand that
14 question?

15 A. No, I'm not sure. What do you mean?
16 Like...

17 Q. So I see -- I think -- I can see from the
18 feed -- I just want make clear what's, kind of, in
19 front of you and what are you looking at. So I see
20 there's a screen in front of you; is that right?

21 A. This is a control screen. There's no video
22 on it.

23 MR. PARK: The AV control screen.

24 A. So I'm looking at a TV monitor-type screen
25 with a camera on top that's pointed at me, and

1 there's microphones on the table.

2 MR. PARK: This is just a
3 controlling --

4 THE WITNESS: We can turn it around.

5 MR. PARK: I just did.

6 THE WITNESS: Leave it away from me or
7 whatever. That's fine.

8 BY MS. LaVALLEY:

9 Q. That's not necessary. I was just
10 confirming whether it's an iPad in front of you and
11 whether anything is open.

12 Okay. Great. So you have some paper
13 documents with you today, correct?

14 A. That is correct.

15 Q. And what -- what are those?

16 A. This book is my declaration. This book
17 there, the exhibits.

18 (Proceedings paused due to a technical
19 interruption.)

20 BY MS. LaVALLEY:

21 Q. Okay. Mr. Culbert, have you been deposed
22 before?

23 A. Yes, I've been deposed before.

24 Q. How many times?

25 A. I'm just going to count.

1 11 times.

2 Q. And you were looking at -- what document
3 were you looking at to determine that?

4 A. Exhibit 1003, my CV.

5 Q. Okay. And what proceedings were those
6 depositions in?

7 A. (No response.)

8 Q. Just to clarify, just generally, what types
9 of proceedings.

10 A. So there was one PGR, one litigation case,
11 and nine IPRs.

12 Q. And roughly, in those proceedings were you
13 being deposed for the patent owner or the
14 petitioner?

15 A. A mix of both.

16 Q. Roughly, what percentage would you say were
17 the patent owner?

18 A. I'll give you 8 of 11. So that's just
19 under 80 percent.

20 Q. And the remaining three were on behalf of
21 the petitioner; is that correct?

22 A. Two were. One was a litigation case, which
23 was not -- did not involve a patent.

24 Q. And, generally, what technologies were at
25 issue in those proceedings?

1 A. The majority of the proceedings were
2 related to expandable spine cages. Or devices or
3 implants.

4 Q. What do you mean by "devices or implants"?
5 Do you mean spinal devices or implants?

6 A. Yes. Spinal devices, implants. They're
7 all very related.

8 Q. Okay. So I'll just briefly go over the
9 ground rules for the deposition. I know you've
10 been through this before.

11 But you understand that you're testifying
12 under oath today, right?

13 A. That is correct.

14 Q. And is there any reason why you can't give
15 truthful, accurate, and complete testimony today?

16 A. No, there's not.

17 Q. If at any point today I ask you a question
18 that you don't understand, can you please let me
19 know and I will try to clarify it?

20 A. I will.

21 Q. If you respond to my question, is it fair
22 to assume that you understood it?

23 A. That is fair.

24 Q. And I'll try to take breaks every hour or
25 so but, you know, you'll let me know if at any

1 point you need a break, Okay?

2 A. Okay.

3 Q. And Medtronic's counsel is with you today,
4 correct?

5 A. That is correct.

6 Q. And you understand that at certain points,
7 he may make certain objections?

8 A. I do.

9 Q. And unless he --

10 A. I do understand.

11 Q. I'm sorry. What was that?

12 A. Sorry. I just expounded. I do understand.

13 Q. Okay. And that raises my next instruction.

14 Just so we have a clear record today, you
15 know, please make sure you wait until I'm finished
16 my question, until you respond, and I will try to
17 do the same and not move on to my next question
18 until your answer is complete. Okay?

19 A. Okay.

20 Q. Okay. And unless counsel instructs you not
21 to answer, I'll ask that you provide an answer to
22 my question. Do you understand?

23 A. I understand.

24 Q. And who are you representing in this IPR
25 proceeding?

1 MR. PARK: Who is he representing?

2 MS. LaVALLEY: Yes.

3 MR. PARK: You can answer that
4 question.

5 THE WITNESS: I apologize. I didn't
6 hear what she said.

7 MR. PARK: Ask her to --

8 BY MS. LaVALLEY:

9 Q. Okay. I can repeat the question. Who are
10 you representing in this IPR proceeding?

11 MR. PARK: Objection to form.

12 A. I am representing myself.

13 Q. So you are acting --

14 MR. PARK: I can say for the record, as
15 I said earlier, that I'm representing both
16 Medtronic and the witness.

17 BY MS. LaVALLEY:

18 Q. And do you believe you are acting
19 independently today, testifying independently
20 today?

21 MR. PARK: Objection to form.

22 You can answer if you understand what
23 she means.

24 A. Yeah. Can you please clarify the question?

25 Q. Do you believe you are testify -- you do

1 not believe you are testifying on behalf of either
2 party in this proceeding; is that correct?

3 MR. PARK: Objection to form.

4 You can answer if you understand.

5 A. I'm -- we're getting into legal terms. I'm
6 not comfortable answering.

7 Q. Okay. I can brief -- I can rephrase my
8 question on this.

9 So you are not -- are you testifying on
10 behalf of either the patent owner or the petitioner
11 in this proceeding?

12 MR. PARK: Objection to form.

13 A. Again, I don't understand the legal
14 implications of the question.

15 Q. And what part of my question do you not
16 understand?

17 A. Generally what you're asking. I'm here
18 because I wrote a -- an expert report, and I am
19 here to answer questions about it as an expert
20 witness.

21 Q. And on -- did you submit that expert report
22 on behalf of a specific party in this proceeding?

23 A. I wrote the report and submitted it to --
24 signed and submitted it to Paul Hastings, who
25 represents Medtronic.

1 Q. And do you understand whether your opinions
2 support the positions of Medtronic that it's taken
3 in this IPR proceeding?

4 MR. PARK: Objection to form.

5 If you understand.

6 THE WITNESS: Yeah.

7 A. We're going beyond my declaration.

8 So I was asked to consider whether the
9 prior art references disclose or suggest the
10 features recited in claims 1 to 6, 8 to 12, and 17
11 to 20, the challenged claims in the '755 patent.
12 And that's what these opinions are. This report
13 that I submitted.

14 Q. Okay. So that's not quite responsive to my
15 question.

16 MR. PARK: I don't think he understands
17 the question.

18 BY MS. LaVALLEY:

19 Q. This is just a yes -- just a "yes" or a
20 "no." Do you have an understanding --

21 MR. PARK: He can answer how he --
22 (Indiscernible crosstalk clarified by
23 the court reporter.)

24 A. Can you repeat the question?

25 Q. Sorry, I'm going to repeat my question.

1 So this is just a "yes" or a "no" question.
2 Do you have an understanding, one way or another,
3 of whether your opinions support the positions of
4 Medtronic that it's taken in this IPR proceeding?

5 MR. PARK: And objection, form.

6 You could answer the question in the
7 manner that you see fit.

8 MS. LaVALLEY: And, Counsel --

9 A. I don't under --

10 MS. LaVALLEY: -- I'll just
11 interject -- I'll just interject there and ask that
12 you keep your speaking objections off the record
13 and --

14 MR. PARK: Counsel, I fully respect the
15 process of no speaking objections. I do not intend
16 to give speaking objections, but I think it's
17 pretty clear that the witness does not understand
18 what you're asking the witness and you just keep
19 asking the same questions and wasting time in this
20 deposition.

21 Can you please either ask a clearer
22 question or move on?

23 MS. LaVALLEY: And I'll ask the
24 questions as I see fit, and I am working to revise
25 my questions, and that's what I'm trying to do.

1 So I'll just -- I'll repeat my question
2 that I just asked.

3 BY MS. LaVALLEY:

4 Q. So do you have an understanding, one way or
5 another, of whether your opinions support the
6 positions of Medtronic that it's taken in this IPR
7 proceeding?

8 MR. PARK: Objection to form. Asked
9 and answered.

10 A. Since I don't fully understand the question,
11 I cannot say one way or the other.

12 Q. Were you retained by Medtronic in this
13 proceeding?

14 A. I was retained by Medtronic's law firm.

15 (Break: 10:19 a.m. to 10:21 a.m.)

16 BY MS. LaVALLEY:

17 Q. Okay. Before our brief break, you
18 mentioned you were retained by Medtronic's counsel
19 in this proceeding; is that correct?

20 A. Yes. I was retained by their counsel on
21 behalf of Medtronic for this.

22 Q. Okay. And so your agreement is with Paul
23 Hastings; is that correct?

24 A. The actual contract is with Hueston
25 Hennigan.

1 Q. And who is Hueston Hennigan?

2 A. They're the law firm that reached out to
3 me.

4 Q. And Hueston Hennigan represents Medtronic?

5 A. Yes, I believe so. And then they -- they
6 introduced me to Paul Hastings.

7 Q. What is the scope of your --

8 MR. PARK: Hold on one second.

9 And I caution the witness not to reveal
10 any confidential information.

11 THE WITNESS: Yeah.

12 MR. PARK: Privileged information.

13 BY MS. LaVALLEY:

14 Q. What is the scope of your engagement?

15 A. I don't -- I don't have that, like,
16 memorized, what is in the agreement.

17 Q. Do you have a general sense of what the
18 scope of the agreement is?

19 MR. PARK: Objection to form.

20 A. Actually, I do not.

21 Q. As you sit here today, do you have any
22 understanding of what the scope of your engagement
23 is?

24 A. I don't have the exact details of the
25 engagement letter.

1 Q. And why were you -- strike that.

2 As you sit here today, do you have an
3 understanding of what your role is in this
4 proceeding?

5 A. My role was to provide an expert report.

6 Q. And what was the scope of that expert
7 report supposed to be when you were -- when you
8 were retained in connection with this matter?

9 A. The -- the scope is listed in paragraph 1
10 that -- what I've been doing is "I have been asked
11 to consider whether prior art references disclose
12 or suggest the features recited in claims 1 to 6, 8
13 to 12, and 17 to 20 of the challenged claims of the
14 '755 patent."

15 Q. And you're reading from paragraph 1 of the
16 declaration that you submitted in this matter
17 which, for the record, is Exhibit 1002; is that
18 correct?

19 A. I'm reading from my declaration. I -- to
20 be honest, I don't know what the exhibit number is
21 of the declaration itself.

22 MR. PARK: It's 1002.

23 BY MS. LaVALLEY:

24 Q. I apologize. I lost my feed to the
25 exhibits.

1 MS. LaVALLEY: Can we briefly go off
2 the record.

3 (Break: 10:25 a.m. to 10:26 a.m.)

4 BY MS. LaVALLEY:

5 Q. Okay. And going back to your last
6 response, I just want to make sure we clarify this.

7 On the first page of your declaration, do
8 you have that in front of you?

9 A. I do.

10 MR. PARK: Objection --

11 BY MS. LaVALLEY:

12 Q. At the bottom it's listed as Medtronic
13 Exhibit 1002?

14 A. I see that.

15 Q. So Medtronic Exhibit 1002 is the
16 declaration that you submitted this IPR, correct?

17 A. That is correct.

18 Q. And just a moment ago, when you were
19 describing the scope of your declaration in this
20 case, you were reading from paragraph 1 of that
21 previously marked Medtronic Exhibit 1002, correct?

22 A. That is correct.

23 Q. And how did you become involved in this
24 proceeding?

25 MR. PARK: And I caution the witness

1 not to reveal any confidential, privileged
2 information.

3 A. I was contacted by a person at Hueston who
4 introduced me to Hastings.

5 Q. And around what time frame was that first
6 contact?

7 A. I don't have an exact date, but it was at
8 least a couple months prior to November 7, 2025.

9 Q. Is that a couple months prior to when you
10 submitted your declaration?

11 A. Approximately, correct. I don't have an
12 exact date.

13 Q. And when were you formally engaged in
14 connection with this matter?

15 A. As I mention, it was a couple months prior
16 to November 7, 2025.

17 Q. Have you done any other work for Medtronic?

18 A. No, I have not. Oh, no, I have not prior
19 to this. Actually, I don't know if this is the
20 first one. I am an expert on several of -- IPRs
21 that are running concurrently. But prior to the
22 engagement, I have not done work for Medtronic
23 before.

24 Q. And when you say "I am an expert on several
25 IPRs running concurrently," are you talking about

1 IPRs challenging other patents of the Moskowitz
2 Family?

3 A. That is correct.

4 Q. How many other IPRs are you currently
5 involved with for Medtronic?

6 A. There --

7 MR. PARK: I'll caution the witness not
8 to reveal any confidential, privileged, or work
9 product information.

10 So she's asking about stuff that's
11 already gotten filed.

12 A. Correct. There are nine IPRs.

13 Q. Have you done any other consulting work for
14 Medtronic apart from those nine IPRs?

15 MR. PARK: Again, I caution the witness
16 not to reveal any confidential, privileged work
17 product information.

18 A. I don't -- I don't think so.

19 Q. Have you done any other consulting work for
20 petitioner's counsel?

21 A. Prior to this engagement -- prior to the
22 engagement letter we've been discussing, I have not
23 done any prior work with this counsel.

24 Q. Are you being compensated for your work?

25 A. Yes.

1 Q. How are you being compensated in this
2 matter?

3 MR. PARK: Objection. Form.

4 A. Can you clarify the question, please?

5 Q. Sure. Are you being compensated on an
6 hourly basis in this matter?

7 A. Yes, I'm being compensated at my standard
8 and customary hourly rate.

9 Q. And what is that standard rate?

10 A. \$500 per hour.

11 Q. And is that the rate you normally charge in
12 connection with your consulting work?

13 A. Yes, that's the rate I have previously
14 charged and have charged currently.

15 Q. Can you tell me approximately how many
16 hours you've billed in connection with this
17 proceeding?

18 A. I -- I don't have a total, no.

19 Q. Can you provide an approximate range?

20 A. For what I've billed so far on the '755
21 proceeding, it's -- and this is purely a guess --
22 somewhere between 10 to 30 hours. Which does not
23 include the deposition prep and the deposition
24 because obviously I haven't billed yet.

25 Q. Okay. And so when you say 10 to 30 hours,

1 you're excluding the time you've spent on the
2 deposition prep and the deposition; is that
3 accurate?

4 A. Correct. Because your question was, what
5 have I billed, and I have not billed for those yet.

6 Q. Is there any other time that you haven't
7 billed for yet in connection with this matter?

8 A. Not that I'm aware of.

9 Q. So the approximate 10 to 30 hours that you
10 believe you've spent on this matter, apart from,
11 you know, deposition preparation and the
12 deposition, was that in connection with preparing
13 your declaration?

14 A. That is the time in prep -- spent in
15 preparation of the declaration.

16 Q. So it's accurate to say you've spent
17 approximately 10 to 30 hours preparing the
18 declaration that you submitted in this IPR; is that
19 correct?

20 A. I have billed 10 to 30 hours in -- for
21 preparation, this declaration in this IPR.

22 Q. And that billing time of 10 to 30 hours, is
23 that an accurate reflection of the time that you
24 actually spent for preparing the declaration in
25 this IPR?

1 MR. PARK: Objection to form.

2 A. That is the amount of billable time I
3 used -- I have spent preparing this declaration.

4 Q. And I understand that you're reviewing the
5 paper copy, but I'm -- I've presented on the
6 AgileLaw platform your declaration, which was
7 previously marked, as we discussed, as Medtronic
8 Exhibit 1002.

9 (Previously marked Exhibit 1002 was
10 introduced.)

11 BY MS. LaVALLEY:

12 Q. And if you could just turn to your
13 signature page, which is on page 48 of 115. Please
14 tell me when you're there.

15 A. I'm there.

16 MR. PARK: Did you say 48?

17 THE WITNESS: 48 of 115. This one here
18 (indicating).

19 MR. PARK: Okay.

20 MS. LaVALLEY: There's a page number 45
21 as well as 48 of 115, to be clear.

22 BY MS. LaVALLEY:

23 Q. And that's your signature on page 48 of
24 115, correct?

25 A. That is my signature that I applied

1 electronically.

2 Q. And at the time you signed, you believe the
3 opinions expressed in your declaration were
4 accurate, correct?

5 A. Correct.

6 Q. And have any of your opinions changed as
7 you sit here today?

8 A. No, my opinions have not changed.

9 Q. Did you prepare the first draft of your
10 declaration?

11 A. I provided the ideas with conversations
12 with counsel, and the first draft was supplied to
13 me to review after conferring me with my ideas.

14 Q. So you did not prepare the first draft of
15 your declaration --

16 MR. PARK: Object --

17 BY MS. LaVALLEY:

18 Q. -- is that correct?

19 MR. PARK: Objection to form.

20 A. Yeah, the first draft was done in
21 piecemeal, so we -- and after conversations with
22 counsel, I provided my ideas, and they provided me
23 something to review, which I did. And it was an
24 iterative process after that where I made sure that
25 the declaration is my opinions.

1 Q. And you mentioned that before the first
2 draft was supplied to you, you provided ideas with
3 conversations with counsel. Did I summarize that
4 accurately?

5 A. Prior to the first draft, I did provide
6 ideas to counsel based on reviewing information
7 that was provided to me.

8 Q. And how did those conversations take place?
9 Meaning were they in writing or, you know, in
10 person, over the phone?

11 A. The conversations took place between a
12 mixture of -- I don't know if it was Zoom, Webex,
13 some sort of videoconferencing, and/or direct
14 telephone conversations.

15 Q. And how many conversations with counsel
16 would you say you had before you were provided with
17 the first draft?

18 A. Sorry. You froze on the screen there for a
19 minute.

20 Q. Oh, sorry. I'll repeat my question.
21 How many conversations with counsel did you
22 have before you were provided with the first draft?

23 A. I don't recall.

24 Q. Less than five?

25 A. I -- I don't know.

1 Q. Can you say less than 10?

2 MR. PARK: Objection to form, Counsel.

3 A. I don't recall on the '755 proceeding how
4 many conversations I had prior to seeing a first
5 draft. It was obviously enough information I gave
6 them to produce a first draft.

7 Q. Can you say whether you had more or less --
8 as you sit here today, can you say whether or not
9 you had more or less than 10 conversations with
10 counsel before you received a first draft of your
11 declaration?

12 MR. PARK: Objection to form.

13 A. I can't say how many conversations I had
14 prior to reviewing a first draft. And, again, it
15 wasn't a first complete draft.

16 Q. Who provided the first draft of your
17 declaration to you?

18 A. Trying to remember his last name. Chetan.
19 Chetan. That's all -- I don't want to try to
20 pronounce his last name.

21 Q. Is that Chetan Bansal at Paul Hastings?
22 Does that refresh your recollection? Does that
23 sound right?

24 A. It was Chetan from Hastings. I can't
25 remember his last name.

1 Q. And do you recall when you received that
2 first draft?

3 A. No, I don't recall a date I received the
4 first draft.

5 Q. Do you have any recollection of when you
6 received the first draft after you -- you were
7 retained in connection with this matter?

8 A. No, I don't recall a date. It was prior to
9 November 7, 2025.

10 Q. Do you know whether it would have been in
11 the fall that you received the first draft?

12 A. I don't recall a date other than prior to
13 November 7, 2025.

14 Q. So you can't say whether you received the
15 first draft a week before November 7, 2025, or two
16 months before November 7, 2025; is that accurate?

17 MR. PARK: Objection to form.

18 Counsel, is this really necessary?

19 A. I don't remember a date.

20 Q. Do you recall whether the first draft was a
21 substantially complete draft?

22 A. How do you define a "substantial" [no
23 audio]?

24 Q. I'm sorry. You cut out a bit there. I
25 don't know if I'm the only one having audio issues?

1 MR. PARK: "How do you define 'a
2 substantially complete draft'?"

3 A. That's what I responded.

4 Q. Okay. Maybe -- can you please repeat your
5 testimony for the record so we have your testimony
6 as opposed to counsel's?

7 MR. PARK: It's vital testimony.

8 Yeah, please do.

9 A. How do you define "a complete draft" -- "a
10 substantially complete draft"?

11 Q. Say, 90 percent complete; is that -- is
12 that fair?

13 A. So --

14 Q. So using --

15 (Indiscernible crosstalk.)

16 BY MS. LaVALLEY:

17 Q. So let me just rephrase.

18 So using that definition of "a
19 substantially complete draft," was the first draft
20 that you received a substantially complete draft?

21 MR. PARK: Objection to form.

22 A. As I mentioned in a previous answer, I was
23 defining first draft were coming to me as portions.
24 So if you're saying a first draft of all 45 pages
25 here, that came later on.

1 So it was a very iterative process. I
2 provided my ideas, we looked at the claims, and it
3 was a back-and-forth. And it wasn't just "Here,
4 here's everything." It was "Here's a piece of it";
5 we review it, and -- and then we built from there.

6 So it was a several -- it was a long
7 process. Can't give you any times; I don't
8 remember exact dates and number of iterations, but
9 it was a process.

10 Q. Did you personally draft any portion of
11 your declaration?

12 A. I personally redlined and changed portions
13 of my declaration.

14 Q. And did you draft the claim charts that are
15 attached to your declaration?

16 A. I did not write the first draft, but I
17 definitely changed a lot as we went through this
18 process.

19 Q. So did you suggest revisions to the claim
20 charts?

21 A. What -- what do you mean "suggest"? I
22 provided redlines, my opinions, that were
23 incorporated into the claim charts.

24 Q. Taking a step back, did counsel initially
25 draft the claim charts that are attached to your

1 declaration?

2 MR. PARK: Objection to form.

3 A. The claim charts in the appendices of '755
4 were initially drafted based on my conversations
5 with counsel.

6 Q. And who initially drafted those appendices?

7 MR. PARK: I'm going to instruct the
8 witness not to answer that question.

9 Counsel, you know full well that the
10 process of preparing an expert report is privileged
11 information, so I'm going to instruct the witness
12 not to answer that question. This is just -- I've
13 given you a lot of leeway, Counsel, but it's gone
14 beyond the pale right now.

15 BY MS. LaVALLEY:

16 Q. Are you going to follow your counsel's
17 instructions?

18 A. Yes, I will follow my counsel's
19 instructions.

20 MS. LaVALLEY: So, Counsel, just so
21 we're clear, who provided a draft of a portion of
22 the report, your position is that's privileged?

23 MR. PARK: Absolutely. I think that's
24 the epitome of the work product privilege for
25 expert reports.

1 BY MS. LaVALLEY:

2 Q. How long did you -- how many hours did you
3 spend reviewing the prior art before signing your
4 declaration?

5 A. I don't know.

6 Q. Do you have any recollection of the
7 approximate time you spent reviewing the prior art?

8 MR. PARK: Objection to form.

9 A. You -- sorry, you cut out there a little
10 bit there for me. I didn't hear the full question.

11 Q. Okay. Do you have any recollection of the
12 approximate time you spent reviewing the prior art
13 prior to signing your declaration?

14 MR. PARK: Objection to form.

15 A. I do not recall.

16 Q. Do you know how many hours you spent
17 reviewing the declaration?

18 A. I don't recall how many hours broken down
19 specifically of reviewing the declaration itself.
20 Or any of the exhibits. I don't break it down that
21 way.

22 Q. Did you spend more time reviewing the prior
23 art or reviewing the draft declaration?

24 A. Again, I don't have that -- those numbers
25 broken down.

1 Q. Did you independently verify each opinion
2 included in your declaration?

3 MR. PARK: Objection to form.

4 A. Can you please ask that again? Clarify?

5 Q. Did you independently verify each opinion
6 included in your declaration?

7 MR. PARK: Objection to form.

8 A. This is my declaration with my opinions, so
9 I have viewed everything.

10 Q. That wasn't my question. My question is
11 whether you independently verified every opinion
12 included in your declaration.

13 MR. PARK: Objection. Asked and
14 answered.

15 A. I believe I answered that question.

16 Q. And you answered a different question.
17 Your -- you said that you viewed everything, unless
18 I misheard you. I just want to make sure we have a
19 clear record. Right now the transcript shows that
20 you said "This is your declaration of your opinion
21 so I viewed everything."

22 So I just want to clarify with that. My
23 question was not whether you viewed everything --

24 A. I --

25 Q. -- independently verified each opinion

1 included in your declaration?

2 A. My --

3 MR. PARK: Hold on a second.

4 Counsel is making a representation. I
5 just want to verify what counsel's saying.

6 THE WITNESS: Okay.

7 MR. PARK: (Reviewing realtime feed.)

8 Give her -- give her the same response.

9 A. Yeah, I reviewed -- you said "viewed," but
10 I believe I said I "reviewed." That's the
11 clarification. So there may have been a transcript
12 or couldn't hear my [no audio] properly.

13 Q. Okay. So you independently reviewed each
14 opinion in your declaration; is that correct?

15 A. Yes, I have reviewed everything in my
16 declaration on my own, independently.

17 Q. And did you review -- and with your review,
18 did you independently verify that every opinion in
19 your declaration was true?

20 A. You skipped there for one -- can you just
21 repeat that again, please?

22 Q. With your review, did you independently
23 verify that every opinion in your declaration was
24 true?

25 A. I believe every -- all my opinions in my

1 declaration, true.

2 Q. Did you verify that every opinion in your
3 declaration was true?

4 MR. PARK: Objection. Asked and
5 answered.

6 A. Since they're my opinions, they are true.

7 Q. Okay. I understand that you believe your
8 opinions are true, but did you do anything to
9 independently verify that they were true?

10 A. I don't understand because they're my
11 opinions. How do I independently verify my
12 opinions? I'm not -- I'm not sure about the
13 question that is. Or what you're asking.

14 Q. I'm asking you whether you verified that
15 every opinion offered in your declaration was true.
16 Are you unwilling to respond to that question?

17 MR. PARK: He says he doesn't
18 understand your question. You can stop
19 misrepresenting the record, Counsel.

20 You want to reask the question? One
21 that he can understand.

22 MS. LaVALLEY: Counsel, you're not
23 testifying today. The witness is --

24 MR. PARK: I'm definitely not
25 testifying.

1 (Indiscernible crosstalk.)

2 MS. LaVALLEY: -- is perfectly capable
3 of telling me whether or not he understands my
4 question. Please, again --

5 MR. PARK: You're badgering the
6 witness.

7 MS. LaVALLEY: -- withhold your
8 speaking objections.

9 (Indiscernible crosstalk.)

10 MR. PARK: These are not speaking
11 objections. I'm criticizing your questions which
12 are not taking into account the answers you're
13 actually getting from the witness.

14 You asked -- at the very start of the
15 deposition, you asked him to clarify questions that
16 he didn't understand. And he told you that he
17 didn't understand your question because it really
18 doesn't make any sense. And you're just persisting
19 on asking the same question again and again.

20 BY MS. LaVALLEY:

21 Q. Mr. Culbert, do you understand what it
22 means to verify something?

23 A. Yes, I understand what it means to verify
24 something on a general -- generally.

25 Q. And generally, what does that mean to you?

1 A. I -- that's so very broad. Can you narrow
2 it down to a context?

3 Q. Well, in the context of an opinion, when
4 you state an opinion on something and you put it in
5 writing, what do you do to confirm the truth of
6 that opinion?

7 A. So to verify an opinion, you have to look
8 to see the support material that went into that
9 opinion to make sure it reflects the opinion.

10 Q. Okay. So using that definition of
11 "verify," did you verify every opinion that is in
12 your declaration?

13 A. Yeah, and that's -- I used the information
14 in my declaration supporting material to come up
15 with my opinion as well as the knowledge of a
16 POSITA, the general knowledge of a POSITA. So all
17 my opinions are supported by the referenced
18 material, including general knowledge of the
19 POSITA.

20 Q. So are you able to confirm whether every
21 one of your opinions offered in your declaration
22 are supported by the referenced material, including
23 the general knowledge of a POSITA?

24 MR. PARK: Objection to form.

25 A. Sorry, I'm just trying -- it's such a

1 broad -- I'm going through every -- even in the
2 definition of opinion, throughout the document. So
3 to my knowledge, in general, all my opinions stem
4 from all the supporting documentation and general
5 knowledge of a POSITA.

6 Q. Have you read the petition that Medtronic
7 submitted in this IPR?

8 A. Well, petition -- it's not my expert
9 report, you mean?

10 Q. Yes. The petition --

11 A. The petition itself?

12 Q. -- not your expert report.

13 A. No, I have not read the petition.

14 Q. Do you know whether the petition was
15 prepared before or after your declaration?

16 A. I don't know. I wasn't involved with the
17 petition.

18 Q. You had no involvement in drafting,
19 revising, or reviewing the petition; is that
20 accurate?

21 A. That is accurate. I had nothing to do with
22 the petition other than providing my expert report.
23 And my assumption is they used that.

24 Q. Are you aware that much of your declaration
25 is repeated in the petition?

1 A. No, I'm not aware of that. I have not read
2 the petition.

3 Q. And how much time did you spend preparing
4 for the deposition today?

5 A. I reviewed all the materials and -- yeah, I
6 don't have an exact number of hours, but I spent a
7 couple days, at least a couple days preparing.

8 Q. Did you say you spent full days preparing
9 or how many hours per day?

10 A. I don't know an exact hour, but roughly
11 eight hours a day.

12 Q. And when you say "a couple days," do you
13 mean two days?

14 A. Two days -- two full days and little bit on
15 the flight to D.C.

16 Q. And you mentioned you reviewed all the
17 materials. What are the materials that you're
18 referring to?

19 A. My declaration and some of the exhibits --
20 or all of the exhibits.

21 Q. Did you meet with counsel to prepare for
22 the deposition?

23 A. Yes, I met with counsel prior -- to prep
24 for the deposition.

25 Q. When did you meet with counsel?

1 A. I met with counsel Monday and Tuesday of
2 this week.

3 Q. Who specifically did you meet with?

4 A. I met with Mr. Young Park here. Chetan was
5 here. Bansal, I think you said his last name was.
6 And a Medtronic attorney, from the company itself,
7 Tony.

8 Q. And were all three attorneys present for
9 both the meeting on Monday and Tuesday?

10 A. No, they were not, not all three.

11 Q. Okay. Let's start with -- you mentioned
12 you met with counsel on Monday. Who did you meet
13 with on Monday?

14 A. It started off meeting with Mr. Young Park,
15 and then Tony came in later and met with him for
16 part of the day.

17 Q. And how long was Monday's meeting with
18 counsel? Approximately.

19 A. Approximately eight hours, plus or minus,
20 plus some time. I don't know the exact time.
21 Let's just call it a full day, yeah, full.

22 Q. And was Tuesday's meeting with counsel a
23 full day as well?

24 A. It was slightly less. At least an hour
25 less.

1 Q. And who did you meet with on Tuesday?

2 A. Again, started the meeting with Mr. Young
3 Park, and then Tony came in, and then later Chetan
4 came in.

5 Q. Other than your meetings with counsel on
6 Monday and Tuesday of this week, did you have any
7 other meetings or calls with counsel to prepare for
8 the deposition today?

9 A. Other than -- there may have been a brief
10 call -- like, we're talking a couple minutes --
11 with Chetan to say --

12 MR. PARK: Wait. Don't reveal --

13 THE WITNESS: Oh, yeah.

14 MR. PARK: -- any confidential
15 communications.

16 A. It was brief -- very brief calls.

17 Q. Okay. And have you reviewed patent owner's
18 preliminary response?

19 A. That's -- is that what they call a POPR?

20 Q. Yes.

21 A. I have not reviewed a POPR or any other
22 thing other than my declaration and supporting
23 material.

24 Q. Are you aware of any of the arguments that
25 the patent owner made in the POPR?

1 MR. PARK: Objection. Objection to
2 form.

3 A. I am not aware or had really discussed
4 anything beyond my declaration of what's happening
5 beyond that.

6 MS. LaVALLEY: Okay. We've been going
7 a little over an hour. Why don't we take a short
8 10-minute break.

9 (Break: 11:12 a.m. to 11:22 a.m.)

10 BY MS. LaVALLEY:

11 Q. Okay. Mr. Culbert, I want to discuss your
12 professional background, so I'm going to show
13 what's been marked as Medtronic Exhibit 1003.

14 (Previously marked Exhibit 1003 was
15 introduced.)

16 BY MS. LaVALLEY:

17 Q. And this is your CV, correct?

18 A. This is my CV at the time of submission --
19 at the time of submission of the declaration.

20 Q. Is there any professional experience that
21 needs updating since you submitted the CV?

22 A. The -- where it states "Confidential
23 Company," that says an IPR case. This confidential
24 company I can now say is Medtronic, so that is now
25 nine cases -- nine IPR cases. And then I can also

1 add one -- a different confidential company, not
2 Medtronic. I'm doing a litigation --

3 (Court reporter requested clarification
4 due to distorted/muted audio.)

5 A. -- case.

6 Q. And that matter is still confidential; is
7 that correct?

8 A. That is correct.

9 Q. And you earned a bachelor's degree in
10 metals and materials engineering, correct?

11 A. I earned a bachelor's of applied science
12 degree in metals and materials engineering.

13 Q. And you have an MBA as well, right?

14 A. Correct, I have an MBA.

15 Q. And you do not have a PhD, correct?

16 A. No, I don't have a PhD.

17 Q. And you're also not a physician, correct?

18 A. I am not a physician, MD.

19 Q. Are you licensed to practice medicine?

20 A. I -- you cut out, so I didn't hear the
21 whole question.

22 Q. Sorry. Are you licensed to practice
23 medicine?

24 A. No, I'm not licensed to practice medicine.

25 Q. And since 2010, your primary work has been

1 consulting; is that accurate?

2 A. And is when I started consulting and done
3 so primarily.

4 Q. And prior to your consulting career, you
5 worked at Interventional Spine from May 2010 [sic]
6 to March 2010; is that correct?

7 MR. PARK: Objection to form. You said
8 that incorrectly.

9 A. No. You had the dates wrong. You want me
10 to correct them, or do you want to reask the
11 question?

12 Q. I can reask the question. You worked at
13 Interventional Spine from May 2010 [sic] to
14 March 2010; is that correct?

15 A. And I worked at Interventional Spine and
16 other names prior to that.

17 MR. PARK: I think you still got the
18 date wrong, Counsel.

19 THE WITNESS: May 2000? March 2010?
20 Is that --

21 MR. PARK: Just looking at the
22 transcript.

23 BY MS. LaVALLEY:

24 Q. I read the dates that are on your CV, so
25 maybe the transcription was wrong. So let's

1 clarify that. You worked at Interventional Spine
2 from May 2000 to March 2010, correct?

3 A. Correct. Interventional Spine and other
4 names it was called prior to that.

5 Q. And what other names was it called prior to
6 that?

7 A. Triage Medical and Anchor Medical.

8 Q. And prior to Interventional Spine, had you
9 worked on spinal implant systems?

10 A. Prior to May 2000, no, I have not worked on
11 spine systems.

12 Q. And what types of spinal products were you
13 involved in developing at Interventional Spine?

14 A. There were several products that I worked
15 on -- or invented and developed and commercialized.
16 It was posterior fixation devices, motion
17 preservation devices, cervical fixation devices,
18 expandable cage, spine instrumentation, minimally
19 invasive access systems. That's what I recall off
20 the top of my head, and there may be more.

21 Q. You mentioned expandable cage. How many
22 expandable cage products did you work on?

23 A. There was one that became the Opticage, but
24 it went through several design iterations. And
25 then there was another one that a doctor had

1 presented to us that we worked on for a period of
2 time.

3 Q. And did that second product have a
4 commercial name?

5 A. The second product, you mean the one from
6 the doctor?

7 Q. Yes.

8 A. No. It -- to my knowledge, it wasn't
9 commercialized. Yeah, to my knowledge, it wasn't
10 commercialized.

11 Q. And what was your role with respect to the
12 Opticage that you mentioned?

13 A. I was a named inventor. I came up with the
14 original concept of moving -- of the expansion of
15 moving to end plates [no audio]. And then I had a
16 team of -- a technician and engineer that helped
17 develop details.

18 Q. I apologize. I did miss part of your
19 answer.

20 A. Okay.

21 Q. Are you able to repeat kind of your role
22 with respect to the Opticage?

23 A. Correct. I came up with the original
24 concept and the patent. And then I brought
25 together a technician and an engineer, and we

1 developed through an iterative process to what is
2 seen as the Opticage.

3 Q. And you mentioned you were an inventor. Is
4 that -- are there patents related to that
5 technology?

6 A. Yes, there are patents on the Opticage
7 technology.

8 Q. And are you a named inventor on those
9 patents?

10 A. Yes, I'm a named inventor on those patents.
11 I have many spine patents.

12 Q. And what was the novel aspect of the
13 Opticage, to your understanding?

14 A. In general, cages on -- the majority of
15 cages on the market were fixed height, and you
16 would have to have several fixed-height cages. So
17 my concept was, Can we make it a variable height so
18 when it's implanted, it can go in small?

19 Because all the procedures at the time were
20 looking at becoming minimally invasive, so smaller
21 and smaller incisions. So it would be great to
22 have a device that would go in small and then
23 expand.

24 Q. So was the Opticage commercialized?

25 A. Yes, it was commercialized.

1 Q. Do you know whether it's still used and
2 present on the market?

3 A. I don't know for sure. Yeah, the company
4 was acquired by J&J, or if you -- it was a -- the
5 company was acquired by another -- a larger
6 company. But after I left the company.

7 Q. And you also mentioned you were involved in
8 the development of surgical instruments; is that
9 correct?

10 A. That is correct. I was involved with many
11 different surgical instruments.

12 Q. Approximately how many surgical instruments
13 were you involved in the development of?

14 A. I can't give you an exact number but
15 definitely a lot more than 10.

16 Q. During product development, were spinal
17 implants and surgical instruments typically
18 developed together as a system?

19 MR. PARK: Objection to form.

20 A. It was -- I can't really say the exact same
21 time, so it's -- usually the implant is developed
22 first with the concept of how to implant it in the
23 back of the inventor's mind, or my mind, at the
24 time. And then the instrumentation was typically
25 developed afterwards on how to make it work.

1 Q. Were you involved in the development of any
2 particular instrumentation to be used with the
3 Opticage?

4 A. Yes, there was specific instrumentation
5 that we used to implant the Opticage. Our
6 directive at the time from the CEO was basically
7 everything had to be minimally invasive. So once
8 we were working on the implant, keep in mind what
9 instrumentation would be needed. We then worked on
10 the instrumentation and the procedure itself.

11 Q. What do you mean by "minimally invasive" in
12 the context of spinal implants?

13 A. So up -- "minimally invasive" means taking
14 a procedure that's typically done with a large
15 incision -- which is cutting through the skin, the
16 fascia, the muscles, and actually cutting through
17 the muscles -- to where you can cut through --
18 ideally you would just cut the skin and fascia,
19 which will heal relatively quickly compared to
20 muscle, and then expand the muscles away from each
21 other to then access the -- in this case, the
22 spine.

23 So minimally invasive is taking a large
24 incision and making it -- which is very disruptive
25 to the patient and longer recovery time and danger

1 to a lot more smaller, less-invasive procedure for
2 the patient.

3 Q. So when you would typically work to design
4 or develop an implant, you would always have an
5 instrument design in mind that would permit a more
6 minimally invasive procedure; is that accurate?

7 A. You were always considering it. Do you
8 have the exact design in mind? Not necessarily.
9 Sometimes that gets developed out afterwards.

10 There's a lot of inputs when you're
11 developing products. And especially
12 instrumentation, you start to get physician
13 feedback as well. So we go to cadaver labs; we try
14 things. And using that feedback we change not only
15 the instrumentation, but we could also potentially
16 change the implant to accommodate the
17 instrumentation.

18 Q. Based on your experience, what kind of
19 testing would be required to confirm that a
20 particular instrumentation would work with an
21 implant, you know, prior to, you know, bringing it
22 to market?

23 MR. PARK: Objection. Form.

24 A. Can we -- yeah, so -- be more specific,
25 because "spinal implant" is pretty broad. And

1 there's -- every intel -- depends on the implant,
2 there's a different approach.

3 Q. Let's narrow it to the Opticage, just to
4 have a target here. In that case, what type of
5 testing was done to confirm, you know, particular
6 instrumentation would work with that implant?

7 MR. PARK: Objection to form.

8 A. For the Opticage we used a whole series of
9 bench testing where we test it ourselves in cadaver
10 labs. And then eventually we would go to human
11 trials.

12 Q. So when designing an implant, would the
13 intended interface between the implant and the
14 surgical instrumentation be something that would
15 have been specifically designed?

16 A. Yes, with Opticage -- once the Opticage
17 became into its form that you see in the patent,
18 the instrumentation was thought of on how to do it.
19 I don't recall if we had the details of the
20 instrumentation when we filed the first provisional
21 and/or application. That, I don't recall.

22 Q. Would the implant and its intended
23 instruments be documented together during the
24 design process?

25 A. Actually, I don't recall with the Opticage.

1 But sometimes things are done as a system, and
2 sometimes they're done individually through the
3 design process documentation.

4 Q. But during the development process, the
5 engagement interface between the implant and the
6 surgical instrument would be something that would
7 be intentionally engineered; is that accurate?

8 MR. PARK: Objection to form.

9 A. The design process is an iterative process
10 where you start off with a general concept and then
11 build in features as you needed. And the time you
12 file that is subjective.

13 Q. And during your time at Interventional
14 Spine, you were responsible for preparing 510(k)
15 submissions, correct?

16 A. That is correct. I was responsible for
17 preparing them and --

18 Q. Approximate -- sorry. Go ahead.

19 A. Well, let me -- yeah.

20 Not all of them. The company grew, and so
21 we did get regulatory people in that end up doing
22 it. But I was the -- then became the support
23 person to provide the documentation for the 510(k).

24 Just to note that Interventional Spine, I
25 was the first employee, so we were a startup, and

1 we grew from there.

2 Q. How many, approximately, 510(k) submissions
3 did you participate in?

4 A. At Interventional Spine?

5 Q. At Interventional Spine, yes.

6 A. I -- there were many. I can't give you a
7 number.

8 Q. Briefly, can you tell me what a 510(k)
9 submission is?

10 A. Generally it's a submission to the FDA to
11 get clearance to market your product in the United
12 States.

13 Q. And generally how does that process work?

14 A. I'm not sure how level of detail you're
15 looking for. Like -- it's -- there's a lot to it.
16 You've got to figure out your indication for use;
17 you have to find a predicate. 510(k) is relying on
18 a predicate device, so you'll need a predicate
19 device.

20 Depending on the product, there's guidance
21 documents from the FDA that you have to address in
22 your 510(k), which then spells out the testing and
23 safety. There's file comp, sterilization. There's
24 just a lot that goes into a 510(k).

25 Q. How long does that process typically take

1 for spinal implants?

2 A. It could be short; depends on if it's a
3 full 510(k) or a special 510(k). Special 510(k) --
4 let me rephrase that.

5 Let me re -- ask a question. The process
6 of preparing it or the process of approval?

7 Q. Both. So from when you begin the process
8 of preparing it through approval, what's that
9 timeline look like?

10 A. And we're looking at the Opticage itself?
11 Or are we talking all -- you're asking all spinal
12 implants?

13 Q. More generally, based on your experience
14 with spinal implants.

15 MR. PARK: Objection to form.

16 A. Yeah, I -- it's very broad. There --
17 spinal implants that we done within two, three
18 months. Then it could take months or a couple
19 years, from my experience and the way I do it. Or
20 I did it, I guess, is more...

21 Q. And how long did that process take for the
22 Opticage?

23 A. The Opticage -- to submit the 510(k) -- I
24 don't recall the exact time for the development.
25 It was definitely less than a year to submit it.

1 When I say "submit it," I mean submit it to the
2 FDA.

3 Q. And then how long do you recall did the
4 approval process take once the 510(k) was submitted
5 to the FDA?

6 A. That, I don't recall how long. At that
7 time there weren't too many expandable cages to
8 have as a predicate on the market, so it was
9 definitely a process with the FDA, a back-and-forth
10 process with them to get approval. I believe
11 Opticage was one of the first marketed devices.

12 Q. Did the 510(k) for the Opticage identify
13 the intended surgical instrumentation that would be
14 used with that?

15 A. Actually, I don't recall.

16 Q. Do you recall more generally, when
17 preparing 510(k)s for spinal implants, would the
18 FDA require that the submission identify the
19 intended surgical instrumentation?

20 MR. PARK: Objection to form.

21 A. Again, all "spinal implants" is very broad,
22 and sometimes they do; sometimes they don't.

23 Spinal instrumentation, if they're -- can
24 take on a class 1, which is self-certify, so you
25 actually don't have to submit them to the FDA.

1 I'm not saying in all cases. I'm saying in
2 some -- in some cases, in some spine products, you
3 don't actually have to submit the instrumentation.

4 Q. Do you know when you have to submit
5 instrumentation for approval?

6 MR. PARK: Objection. Outside the
7 scope.

8 A. There's no exact rules on that, no.
9 Rules -- or "requirements" is a better word than
10 "rules."

11 Q. If a product design was modified for a
12 spine implant, would a new FDA submission be
13 required?

14 MR. PARK: Objection to the form.
15 Outside the scope.

16 A. You can -- design changes to a spine
17 implant would have to be reviewed internally based
18 on standards to determine whether it needs to be
19 resubmitted or not. So not in all cases, no.

20 (Indiscernible crosstalk.)

21 BY MS. LaVALLEY:

22 Q. And what are the standards to determine
23 whether or not a modified spinal implant would need
24 to be resubmitted?

25 MR. PARK: Objection to form. Outside

1 the scope.

2 A. It's based on -- typically it's based on a
3 risk analysis done by the company.

4 Q. And what do you mean by "risk analysis"?

5 A. It's a standard terminology. And it's --
6 you look at the risks of the device and then -- and
7 the potential changes, how they can impact the
8 device. And the risks are being to the patient,
9 the user.

10 Q. And what are the FDA requirements as to
11 when a new -- a modified product would need to be
12 resubmitted for approval?

13 MR. PARK: Objection to form. Outside
14 the scope.

15 A. Yeah, again, it's based on the risk
16 analysis and determination by the company.

17 Q. I want to turn back to your -- the
18 declaration that you submitted, Exhibit 1002. And
19 if you could turn to page 34 of your declaration
20 and let me know when you're there.

21 A. Page 34 of 115 or page 34 at the bottom --

22 Q. I apologize. Actually, neither.

23 Page 17 -- actually page 19 of 115. So let me just
24 clarify. Please turn to page 19 of 115 of your
25 declaration, Exhibit 1002.

1 A. Okay. "Section VII, Claim Construction" on
2 that --

3 Q. Yes.

4 A. -- page?

5 I'm there.

6 Q. And on actually the following page,
7 paragraph 34 of your declaration, you say, "Claim
8 10 includes a means-plus-function limitation."

9 Do you see that?

10 A. I see that.

11 Q. And what is your understanding of a
12 means-plus-function limitation?

13 MR. PARK: Objection. Outside the
14 scope.

15 A. So I don't have the legal definition of the
16 "mean-plus-function." I didn't opine on that. But
17 I was told is that that means for me to consider
18 was that it's a means of placement of a bone fusion
19 material.

20 Q. So you --

21 A. Specific --

22 Q. Is it correct that you have been asked to
23 assume that the corresponding structure for the
24 means for placement of a bone fusion material is
25 an --

1 A. Yes, the next --

2 Q. -- orifice in the implant that can --

3 A. Yeah, I've been asked --

4 (Indiscernible crosstalk clarified by
5 the court reporter.)

6 BY MS. LaVALLEY:

7 Q. Yeah, let me just -- let me just repeat my
8 question, and then you can respond.

9 So is it correct that you have been asked
10 to assume that the corresponding structure for the
11 means for placement of a bone fusion material is an
12 orifice in the implant that can receive a bone
13 fusion material?

14 A. That is correct. I was asked to assume
15 that the corresponding structure is an orifice in
16 the implant that can receive a bone fusion
17 material.

18 Q. Are you offering an opinion, one way or
19 another, of whether that is the correct structure
20 for the means for placement of bone fusion
21 material?

22 A. I'm giving no legal opinion if it's a
23 means-plus-function limitation. I'm -- I've been
24 using this definition for my opinion.

25 Q. Do you have any opinion of whether that is

1 the correct structure for the means for replacement
2 of bone fusion material?

3 A. I have no opinion at this time.

4 Q. And apart from the "means" term in claim
5 10, you did not apply any special meaning to any of
6 the other terms of the '755 patent in your
7 analysis; is that correct?

8 A. (Reviewing document.)

9 Correct. I didn't apply any special
10 meanings. I used ordinary and customary meanings.

11 Q. And the reason you provide for not
12 expressly construing any claim is because it's your
13 opinion that "the prior art discloses or suggests
14 each claim limitation under any reasonable
15 construction, particularly in view of patent
16 owner's infringement contentions"?

17 Is that your testimony?

18 A. Can I read your question? Or you --

19 Q. Yes. Absolutely. Or I can repeat it.

20 I'm reading -- I'm reading from and quoting
21 you from paragraph 33. And I can -- I can reask it
22 if you want to confirm.

23 A. Okay. Yeah, that's what I was trying to
24 do. See, I knew it was a long question that you
25 were -- I just wanted to make sure that it was

1 recited the correct way.

2 Q. Absolutely. And I'll restate it. I'm at
3 paragraph 33 of your declaration, and this is the
4 last part of the last sentence.

5 The reason you provide for not expressly
6 construing any claim terms is because it's your
7 opinion that "the prior art discloses or suggests
8 each claim limitation under any reasonable
9 construction, particularly in view of patent
10 owner's infringement contentions."

11 Is that correct?

12 A. That is correct.

13 Q. And you're referring to the patent owner's
14 infringement contentions in the infringement
15 lawsuit it has against Medtronic, correct?

16 A. I'm referring to Exhibit J1 of it in our
17 Exhibit 1051, not the entire contention. So what
18 you see in 1051 is what I reviewed.

19 Q. And that's Exhibit 1051 to the petition,
20 correct?

21 A. (Reviewing document.)
22 1051 of my declaration.

23 MR. PARK: I don't think you understand
24 the parlance that you're using.

25 A. I didn't review the petition.

1 Q. Yep. So let me -- let me clarify that.
2 That's just Medtronic's Exhibit 1051 in this
3 proceeding, correct?

4 A. Sorry, you cut out there for a second.
5 What?

6 Q. So the infringement contentions that you're
7 relying on in forming the opinion in paragraph 33
8 is Medtronic Exhibit 1051; is that correct?

9 A. I don't know what it is in the petition.
10 What I reviewed was in my declaration, Exhibit 1051.
11 Oh, it -- I guess it is titled "Infringement
12 Contentions for T2 Stratosphere."

13 Q. Okay. Just so we're clear on this.
14 (Exhibit 1051 was marked for
15 identification.)

16 BY MS. LaVALLEY:

17 Q. So what I've shown on the screen, the title
18 page says "Exhibit J1" and "Medtronic Exhibit 1051"
19 on the front cover, correct? That's what you're
20 referring to in paragraph 33; is that correct?

21 A. Correct. Which is attached to my
22 declaration.

23 Q. So did you review the infringement
24 contentions in forming the opinions in your
25 declaration?

1 A. I reviewed the infringement contentions in
2 Exhibit J1 of my Exhibit 1051. The reason I'm
3 being narrow is because I don't know if there was
4 other stuff. This is what I was provided and I
5 read.

6 Q. Understood. And thank you for being
7 precise.

8 So you reviewed Exhibit 1051 in forming the
9 opinions in your declaration, correct?

10 A. I considered -- I reviewed and considered
11 Exhibit 1051 in forming my opinions.

12 Q. And did you use the contentions in
13 Medtronic Exhibit 1051 to understand the claims?

14 A. I don't recall -- well, I don't think so.
15 I think -- yeah. No, I don't recall.

16 Q. And what do you mean in your statement in
17 paragraph 33 of your declaration that "the prior
18 art discloses or suggests each claim limitation
19 under any reasonable construction, particularly in
20 view of patent owner's infringement contentions"?

21 A. Well, reviewing all material, all the
22 supporting material, including the '755 patent and
23 1051, I came up with my opinions, and -- which
24 included reviewing this document.

25 Q. And why do you cite Exhibit 1051 in that

1 statement regarding your reasons for not expressly
2 construing any claim?

3 A. So can you repeat that again, please?

4 Q. Why did you cite Exhibit 1051 in the
5 statement in paragraph 33 providing your reason for
6 not expressly construing any claim limitations?

7 A. (Reviewing document.)

8 "Because the prior art discloses or
9 suggests each claim limitation under any reasonable
10 construction."

11 Q. And then it goes on to say "particularly in
12 view of patent owner's infringement contentions,
13 Exhibit 1051," correct?

14 A. That is correct.

15 Q. Why did you cite patent owner infringement
16 contentions, Exhibit 1051, for that statement?

17 A. Because I was -- because I reviewed it.

18 Q. Did you cite every document that you
19 reviewed in paragraph 33?

20 A. I did not recite every document in
21 paragraph 33, no.

22 Q. Why did you determine it was necessary to
23 cite Exhibit 1051 in paragraph 33?

24 MR. PARK: Objection to form.

25 A. So I think I wanted to make sure that I

1 reviewed not just my own opinions, but compare them
2 to the opinions of what the patent owners are of
3 the claim construction.

4 Q. So did you consider those infringement
5 contentions in Exhibit 1051 to understand the
6 claims?

7 MR. PARK: Objection to form.

8 A. I reviewed 1051 and considered patent
9 owner's claim terms.

10 Q. And why did you want to consider patent
11 owner's claim construction in 1051 in forming your
12 opinions?

13 MR. PARK: Objection to form. Asked
14 and answered.

15 A. I was provided this as a supporting
16 document to review in forming my opinions.

17 Q. And did any of patent owner's contentions
18 in Exhibit 1051 inform your understanding of any
19 particular term of the '755 patent?

20 A. I don't recall any specifics, no. I
21 reviewed all the material and then came to my
22 opinions.

23 Q. And claims of the '755 patent use the term
24 "tool-engagement surface," correct?

25 A. (Reviewing document.)

1 Q. And if it's helpful, '755 patent is
2 Exhibit -- Medtronic Exhibit 1001.

3 A. Yes, the claim of '755 does use the term "a
4 tool-engagement surface."

5 Q. And you don't propose a construction of
6 tool-engagement surface in your declaration,
7 correct?

8 A. I use the customary general definition a
9 POSITA would understand what a tool-engagement
10 surface would be.

11 Q. But you don't propose a particular
12 construction of tool-engagement surface in your
13 declaration, correct?

14 A. Yes, I do not propose a new definition
15 other than the general meaning.

16 Q. And what is your understanding of the
17 general meaning of "tool-engagement surface" from a
18 POSITA perspective?

19 A. Specifically to the '755? Or...

20 Q. Well, let me ask the question in a
21 different way to clarify.

22 What meaning of the term "tool-engagement
23 surface" did you use in formulating the opinions in
24 your declaration?

25 A. It's a surface on the implant that the tool

1 engages. And to be -- we'd have to look at, claim
2 by claim, exactly how it's used because there might
3 be nuances. But in claim 1, at one point here, the
4 tool-engagement surface -- the expansion mechanism
5 comprises of the tool-engagement surface.

6 Q. So sticking with claim 1 of the
7 '755 patent, I just want to make sure that I
8 understand what you said.

9 So your understanding of "tool-engagement
10 surface," in the context of claim 1 of the
11 '755 patent, is the surface on the implant that the
12 tool engages; is that correct?

13 A. (Reviewing document.)

14 Yeah, I just got -- can you please repeat
15 that question?

16 Q. Sure. So your understanding of
17 "tool-engagement surface," in the context of claim
18 1 of the '755 patent, is the surface on the implant
19 that the tool engages, correct?

20 A. More specifically, it's the surface on the
21 expansion -- a surface on the expansion mechanism
22 for the tool.

23 Q. And what do you mean by "for the tool"?

24 A. So -- let me make sure I get...

25 (Reviewing document.)

1 So a tool that is used for the turning
2 mechanism of the expansion mechanism.

3 Q. And what -- what are you reading from for
4 that answer?

5 A. I'm not reading; I'm paraphrasing.

6 Q. Oh, what are you paraphrasing?

7 A. I'm -- the answer to your question.

8 Q. Sure. It just -- it looked like you were
9 reviewing a specific paragraph of your declaration.
10 What paragraph of your declaration --

11 A. Oh, I reviewed --

12 Q. -- were you reviewing?

13 A. I reviewed a few paragraphs here.

14 Q. Okay. And what paragraphs are those?

15 A. On page -- sorry, I started backwards.
16 Page 56 of 115. Well, let's -- let's call it all
17 of 1.d, page 54 of 115 to page 56 of 115.

18 Q. And this is -- this is Appendix A of your
19 declaration, the claim chart for Schafer, correct?

20 A. Correct. It's in Appendix A.

21 Q. Okay. And going back, you said that the
22 tool-engagement surface in the context of claim 1
23 of the '755 patent "is the surface on the expansion
24 mechanism for the tool."

25 Do you mean the surface on the expansion

1 mechanism that engages with the tool -- or what do
2 you -- what do you mean by "for the tool"?

3 A. So I believe I said "a feature" of the
4 expansion -- or something. It wasn't the whole
5 expansive mechanism. It was a part of it. I can't
6 remember the exact wording.

7 Can I -- go ahead. Please repeat the
8 question.

9 Q. Yeah. Understood. And thanks for that
10 clarification.

11 So I'm reading your definition from
12 earlier. You mentioned that the -- the
13 tool-engagement surface, in the context of claim
14 16 -- excuse me, the tool-engagement surface in the
15 context of claim 1 of the '755 patent is a part of
16 the surface on the expansion mechanism for the
17 tool. And now I understand what you're referring
18 to as the tool.

19 I was wondering, what do you mean by the
20 "for the tool"?

21 A. For '755, as well as Schafer, it's a
22 feature that allows the tool to engage with a part
23 of the expansion mechanism.

24 Q. What do you mean by "engage"?

25 A. Where they contact with each other.

1 Q. So is it accurate to say that you believe
2 the tool-engagement surface is a part of the
3 expansion mechanism that allows the tool to contact
4 the expansion mechanism?

5 A. Can I read your question?

6 Q. Yes.

7 A. Sometimes I -- easier to read.

8 Q. Absolutely.

9 A. (Reviewing realtime feed.)

10 So just to be -- to clarify, the
11 tool-engagement surface is part of the turning
12 mechanism, which is part of expansion mechanism.

13 Q. Okay. And just -- just to clarify and just
14 going forward, and I -- I -- when you asked to, you
15 know, the -- review the realtime feed and read my
16 question, and that's fine. I just want to confirm
17 that there's nothing else open on that laptop in
18 front of you.

19 A. Oh, correct. Yeah, I'm just -- it was just
20 the transcript. That's what you call it?

21 Q. Yep. Okay. Okay. Thank you.

22 So you believe that the tool-engagement
23 surface is part of the turning mechanism; is that
24 correct?

25 MR. PARK: Objection to form.

1 A. I apologize. There was a little -- little
2 bleep in the video.

3 Q. You believe that the tool-engagement
4 surface is part of the turning mechanism; is that
5 correct?

6 MR. PARK: Objection to form.

7 A. From my understanding of '755 patent, is
8 that the question?

9 Q. Yes.

10 A. (Reviewing document.)

11 So, no, that's not -- so the tool --
12 tool-engagement surface is listed separately as --
13 in the claim as the expansion mechanism. I'm
14 rereading the claim.

15 So expansion mechanism comprises a
16 tool-engagement surface, a threaded body, and a
17 turning mechanism.

18 Q. Okay. Focusing again on what the
19 tool-engagement surface is, you mentioned it's a
20 part of the expansion mechanism which engages with
21 the tool; is that -- that's correct?

22 A. (Reviewing document.)

23 It can be. It can be part of a turning
24 mechanism.

25 Q. Do you think the tool-engagement surface

1 can be part of the turning mechanism? Is that
2 correct?

3 MR. PARK: Objection to form.

4 A. The way the claim reads is that it just
5 needs a tool-engagement surface.

6 Q. Okay. And what is your understanding of
7 what a tool-engagement surface is in the context of
8 claim 1 of the '755 patent?

9 A. A surface of the expansion mechanism that
10 the tool engages.

11 Q. And when you say "a surface of the
12 expansion mechanism that the tool engages," what is
13 your understanding of "engages"?

14 A. As I said prior, it's when it contacts it.
15 When the tool contacts that surface.

16 Q. Is it fair to say your understanding of
17 tool-engagement surface in the context of the
18 claim 1 of the '755 patent is a surface of the
19 expansion mechanism that the tool contacts?

20 A. A part of the expansion mechanism that the
21 tool contacts, correct.

22 Q. And does that contact between the tool and
23 the expansion mechanism have to occur at any
24 particular time for you to consider it a
25 tool-engagement surface?

1 MR. PARK: Objection to form.

2 A. (Reviewing document.)

3 When you say "time," what specifically do
4 you mean "time"?

5 Q. I mean during expansion -- during the
6 expansion process. So you mention that your
7 understanding -- to just clarify and rephrase my
8 question.

9 So you mention that your understanding of
10 tool-engagement surface is a part of the expansion
11 mechanism that the tool contacts. And my follow-up
12 question is, When does that contact have to occur?
13 Does it need to be during expansion?

14 MR. PARK: Objection to form.

15 A. (Reviewing document.)

16 It doesn't specify exactly when it needs to
17 happen.

18 Q. So would you consider anything that the
19 tool contacts on the engagement mechanism to be a
20 tool-engagement surface?

21 MR. PARK: Objection to form.
22 Mischaracterizes.

23 A. (Reviewing document.)

24 Yeah, please -- will you repeat that,
25 please?

1 Q. Would you consider anything that the tool
2 contacts on the engagement mechanism to be a
3 tool-engagement surface?

4 MR. PARK: Objection. Form.

5 A. What tool -- is multiple tools -- just need
6 more specifics.

7 Q. I guess I'm asking you what your definition
8 of "tool-engagement surface" is.

9 So my question is, Would you consider
10 anything that -- any tool contacts on the
11 engagement mechanism to be a tool-engagement
12 surface?

13 MR. PARK: Objection. Outside the
14 scope.

15 A. I didn't -- I didn't opine on that, and I
16 would have to analyze that separately.

17 Q. Okay. Let's -- what part of that question
18 would you need to analyze separately?

19 A. I think you asked, If any tool touches any
20 surface, is it considered a tool-engagement
21 surface? I actually can't remember exactly what
22 you said.

23 But it seems really broad, and I really
24 have to understand what that is and take it into
25 context of -- here in '755, as well as is it

1 compare -- are you trying to bring in other prior
2 art? And it -- it's very broad.

3 Q. The tool part you think is very broad or
4 what part of that question?

5 A. The "any tool." A lot of parts of the
6 question, but "any tool," you said.

7 Q. Okay. Well, so -- I'll try again then.

8 So if you define -- or understand
9 "tool-engagement surface" to be a part of the
10 expansion mechanism that the tool contacts; is that
11 correct? Is that your understanding?

12 A. Repeat it again, please.

13 Q. I'll strike -- I'm going to reask -- I'll
14 strike that question and reask it.

15 A. So --

16 Q. Is your understanding --

17 (Indiscernible crosstalk.)

18 BY MS. LaVALLEY:

19 Q. Is your understanding of tool-engagement
20 surface a part of the expansion mechanism that the
21 tool contacts?

22 A. I'm having audio/video issues.

23 Q. Oh, you are. Okay. Can -- I want to make
24 sure that you can hear me.

25 A. Yeah, it's -- it must be, like, an internet

1 lag or something. It's jittering. So I'm not
2 capturing 100 percent of what you're saying.

3 Q. Okay. Well, we need to fix that, so --
4 let's go off the record just briefly to fix the
5 audio.

6 (Break: 12:33 p.m. to 12:35 p.m.)

7 BY MS. LaVALLEY:

8 Q. Okay. I'm going to repeat my question from
9 before the break and when you can hear my question.

10 Is your understanding of tool-engagement
11 surface part of the expansion mechanism that the
12 tool contacts?

13 A. Which tool are you referring to?

14 Q. I'm reviewing -- or I'm repeating your
15 prior testimony. So is that not your understanding
16 of what a tool-engagement surface is?

17 MR. PARK: Objection to form.

18 A. Yeah, I was just clarifying the -- because
19 he -- you had also --

20 (Court reporter requested
21 clarification.)

22 A. I'm also trying to understand, because the
23 previous question, it also asked "any tool," so I'm
24 trying to narrow down specifically what the comment
25 was in regard to.

1 Q. Okay. Well, why don't we start here. Why
2 don't you tell me what your understanding of
3 "tool-engagement surface" is, and we can go from
4 there.

5 MR. PARK: Objection. Asked and
6 answered.

7 A. It's the surface -- a surface on the
8 expansion mechanism that a tool can engage. Or
9 does engage.

10 Q. And what tool are you referring to in that
11 statement?

12 A. (Reviewing document.)

13 A tool to use to assist in expanding the
14 expansion mechanism.

15 Q. And would you consider any surface on the
16 expansion mechanism that a tool to use to assist in
17 expanding the expansion mechanism can engage to be
18 a tool-engagement surface?

19 MR. PARK: Objection. Incomplete
20 hypothetical.

21 A. Again, I have not opined and analyzed it
22 that way.

23 Q. And what have you opined on as far as what
24 would be the tool-engagement surface in the context
25 of the '755 patent?

1 MR. PARK: Objection. Asked and
2 answered now several times.

3 A. I have opined on the prior art that was
4 given and the information given what that surface
5 is. And how it relates to the prior art.

6 Q. Would you consider any surface of the
7 expansion mechanism that the tool you just
8 described can touch to be a tool-engagement
9 surface?

10 MR. PARK: Objection. Incomplete
11 hypothetical.

12 A. Yeah, I haven't opined on that and given an
13 opinion on -- it wasn't my directive.

14 Q. So you don't have an opinion on that
15 question one way or another?

16 A. At this time I don't have an opinion
17 without further review and research.

18 Q. And what would you need to review and
19 research to respond to that question?

20 MR. PARK: Objection to form.

21 A. I would have -- I don't know everything at
22 this time. This is something new to me, and I'm
23 not here ready to present a new opinion on
24 something I haven't seen or reviewed.

25 Q. And what part of that question is new to

1 you?

2 A. Something about -- I can't remember exactly
3 what it was. It was something about any surface of
4 the engagement mechanism.

5 (Court reporter requested
6 clarification.)

7 A. Any surface.

8 Q. So it's the "any surface" in my question
9 that is giving you pause; is that correct?

10 A. At least that. I have to go through the
11 question again. The question's so broad, it's --
12 my directive was to look at and review the prior
13 art to see if it discloses or suggests...

14 (Reviewing document.)

15 MR. PARK: We've been going for well
16 over an hour. Is there -- can you let us know when
17 there's a good time for a break?

18 MS. LaVALLEY: Sure. After this line
19 of questioning, we can take a short break.

20 THE WITNESS: Yeah.

21 MR. PARK: Well, we're going to take a
22 lunch break.

23 MS. LaVALLEY: Oh, sure. Absolutely.

24 BY MS. LaVALLEY:

25 Q. So as part of your analysis that you've

1 prepared in your declaration, did you consider the
2 meaning of the claim terms in the '755 patent?

3 A. What I did was -- I can read paragraph 33.

4 Q. No, I --

5 A. They use the word "ordinary and customary
6 meanings," other than claim 10, the
7 means-plus-function limitation, which counsel gave
8 me specific definition to use.

9 Q. So other than that means-plus-function
10 limitation in claim 10, you used the ordinary and
11 customary meaning of all other claim terms,
12 correct?

13 A. As would have been understood by a POSITA
14 at the time of the invention of the patent.

15 Q. Okay. And did you consider what the
16 ordinary and customary meaning of "tool-engagement
17 surface" is as part of your analysis?

18 MR. PARK: Objection. Asked and
19 answered now several times.

20 A. I considered it in respect to the prior art
21 I was given. Or provided.

22 Q. Is it fair to say that you only considered
23 what tool-engagement surface means with respect to
24 the prior art?

25 A. My focus and directive was to see if the

1 prior art meet that claim limitation. I didn't
2 feel a need to go outside of that or opine on --
3 outside of that.

4 Q. So you didn't independently determine what
5 the term "tool-engagement surface" means in the
6 context of the '755 patent; is that correct?

7 MR. PARK: Objection. Objection to
8 form.

9 A. I used ordinary and customary meanings as
10 would have been understood by a POSITA at the time
11 of invention of the patent -- or for the patent.

12 Q. That wasn't my question. My question is,
13 Did you independently determine what the term
14 "tool-engagement surface" means in the context of
15 the '755 patent?

16 MR. PARK: Objection. Form. Asked and
17 answered now numerous times.

18 A. I don't understand how my answer didn't
19 answer your question.

20 Q. You said that you used the ordinary,
21 customary meaning as would have been understood by
22 a POSITA at the time of the invention of the
23 patent. And my question is, Did you determine what
24 the term "tool-engagement surface" means in the
25 context of the '755 patent?

1 MR. PARK: Objection to form. If you
2 understand.

3 A. And I used it in -- in my directive of,
4 does the prior art -- does the prior art disclose
5 or suggest the features recited in claims 1 to 6, 8
6 to 12, and 17 to 20 of the challenged claims of the
7 '755 patent?

8 (Court reporter requested
9 clarification.)

10 THE WITNESS: Sorry. I was reading,
11 so...

12 A. I used the ordinary and customary meaning
13 as would have been understood by a POSITA at the
14 time of the invention for the patent when
15 determining whether prior art references disclose
16 or suggest the features recited in claims 1 to 6, 8
17 to 12, and 17 to 20, the challenge claims of the
18 '755 patent.

19 MR. PARK: All right, Counsel, can we
20 take a break?

21 BY MS. LaVALLEY:

22 Q. Did you have an understanding of
23 "tool-engagement surface" in the context of the
24 '755 patent before you applied it to the prior art?

25 A. I had ordinary and customary meaning of

1 "tool-engagement surface," and then I applied that
2 to the prior art.

3 Q. And what is -- what did you determine the
4 ordinary and customary meaning of "tool-engagement
5 surface" was before you applied it to the prior
6 art?

7 MR. PARK: Objection. Counsel, you
8 seriously asked this same exact question about
9 seven times now. He's given you the same exact
10 answer. It's getting harassing now. I think the
11 record's very clear. You've asked the same exact
12 question, and he's given the same exact answer.

13 I'm -- he can give it to you one more
14 time, but I'm not going to allow another question
15 that's exactly the same, that's soliciting the
16 exact same answer.

17 MS. LaVALLEY: And, Counsel, I've
18 actually received six different answers to similar
19 questions --

20 MR. PARK: The record speaks for
21 itself.

22 MS. LaVALLEY: -- that are not the
23 same. So I'm trying to clarify the response for
24 the record. And please keep your speaking
25 objections --

1 MR. PARK: No, no, you are not. And I
2 think the record speaks very clearly for itself.

3 BY MS. LaVALLEY:

4 Q. Mr. Culbert, are you going to respond to my
5 question?

6 A. Yeah, can you repeat the question again,
7 please?

8 Q. Certainly. What did you determine the
9 ordinary and customary meaning of "tool-engagement
10 surface" was before you applied it to the prior
11 art?

12 MR. PARK: Objection. Asked and
13 answered.

14 A. I understand typically given by the
15 ordinary and customary meaning as would have been
16 understood by a POSITA at the time of the invention
17 for the patent.

18 MS. LaVALLEY: All right. We'll take a
19 lunch break here.

20 (Break: 12:50 p.m. to 1:31 p.m.)

21 BY MS. LaVALLEY:

22 Q. Welcome back, Mr. Culbert. Did you discuss
23 your testimony with your counsel during the break
24 at all?

25 A. No, I did not.

1 (Previously marked Exhibit 1010 was
2 introduced.)

3 BY MS. LaVALLEY:

4 Q. Okay. Moving on.

5 I'm going to go through Schafer with you,
6 if you have that paper copy in front of you, and I
7 just revealed that. That's previously marked
8 Medtronic Exhibit 1010. And that's patent number
9 7,056,343 issued to Schafer on June 6, 2006.

10 A. Okay.

11 Q. Do you understand when I'm referring to
12 Schafer, I'm referring to Exhibit 1010?

13 A. I understand that.

14 Q. And Schafer describes an extendable
15 intervertebral implant capable of height
16 adjustment, correct?

17 A. That is correct.

18 Q. And if you could turn to Figure 3 of
19 Schafer.

20 A. Okay.

21 Q. So you would agree that Schafer's implant
22 is generally comprised of six components, correct?

23 MR. PARK: Objection to form.

24 A. How do you define "components"? I -- there
25 are eight different -- separate pieces shown on

1 Figure 3. So I'm...

2 Q. Yes. If you -- if you are referring to the
3 screws, if you include the screws, you're correct.
4 So there are eight separate components shown on
5 Figure 3 of Schafer; is that correct?

6 MR. PARK: Objection to the form.

7 A. Again, I guess my question back with you,
8 How do you define "components"?

9 Q. How do you understand "components"?

10 A. I -- well, I'm asking what your question --
11 are you referring to how they're defined as in the
12 claim? Or how -- or as each individual stand-alone
13 item?

14 Q. I'm referring to Figure 3 of Schafer. And
15 I'll withdraw my prior question and just ask you,
16 How many components are shown in Figure 3 of
17 Schafer?

18 MR. PARK: Objection to form.

19 A. Again, I'm -- I see, including 38, there's
20 eight items listed and referred to. Some
21 components could be merged into one and considered
22 one component.

23 Q. How many components, using your definition
24 of the term, would you consider shown in Figure 3
25 of Schafer?

1 A. If just looking at the -- Figure 3 and not
2 reading the spec, there appears to be eight
3 individual items or components.

4 Q. Have you reviewed Schafer?

5 A. Yes, I have reviewed it.

6 Q. So you've read the specification of
7 Schafer, correct?

8 A. Yes, I've read the specification of
9 Schafer.

10 Q. And in order to expand Schafer's implant, a
11 tool would need to be inserted through the openings
12 22 of the support of Schafer. Is that your
13 understanding?

14 A. Are we referring to a different figure now?

15 Q. Sorry, no, I wasn't referring to any
16 specific figure. I was asking you a question about
17 how Schafer operates generally. Would you like me
18 to reask the question?

19 A. So you were specifically asking about 22,
20 so I was just going to a figure that shows 22.

21 Q. I'll reask my question.

22 In order to expand Schafer's implant, its
23 tool would need to be inserted through the openings
24 of -- openings 22 of the support ring of Schafer.
25 Is that your understanding?

1 A. (Reviewing document.)

2 It is my understanding that the expansion
3 tool goes through 22. Correct.

4 Q. And openings 22 are openings in the support
5 ring 18 of Schafer, correct?

6 A. Correct.

7 Q. And Figure 10 of Schafer depicts a tool 70
8 with teeth 72, right?

9 A. That is correct.

10 Q. So once tool 70 passes through opening 22
11 of the supporting ring 18, what structure would the
12 tool contact?

13 A. (Reviewing document.)

14 It would contact the tool-engagement
15 surface and the turning mechanism.

16 Q. What structure in Schafer does the tool 70
17 contact once it passes through the opening 22,
18 using Schafer's terminology?

19 A. (Reviewing document.)

20 Contacts 18 and 22.

21 Q. So once tool 70 passes through the opening
22 22, you believe the tool contacts 18 and 22 of
23 Schafer?

24 A. Apologize. No. 26. 26 is the teeth?
25 Yeah, the teeth of Schafer 10, 26 contacts the

1 supporting ring 18, as well as the surfaces of 18,
2 which is 22.

3 Q. Okay. So once -- once tool 70 passes
4 through the opening 22, the tool would contact
5 bevel teeth 26 of Schafer; is that correct?

6 MR. PARK: Objection to form. I think
7 he also said "22."

8 A. (Reviewing document.)

9 MS. LaVALLEY: Counsel, I'll just
10 object to that as coaching. If you continue
11 coaching the witness and using the speaking
12 objections, I'll contact the board.

13 BY MS. LaVALLEY:

14 Q. Please go ahead, Mr. Culbert.

15 MR. PARK: You should not
16 mischaracterize his response.

17 A. So once the tool passes through 22 and 18,
18 is -- what my understanding is once it's past all
19 that, what does it contact next? And that is the
20 teeth 26, both the top and bottom. They're labeled
21 the same.

22 Q. Both the top and bottom bevel teeth 26,
23 you're referring to?

24 A. So the bevel teeth at both the top and
25 bottom of 34 and 36.

1 Q. And where in Schafer does it say that the
2 tool contacts 18 and 22?

3 A. (Reviewing document.)

4 I would have to reread it to see if it
5 specifically states that. But a POSITA would
6 understand that the tool -- it would inherently
7 try -- feed that through there without touching it
8 would be almost impossible.

9 Q. And what was the basis for your response
10 that you believe the tool contacts 18 and 22 of
11 Schafer?

12 A. A POSITA would understand that, and based
13 on my personal experience of trying to put a tool
14 through a hole without touching it.

15 Q. Is there anywhere in your declaration where
16 you rely on your personal experience of trying to
17 put a tool through a hole without touching it?

18 A. I don't think it specifically states that,
19 but it's the general knowledge of a POSITA, which I
20 am.

21 Q. As you sit here today, you can't identify
22 anywhere in Schafer where it says that the tool
23 would contact 18 and 22; is that correct?

24 MR. PARK: Objection to form.

25 A. What I said is I could read this again now

1 if you want me to take the time to verify.

2 Q. You're unable to respond to the question
3 without reviewing Schafer; is that correct?

4 A. To be 100 percent certain, I would have to
5 review this again.

6 Q. We can move on. I'll withdraw that
7 question.

8 Does any ancillary touching of the tool to
9 opening 22 cause rotation of the bevel teeth?

10 MR. PARK: Objection to form.

11 A. And we're referring to Schafer, correct? I
12 can't remember --

13 Q. Yes.

14 A. -- if you --

15 (Indiscernible crosstalk.)

16 A. -- at the beginning? Okay.

17 Again, I haven't opined on any touching at
18 all. Meaning if you were to touch the side, does
19 it or does not affect the gears. What I reviewed
20 was, Does the tool go through 18 via hole 22 to
21 then rotate to change the gear -- to move the
22 gears? And that's what I reviewed.

23 Q. So according to Schafer, what does the
24 projecting portion of the tool mate with --

25 ///

1 (Court reporter requested
2 clarification.)

3 BY MS. LaVALLEY:

4 Q. According to Schafer, what does the
5 projecting portion of the tool mate with during
6 actuation of the device?

7 A. (Reviewing document.)

8 When you say "projecting portion," are you
9 referring to teeth 72?

10 Q. Yes.

11 A. So Schafer states that the "tool 70 also
12 has teeth 72 which, together with teeth 26, form a
13 bevel geared -- bevel tooth gear" are interacting.

14 Q. So the tool mates with the bevel teeth 26
15 during actuation of the device; is that correct?

16 A. Yes, the teeth 72 of tool 70 mate with the
17 teeth 26.

18 Q. And can the tool rotate the bevel teeth
19 without touching openings 22?

20 A. I don't see how that could be possible in
21 an operating condition where a doctor is 4 to
22 6 inches away from what's happening with a long
23 slender tool and you would have to keep that
24 cylinder perfectly straight. I don't see that
25 physically possible in real life.

1 Q. In order for Schafer to work, shouldn't the
2 tool be dimensioned so it can easily be turned
3 within the openings of the supporting rings?

4 MR. PARK: Objection to form.

5 A. Not necessarily, because 72 mates with 26,
6 and in order to get the alignment, you want that
7 dimension as close as possible in order for the
8 tool to fit nicely in those gears, or else you
9 might have a hard time inserting the tool.

10 Q. When you said "you want the dimension as
11 close as possible," what -- close as -- what
12 dimension are you talking about there?

13 A. The ID of 22. And the OD of 70.

14 Q. So you're saying you would want the
15 dimension of the openings 22 to be as close as
16 possible to the dimensions of the tool; is that
17 correct?

18 A. The distal OD of the tool, correct. In
19 order to align the tool to be inserted into the
20 gears, where you -- the larger that dimension, the
21 harder it is to find those gears to -- 72 to fit
22 into those gears.

23 Q. Would the bevel teeth on either side of the
24 supporting ring align the tool?

25 MR. PARK: Objection to form.

1 A. If you were able to find the gears blindly
2 like that -- and remember you're 4 to 6 inches
3 away, even to tissue, that is very difficult to do.
4 That is why you want -- and any POSITA would
5 have -- probably have done this, is -- 22 also act
6 as a guide for the tool to be inserted so the gears
7 mate nicely.

8 Q. So do you -- do you agree that the tools
9 should be dimensions so it can be turned easily
10 within the openings of supporting rings?

11 A. I agree the turning easily is definitely a
12 considerat- -- a desired consideration when
13 designing the tool. So is dimensions and
14 alignment, and there is a lot that goes on with
15 doing that.

16 Q. So once the tool is inserted and mates with
17 the bevel teeth, what happens when the tool is
18 turned, in Schafer?

19 A. You want everything or just the beginning
20 part where the 72 mate with 26? 72 gears rotate as
21 you rotate the tool, and so then the gears rotate
22 to spin the bodies.

23 Do you want me to keep -- and then on
24 the -- the thread of bodies have external threads
25 for the shells, which would in turn expand.

1 There's a lot more details, but generally, that's
2 what it does.

3 Q. And so what structure receives the
4 rotational force directly from the tool?

5 MR. PARK: Objection to form.

6 A. You would have forces on the gears of
7 bodies 50, like the gear 26 of 50 and 36. Well,
8 both 50s. They're both 50s. Apologize.

9 No, 50s are the teeth -- 34 and 36. Sorry.
10 The bodies of 34 and 36.

11 So the forces themselves are on 26 of the
12 bodies of 34 and 36, as well as, as I mention,
13 turning that. And once you start receiving --
14 forces starting, pretty soon that tool is going to
15 be moving, and you're going -- the supporting ring
16 18 will also see forces as well.

17 Q. Just to clarify your response with the
18 numbers of the figures.

19 A. Yeah.

20 Q. So one of the structures that you've
21 identified as receiving the rotational force
22 directly from the tool are the gears 26 on the
23 bodies 34 and 36, correct?

24 A. Correct. One of the interfacing components
25 are the gears of -- gears 26 of 34 and 36.

1 Q. And you also mentioned that the supporting
2 ring 18 is going to receive a force as well from
3 the turning of the tool; is that correct?

4 A. That is correct.

5 Q. Where will supporting ring 18 be forced
6 from the rotating of the tool?

7 A. In at least a couple different areas. As
8 34 and 36 turn, that supporting ring will move side
9 to side slightly, and you will see forces from
10 that. As well as the tool will also be moving and
11 doing forces on 22.

12 Q. And what direction --

13 A. 22 --

14 (Indiscernible crosstalk.)

15 BY MS. LaVALLEY:

16 Q. And what direction will the force be
17 received -- from what direction will the force be
18 received on 22 in response to the tool?

19 A. What do you mean with -- what direction
20 of -- will it receive? It can receive it from many
21 directions. As you turn the tool, the tool will be
22 inside of the surface of 22.

23 Q. So will the force be received perpendicular
24 to the tool by surface 22?

25 A. It's moving so it will receive it in

1 different directions.

2 Q. And what structures in Schafer would rotate
3 in response to turning of the tool?

4 A. The threaded bodies, 34 and 36, the
5 entirety of those, which includes the gear in 26,
6 would rotate. And, in turn, those threaded
7 bodies -- the threads on the threaded bodies will
8 then rotate and move 12 and 14.

9 Q. And apart from the inner sleeves -- strike
10 that.

11 Does any force on supporting ring 18 cause
12 rotation of the inner sleeves 34 and 36?

13 A. (Reviewing document.)

14 Well, there's always a -- as I mentioned,
15 there's forces on 18 during rotation. So it's
16 supporting the rotation motion.

17 Q. So you're saying that the force on
18 supporting ring 18 supports rotation, but does the
19 force on supporting ring 18 cause rotation of the
20 inner sleeves 34 and 36?

21 MR. PARK: Objection. Asked and
22 answered.

23 A. Let me answer it a different way. If 18
24 wasn't there, 34 and 36 potentially not rotate
25 because it would fall apart. It needs to be

1 supported, and you'll have equal and opposite
2 forces against it to facilitate rotation.

3 Q. And that's answering a different question.
4 My question was whether the force on supporting
5 ring 18 would cause the rotation of the inner
6 sleeves 34 and 36.

7 MR. PARK: Objection to form.

8 A. The tool would be touching the side of it,
9 and it's used as support, especially as the forces
10 increase. So, again, you'll have an equal and
11 opposite reaction force there that causes the ring
12 to expand -- the 26 gears to expand.

13 Q. So I -- this is a yes-and-no question -- or
14 yes-or-no question, whether the force -- and the
15 question is whether the force on supporting ring 18
16 would cause the rotation of the inner sleeves 34 or
17 36? Yes or no?

18 MR. PARK: Objection to form. And you
19 are not required to give a "yes" or a "no" answer
20 in response to the question.

21 A. I stick by the answers I've given already.

22 Q. Okay. So you're unwilling to say "yes" or
23 "no" in response to my question; is that correct?

24 MR. PARK: Objection to form. He's
25 answered your question, and you don't need to throw

1 in your own characterization there. Just ask your
2 questions, Counsel.

3 A. I do not believe this is a yes-and-no
4 question, and I need to let you know what I think
5 is happening to answer your question.

6 Q. Okay. And I'm entitled to an answer to my
7 question, and I haven't received it yet. So I --
8 my question was whether the force on supporting
9 ring 18 would cause a rotation of inner sleeves 34
10 or 36.

11 MR. PARK: Objection to form. And,
12 again, I object to your characterization of the
13 answer that you think you're not getting from the
14 witness. I disagree.

15 A. When the tool is rotated -- and I'm using
16 one example -- there are forces on 22 of 18 that
17 facilitate the turning of the gears.

18 Q. What portion of the inner sleeves 34 or 36
19 interact with the outer sleeves to cause expansion?

20 A. What portions of 34 and 36? Is that --

21 Q. Yes.

22 A. -- is that what the question is? Only
23 those two? The -- yeah, maybe just repeat again
24 one more time.

25 Q. Sure. What portions of the inner sleeves

1 34, 36 interact with the outer sleeves to cause
2 expansion?

3 A. The gears 26 are the primary features of 34
4 and 36 that interact with the tool 70 to cause
5 expansion. Starting there. If you're talking
6 about all expansion, then it's also -- of the 12
7 and 14, it's the threaded body.

8 Q. Does supporting ring 18 rotate during
9 expansion of the mechanism? Or strike that.

10 Does supporting ring 18 rotate during
11 expansion of the implant?

12 A. No, it doesn't. It may move micro motion,
13 but while you're expanding it, it is generally in
14 the exact same spot.

15 Q. What portion of the outer sleeves interact
16 with the inner sleeves to cause expansion?

17 A. Outer sleeves 12 and 14? So you're asking
18 what portions of 12 and 14 interact with 34 and 36
19 to cause expansion?

20 Q. Let me make sure I have the number correct
21 here.

22 A. Yeah.

23 Q. Yeah, so what portion of the outer sleeves
24 12 and 14 interact with inner sleeves 34 and 36 to
25 cause expansion?

1 A. The primary mechanism to cause expansion is
2 the threads 50, as well as the threads -- the
3 internal threads of 12 and 14. I don't have that
4 number off the top of my head here.

5 Q. Now, is it correct that the threads 46 on
6 the inside of outer sleeves 12 and 14 interact with
7 threads 50 on the outside of inner sleeves 34, 36
8 to cause expansion?

9 A. I'm verifying that.

10 (Reviewing document.)

11 Let's keep it at -- it's -- "the two inner
12 sleeves can be driven in the area of their front
13 surface 54." That's -- well -- no, strike that.

14 Q. It might be helpful to look at Figure 3 of
15 Schafer.

16 A. Yep. I got Figure 3.

17 Q. Okay. Let me reask my question with
18 Figure 3 as a reference.

19 So is it correct that the threads 46 on the
20 inside of outer sleeves 12 and 14 interact with the
21 threads 50 on the outside of inner sleeves 34 and
22 36 to cause expansion?

23 A. Yeah, that's what I was trying to verify,
24 if 46 -- what were -- what was pointing to the
25 inside thread, and I just found it. And that is

1 the primary mechanism that causes them --

2 (Court reporter requested
3 clarification.)

4 A. For them to expand apart.

5 Q. And apart from the threads on the inner
6 sleeves -- excuse me. Apart from the threads on
7 the inside of the outer sleeves, does Schafer
8 identify any other structures that engage the
9 threads of the inner sleeves 34, 36 during
10 expansion?

11 A. (Reviewing document.)

12 Well, as it goes through, it's also going
13 through 16. The thread 46 is going through the
14 surface 16. And then 38 are, I believe, done
15 afterwards. So your question was during
16 expansion -- so 38 --

17 (Court reporter requested
18 clarification.)

19 A. -- are set screws. And I believe they're
20 done afterwards, not during expansion.

21 Q. Okay. So other than the threads on the
22 inner -- I keep misspeaking here with the sleeves.

23 Apart from the threads on the outer sleeves
24 and surface 16, do you believe any other structures
25 in Schafer engage the threads on the inner sleeves

1 34 and 36 during expansion?

2 A. I believe those are the only structures
3 that engage 50 during expansion.

4 Q. And how do you believe the -- can you
5 explain your opinion that the threads on the inner
6 sleeves 34 and 36 engage surface 16 during
7 expansion?

8 A. The internal threads 46 go through surface
9 16, which then 34 and 36 go through 16 as well,
10 because that's where the threads are.

11 Q. Okay. Turning to -- oh, here. Look --
12 that last response, you mentioned that the internal
13 threads 46 go through surface 16. What do you mean
14 by that?

15 A. When the internal threads 46 are
16 machined -- i.e., cut -- they would have to be cut
17 through surface 16. It's clearly shown there on
18 Figure 3.

19 Q. Is surface 16 shown as a flat surface in
20 Figure 3?

21 A. It generally appears to be flat. There
22 isn't another view to confirm.

23 Q. So are you saying that the internal threads
24 46 are cut into the vertical surface of 16?

25 MR. PARK: Objection to form.

1 A. What do you mean by "vertical surface"?

2 Q. I -- I'm really just trying to understand,
3 when you say that the internal threads 46 are
4 machines, they would have to be cut through surface
5 16, what do you mean by "the threads would have to
6 be cut through surface 16"?

7 A. So prior to the threads being there, you'll
8 have 16 -- 16, the surface, and you would have to
9 machine the threads through and take -- machine the
10 threads through 16 to create the threads.

11 Q. So would the threads be on surface 16, or
12 would they be on the internal surface of 12?

13 MR. PARK: Objection to form.

14 A. The threads start on the surface of 16 and
15 go into the internal of 12. Into the internal
16 surface of 12.

17 Q. And what's the basis for your opinion that
18 the threads start on the surface of 16?

19 MR. PARK: Objection to form.

20 A. Based on the picture of Figure 3. To me
21 and a POSITA, the threads start at 16. And if they
22 did not, you would not be able to get 34 into 12.

23 Q. And why would you not be able to get 34
24 into 12 if the threads do not start at 16?

25 A. Because the only way to cut the threads is

1 to remove material, or the threads, or else there
2 will be material there, and the ID of 34 would not
3 fit into -- the OD of 34 would not fit into the ID
4 of 12. And there's no indication there's a
5 counterbore.

6 Q. And what do you mean by the abbreviation
7 "OD"?

8 A. Outside diameter.

9 Q. And is "ID" inside diameter?

10 A. That is correct.

11 Q. And turning to your declaration, Medtronic
12 Exhibit 1002, can you please turn to page 24 of 15
13 [sic].

14 A. Okay. I'm there.

15 Q. And in this figure you identify certain
16 components as the expansion mechanism, correct?

17 A. That is correct.

18 Q. In formulating your opinions, what meaning
19 of "expansion mechanism" do you use?

20 A. The components that facilitate the
21 expansion of the implant.

22 Q. So you include the inner sleeve 34,
23 supporting ring 18, the inner sleeve 36, and
24 locking mechanism 42 as part of the expansion
25 mechanism; is that correct?

1 A. That is correct. I consider all those as
2 part of the expansion mechanism.

3 Q. You don't include outer sleeves 12 and 14
4 in the expansion mechanism, correct?

5 A. For this -- on page 24, correct. No.

6 Q. How did you determine which limitation
7 should be listed -- or, excuse me. How did you
8 determine which components of Schafer should be
9 listed as part of the expansion mechanism?

10 A. I had to look at the entire apparatus and
11 look at the claims and try to determine what is
12 what. So if -- it was apparent that 12 and 14 are
13 the first shell and second shell. And then I
14 determined that everything else facilitated the
15 expansion of those two shells, other than at set
16 screws 38.

17 Q. Are the threads on the outer sleeves 12 and
18 14 required to drive expansion?

19 A. Are the what? Sorry.

20 Q. Are the threads on the outer sleeves -- or,
21 excuse me. On the -- are the threads on the outer
22 shells of 12 and 14 required to drive expansion?

23 A. They are needed to -- they are needed to --
24 for expansion in this embodiment.

25 Q. So why didn't you --

1 A. But there are --

2 Q. -- include the outer sleeve -- oh, sorry.
3 I didn't mean to cut you off there.

4 A. I think I was asking you a question before.
5 Yeah, because -- but they are part of the
6 outer -- they are part of the shells, the first
7 shell and the second shell.

8 Q. Okay. And I interrupted you, and I
9 apologize for that.

10 Let me just clarify your response. Are the
11 threads on the outer shells of 12 and 14 required
12 to drive expansion?

13 A. In this configuration, they are needed to
14 drive expansion.

15 Q. And turning to page 51 of your declaration.

16 A. You want...

17 Q. And actually it's page 54 of 115.

18 Page 15 -- 51 at the center of the page.

19 A. 1.d? Yep.

20 Q. And this includes your analysis as to how
21 Schafer meets limitation 1.d of the '755 patent,
22 correct?

23 A. That is correct.

24 Q. And limitation 1.d of the '755 patent
25 requires an "expansion mechanism comprising a

1 tool-engagement surface, a threaded body, and a
2 turning mechanism." Correct?

3 A. Correct.

4 Q. And on page 55 of 115 of your declaration,
5 Appendix A, you identify the contours of opening 22
6 in Schafer's supporting ring 18 as meeting the
7 limitation of the tool-engagement surface, correct?

8 A. Apologize. So you said that -- or I said
9 that 22 is the tool-engagement surface.

10 MR. PARK: Maybe you should repeat --

11 BY MS. LaVALLEY:

12 Q. I'm asking --

13 MR. PARK: -- your question, Counsel.

14 BY MS. LaVALLEY:

15 Q. I'm asking you to confirm whether you
16 identify the contours of opening 22 in Schafer's
17 supporting ring 18 as meeting the limitation of the
18 tool-engagement surface.

19 A. Yeah, the surface of 22, I considered as
20 the tool-engagement surface.

21 Q. Other than the contours of opening 22 of
22 Schafer's supporting ring 18, your declaration does
23 not identify any other structure in Schafer as a
24 tool-engagement surface, correct?

25 A. That is correct. "Contours of opening

1 22" --

2 (Court reporter requested
3 clarification.)

4 A. -- are a 'tool-engagement surface,' and
5 the only one that I identified here.

6 Q. And then that same page, 55 of --

7 MR. PARK: I'm sorry. Hold on one
8 second. Madam Court Reporter, there's a "contours
9 of opening 22 are a 'tool-engagement surface.'"
10 Like, there was a conjunction there.

11 BY MS. LaVALLEY:

12 Q. And also on page 55 of 115, your
13 declaration identifies Schafer's bevel teeth 26 on
14 the inner sleeves together with supporting ring 18
15 as comprising a turning mechanism, correct?

16 A. Oh, I see where you're at. Can you repeat
17 what you said? Is this at the bottom of the page?

18 Q. Yep. At the bottom, you know, last
19 paragraph there of page 55 of 115, is it correct
20 that your declaration identifies Schafer's bevel
21 teeth 26 on the inner sleeves together with
22 supporting ring 18 as comprising a turning
23 mechanism?

24 A. That is correct.

25 Q. And your declaration doesn't identify

1 either the bevel teeth 26 or the supporting ring 18
2 alone as the turning mechanism, correct?

3 A. Correct. They work together as the turning
4 mechanism.

5 Q. And then the same paragraph on page 55 of
6 115, your declaration identifies the inner sleeves
7 34 and 36 connected through a locking mechanism 42
8 as a threaded body, correct?

9 A. Correct. 34 and 36 "are connected with
10 each other through a locking mechanism 42."

11 Q. And, again, your declaration doesn't rely
12 on any of those features individually as comprising
13 a threaded body?

14 A. (Reviewing document.)

15 Correct. As 34, 36, and locked together
16 with locking mechanism 42, and obviously the
17 threads 50 are the threaded body.

18 MR. PARK: Counsel, can you let me know
19 when it's a good time for a break?

20 MS. LaVALLEY: We can take a break now.

21 MR. PARK: Okay. 10-minute break?

22 MS. LaVALLEY: Sure.

23 (Break: 2:38 p.m. to 2:48 p.m.)

24 BY MS. LaVALLEY:

25 Q. Sir, still on limitation 1.d, limitation

1 1.d of the '755 patent requires that the expansion
2 mechanism is "coupled to the first opposite surface
3 and the second opposite surface," correct? And
4 this is on page 54 of 115 of your declaration.

5 A. I see that.

6 Q. And then page 55 of 115 of your
7 declaration, you address that limitation, don't
8 you?

9 A. Correct.

10 Q. And the only statement in your declaration
11 which addresses how Schafer meets claim 1's
12 limitation requiring that the expansion mechanism
13 is "coupled to the first opposite surface and the
14 second opposite surface" -- surface -- is on
15 page 55 of 115?

16 A. Correct.

17 MR. PARK: Did you say one statement --
18 or -- objection to the form.

19 A. I address that in a paragraph of multiple
20 sentences on page 55 of 115.

21 Q. Okay. So -- and thank you for that
22 clarification.

23 So the only place in your declaration which
24 addresses how Schafer meets claim 1's limitation of
25 requiring that the expansion mechanism is coupled

1 to the first opposite surface and the second
2 opposite surface is the first full paragraph on
3 page 55 of 115, correct?

4 A. I can't remember it's the only time I
5 mention it.

6 MR. PARK: Do you want him to check?

7 THE WITNESS: Sorry, I'm just checking
8 right now.

9 BY MS. LaVALLEY:

10 Q. You can briefly check and confirm that for
11 me.

12 A. (Reviewing document.)

13 This might take me a bit because other
14 parts of the claim might not be -- I may have
15 referred to this as a limitation that has been
16 used.

17 For example, combination of Shane --
18 Schafer, and Yeh, I'm going to go through to see if
19 I refer back to this, which inherently means I
20 disclosed it there too.

21 Q. Okay. Sure. I'll withdraw that question,
22 and we can move on.

23 So going back to page 55 of 115, are you
24 still on that page?

25 A. Yes.

1 Q. Okay. Your declaration identifies
2 Schafer's front surfaces 16 of outer sleeves 12 and
3 14 as corresponding to the first and second
4 opposite surfaces of claim 1, correct?

5 MR. PARK: Objection to form.

6 A. Surfaces 16 of 12 and 14 are opposite outer
7 surfaces, correct.

8 Q. And you also identify Schafer as stating
9 that Schafer discloses that these surfaces 16 rest
10 against supporting ring 18, which you opine as part
11 of the expansion mechanism; is that correct?

12 A. Yeah, coming from Schafer itself, "surfaces
13 16 'rest against supporting ring 18.'"

14 Q. Does supporting ring 18 remain in contact
15 with surfaces 16 through expansion?

16 A. It starts off in contact, and during
17 expansion it can move apart.

18 Q. So you say, "during expansion, it can move
19 apart." You mean surfaces 16 can move apart from
20 supporting ring 18 during expansion; is that
21 correct?

22 A. That is correct.

23 Q. Must surfaces 16 move away from supporting
24 ring 18 in order for there to be expansion?

25 A. Yes, 16 will move away from supporting ring

1 18 during expansion.

2 Q. So would you agree that the surfaces 16
3 would only rest against supporting ring 18 when the
4 implant is in a fully collapsed state?

5 A. In the fully collapsed state as it comes --
6 as it is implanted.

7 Q. I'm sorry. Were you asking for
8 clarification as to what I meant by "fully
9 collapsed state?" I don't think the record caught
10 your question.

11 A. No, I was --

12 Q. Oh.

13 A. I was just clarifying that it -- that
14 during the fully collapsed state is the condition
15 in which it is implanted into the patient.

16 Q. Okay.

17 A. And --

18 Q. So --

19 (Indiscernible crosstalk.)

20 BY MS. LaVALLEY:

21 Q. Okay. So you're clarifying that -- what
22 "fully collapsed state" means -- the state that the
23 implant is in when it's implanted into the patient.
24 Is that the clarification?

25 A. That's what I was clarifying, correct.

1 Q. Okay. And so would you agree that the
2 surfaces 16 would only rest against supporting ring
3 18 when the implant is in a fully collapsed state?

4 A. I agree.

5 Q. And would you also agree that the surfaces
6 16 wouldn't rest against any other component of the
7 device when it's expanded?

8 MR. PARK: Objection to form.

9 A. Can you repeat the question? I just want
10 to make sure I heard the last part just correctly.

11 Q. Would you also agree that the surfaces 16
12 would not rest against any other component of the
13 device when it's expanded?

14 A. Once expanded, 16 does not appear to rest
15 against any other component of the device.

16 Q. You didn't propose a definition of
17 "coupling" in your declaration, correct?

18 (Court reporter requested
19 clarification.)

20 BY MS. LaVALLEY:

21 Q. You did not propose a definition of
22 "coupling" in your declaration, correct?

23 A. Not a specific definition. I assumed the
24 general and ordinary meaning a POSITA would
25 understand.

1 Q. If I rest my coffee cup --

2 MR. PARK: Assume --

3 BY MS. LaVALLEY:

4 Q. -- on my desk surface --

5 MR. PARK: Counsel -- Counsel, hold on
6 a second?

7 MS. LaVALLEY: Yes.

8 MR. PARK: Just clarifying the record.
9 It's "I assumed" with a past tense.

10 BY MS. LaVALLEY:

11 Q. If I rest my coffee cup on my desk surface,
12 have I coupled the cup to my desk?

13 MR. PARK: Objection to form.

14 A. Yeah, specifically, "coupled" in the
15 general and ordinary meaning definition I used was
16 that they're connected.

17 Q. Okay. And that's --

18 MS. LaVALLEY: I'll object to that
19 response as nonresponsive.

20 BY MS. LaVALLEY:

21 Q. My question was, If I rest my coffee cup on
22 my desk surface, have I coupled the cup to my desk?

23 MR. PARK: Objection to form.

24 A. I guess the context -- I'm looking -- I'm
25 just looking at the context on how it is fixed to

1 the desk. So is it filled? Water, holding it
2 down? So there's just a lot to it that I have to
3 think about.

4 Q. Okay. If -- let's say my coffee cup is
5 filled. If I rest my coffee cup on my desk, have I
6 coupled it to the desk surface?

7 A. Generally speaking, it can be considered
8 coupling because it's being held -- fixed together.

9 Q. If my coffee cup were empty and I rest my
10 coffee cup on my desk surface, would you still
11 consider it coupled to the desk?

12 A. Again, generally, you have to look at the
13 context in what it's trying to do, but the weight
14 of the coffee cup itself, the mass could be
15 affixing it to the desk. Sorry. I'm looking at my
16 glass on the table. That's why...

17 Q. So you would still consider an empty coffee
18 cup sitting on a desk surface to be coupled to that
19 surface?

20 MR. PARK: Objection to form. Asked
21 and answered.

22 A. In a scenario -- a situation, it could be
23 considered coupled. You have external -- other
24 external forces continuously act on it, where you
25 put it on there, it's empty, and it's light, and

1 it's blowing; as soon as you put it down, it blows
2 away, I wouldn't say that's fixed. But if there's
3 no other external forces, gravity acting on it, it
4 appears to be fixed, coupled, by the general
5 definition of "coupling."

6 Q. So do you consider "coupled" to mean fixed?

7 A. The general definition I used was -- or a
8 POSITA would use is that they're fixed, correct.
9 Or attached.

10 Q. Okay. And if you could turn to page 69 of
11 115 of your declaration. And please let me know
12 when you're on that page.

13 A. I'm there.

14 Q. So claim limitation 12.d requires an
15 "expansion mechanism comprising a tool-engagement
16 surface and at least one rotating gear that is
17 configured to rotate about an axis passing through
18 the gear."

19 Do you see that?

20 A. Okay. The last section after the comma
21 after "surface"?

22 Q. Yes. That's correct.

23 A. Okay.

24 (Reviewing document.)

25 I see. Yep.

1 Q. And you've identified the bevel teeth 26 on
2 the inner sleeve 34 of Schafer as the rotatable
3 gear, correct?

4 A. 26 of -- sorry. I'd, that picture. Oh,
5 here, where "the bevel teeth 26 on each inner
6 sleeve 32 cons-" --

7 (Reviewing document.)

8 Okay. Yes. Correct.

9 Q. Are there any specific features of the
10 bevel teeth that led you to conclude that the bevel
11 teeth 26 meet the rotatable gear limitation?

12 A. I used the general definition of a gear, is
13 one structure, when rotated, translates movement
14 into a second structure. So the teeth 26 on each
15 inner sleeve are those gears that translate the
16 motion.

17 Q. You didn't propose any specific
18 construction of gear in your declaration, correct?

19 A. I gave an -- oh, claim construction? Is
20 that --

21 Q. Yes.

22 A. -- what you're asking?

23 Q. Yes.

24 A. Did I propose -- I only proposed the
25 general definition understood by a POSITA.

1 Q. You didn't -- nowhere in your declaration
2 does it say what that general definition of "gear"
3 that you used in your analysis is --

4 A. No --

5 Q. -- correct?

6 A. -- I didn't specifically define it, other
7 than that it is a POSITA's general understanding of
8 what a "gear" is.

9 Q. But is there anywhere in your declaration
10 where you provide what that POSITA's general
11 understanding of what a "gear" is?

12 A. I gave an example of what a gear --
13 specific gear is. Where --

14 Q. And where is that?

15 A. (Reviewing document.)
16 Which is 28 of 115.

17 Q. Okay. So you gave an example of what a
18 specific gear is in your declaration, but you did
19 not provide what a POSITA's general understanding
20 of what a gear is anywhere else in your
21 declaration, correct?

22 A. Yeah, a gear has many -- comes in many
23 different forms. And what I showed was one type of
24 gear, specifically a bevel gear. And the bevel
25 gear is very similar to what Schafer used.

1 (Reviewing document.)

2 (Previously marked Exhibit 1008 was
3 introduced.)

4 BY MS. LaVALLEY:

5 Q. So I've revealed what was previously marked
6 as Medtronic 1008, which is U.S. Patent Application
7 Publication 2003/0045877 to Yeh, published March 6,
8 2023.

9 Do you have a copy of Exhibit 1008?

10 A. Yes, I have it open.

11 Q. In your declaration you rely on Yeh in
12 combination with Berry; is that correct?

13 A. Yeh and Berry. That --

14 (Reviewing document.)

15 -- is correct.

16 Q. You don't contend that Yeh anticipates any
17 claims of the '755 patent, correct?

18 MR. PARK: Objection to form. Outside
19 the scope.

20 A. I didn't -- my direction was, does these --
21 got to look again.

22 (Reviewing document.)

23 "These prior art references disclose or
24 suggest" --

25 ///

1 (Court reporter requested
2 clarification.)

3 THE WITNESS: I keep forgetting you're
4 trying to type all this.

5 A. "I have been asked to consider whether
6 prior art references disclose or suggest the
7 features recited in claims 1 to 6, 8 to 12, and 17
8 to 12 [sic], the challenged claims, of the
9 '755 patent."

10 BY MS. LaVALLEY:

11 Q. But nowhere in your declaration do you
12 opine that Yeh anticipates any claims of the
13 '755 patent, correct?

14 A. I have not given any legal definition if it
15 meets it or not.

16 Q. You don't offer any opinions that Yeh
17 discloses each and every limitation of any claim of
18 the '755 patent, correct?

19 A. (Reviewing document.)

20 I give -- can you repeat the question one
21 more time, please?

22 Q. You don't offer any opinions that Yeh
23 discloses each and every limitation of any claim of
24 the '755 patent, correct?

25 A. Every single claim on its own, I do not.

1 Some of them, yes; but also, when combined with
2 Berry, there are a few claims that I combined them
3 with Berry.

4 Q. You don't offer any opinions that Berry
5 discloses each and every limitation of any claim of
6 the '755 patent, correct?

7 A. Berry alone? I do not disclose or suggest
8 that it covers every single claim. Correct.

9 Q. And Yeh describes a spinal column fixation
10 device; is that accurate?

11 A. Spinal column fixation device, correct.

12 Q. And would you agree that Yeh identifies
13 three components as forming a height adjustment
14 mechanism, specifically the lower support body 110,
15 the upper support body 120, and adjustment ring
16 130?

17 A. (Reviewing document.)

18 You asked the expansion mechanism or the
19 whole implant?

20 Q. The height adjustment mechanism.

21 A. Oh.

22 Q. Would you like me to repeat my question?

23 A. In a second.

24 (Reviewing document.)

25 Yeah, so for the height adjustment

1 mechanism of Yeh is formed of the upper support
2 body 120, the lower support body 110, and
3 adjustment ring 130. Referring to Figure 6a and b.

4 Q. And you would agree that those three
5 components cooperate to adjust the height of Yeh's
6 implant?

7 A. Along with the tool that Yeh mentions
8 needed to adjust it.

9 Q. Is adjustment ring 130 the component that a
10 surgeon would rotate in order to adjust the height
11 of the implant?

12 A. Yes, you would rotate 130 to adjust the
13 height of the implant.

14 Q. Do any other components in Yeh's mechanism
15 rotate to adjust the height of the implant?

16 A. (Reviewing document.)

17 No. Only the ring will take -- expand the
18 components.

19 Q. What structure on Yeh's implant is designed
20 to receive the adjustment tool?

21 A. Holes 131. Obviously you need a surface of
22 them.

23 Q. Sorry, just to clarify. You said obviously
24 you need...

25 Can you repeat your thought --

1 A. The surface of the holes --

2 (Indiscernible crosstalk.)

3 A. Yeah. You need the holes themselves and
4 specifically the surfaces of the holes in order to
5 rotate the ring.

6 Q. Okay. And turning to page -- this is on
7 page 87 of 115 of your declaration, please.

8 A. Okay.

9 Q. I apologize. The following page.
10 Page 18 [sic] of 115 of your declaration. In the
11 last paragraph.

12 MR. PARK: Oh, where do you want him to
13 go?

14 MS. LaVALLEY: Sorry. Page 88 of 115
15 of your declaration.

16 A. Okay.

17 Q. In the last paragraph you identify the
18 contours of tool holes 131?

19 A. Correct.

20 Q. All right. You identify the contours of
21 tool holes 131 as the tool-engagement surface,
22 correct?

23 A. The surfaces of the tool holes 131 are the
24 tool-engagement surfaces, correct.

25 Q. And your declaration identifies Yeh's

1 adjustment ring 130 as the turning mechanism in the
2 following statement, correct?

3 A. (Reviewing document.)

4 That is correct.

5 Q. And your declaration identifies the upper
6 support body 120 as a threaded body; is that
7 correct?

8 A. Sorry. Say that again, please.

9 Q. Your declaration identifies the upper
10 support body 120 as a threaded body; is that
11 correct?

12 A. That is correct.

13 Q. And upper support body 120 includes
14 threaded teeth 122, correct?

15 A. Upper support body 120 includes threaded
16 teeth, correct.

17 Q. And how does rotation of adjustment ring
18 130 of Yeh cause adjustment of the implant height?

19 MR. PARK: Objection to form.

20 A. Generally, as you rotate 130, the
21 adjustment ring features on the inside of 130
22 engage with -- which include threads, engage the
23 threaded teeth of the upper support body 120. And
24 as that rotates, the legs -- support legs 121 are
25 prevented from rotating, so then that drives the

1 upper support body perfectly to expand the device.

2 There's obviously a little more that goes
3 on, but that's generally how it works.

4 Q. And how deep does the tool need to go
5 through the tool holes 131 to actuate adjustment
6 ring 130?

7 MR. PARK: Objection to form.

8 A. That is -- would be very variable on the
9 size of the implant, where it's placed, the forces.
10 It's very subjective. There's no one answer.

11 Q. And you haven't provided an opinion on that
12 in your declaration, correct?

13 A. I do not provide an opinion on how far the
14 tool has to go in holes 131, correct.

15 Q. Would the tool need to go deep enough into
16 the tool holes 131 so that the tool doesn't slip
17 out during rotation of the ring?

18 MR. PARK: Objection to form. Outside
19 the scope.

20 A. There's different ways to rotate this. So
21 as it's rotating, you will need engagement of the
22 tool in the hole -- or holes.

23 Q. But you would agree that a POSITA would not
24 want the tool to slip out of the tool holes 131
25 while rotating the adjustment ring 130, correct?

1 A. It's not ideal to have it slip out if you
2 don't want it to slip out. Meaning if you needed --
3 if it slips out and you have to put it back into
4 the hole, that is not ideal. But if it's -- you're
5 at the end of the case and it pops out and it's
6 done, then it's no big deal.

7 So if you have enough force on it, it
8 actually will slip out, and -- but you have enough
9 force, so it's okay.

10 Q. In paragraph 26 of Yeh -- sorry, can you
11 please turn to paragraph 26 of Yeh. That's --
12 again, that's Exhibit 1008.

13 A. Okay.

14 Q. And in the very last sentence, do you see
15 where it says "The adjustment of height of the
16 support member is attained by a tool which is
17 inserted into the tool holes 131 to rotate
18 adjustment ring 130"?

19 A. Oh, down at the bottom?

20 Q. The last sentence --

21 A. It does --

22 Q. -- of paragraph 26 of Yeh.

23 A. (Reviewing document.)

24 I see that.

25 Q. So would you agree that Yeh discloses a

1 tool for adjustment and explains how that tool
2 would be used to adjust the implant height?

3 MR. PARK: Objection to form.

4 A. Yeh discloses a tool that is used to adjust
5 the height of implant, but it doesn't go into
6 detail on how it is used. Other than --

7 Q. So you agree --

8 (Indiscernible crosstalk.)

9 BY MS. LaVALLEY:

10 Q. I'm sorry. Please go on.

11 A. No, I'm sorry. It's the lag -- a little
12 lag between us. Sorry.

13 Q. So you do agree that Yeh discloses a tool
14 that is used to adjust the height of the implant,
15 correct?

16 MR. PARK: Objection to form.

17 A. Yeh discloses a tool, no details of it,
18 that is used to adjust the height of the --

19 (Court reporter requested
20 clarification.)

21 A. -- support member.

22 Q. And would that tool be operated like a
23 lever to rotate the adjustment ring?

24 MR. PARK: Objection to form.

25 A. Again, Yeh does not provide the details of

1 the tool. There are many ways to achieve it.
2 To -- there are many ways to achieve the adjustment
3 of ring with a tool.

4 Q. Yeh does describe "a tool which is inserted
5 into the tool holes 131 to rotate the adjustment
6 ring 130," correct?

7 A. It discloses "a tool which is inserted to
8 the tool holes 131 to rotate the adjustment ring
9 130," but does not say how it rotates it. And as I
10 mentioned, it -- there are many ways to achieve
11 this.

12 Q. Please go to page 90 of 115 of your
13 declaration.

14 A. I'm there.

15 Q. And you rely on Yeh as disclosing
16 limitation 1.f, which reads "wherein the expansion
17 mechanism is configured to drive expansion between
18 the first shell and the second shell in response to
19 rotating of a tool engaged with the tool-engagement
20 surface." Is that correct?

21 A. That is correct.

22 Q. And where, in what you've cited on page 90
23 of 115 of your declaration, does Yeh disclose -- or
24 strike that.

25 And is there anywhere on page 90 of 115

1 where it discloses or suggests to a POSITA that
2 Yeh's tool rotates in order to rotate the
3 adjustment ring 130?

4 A. So to rotate the adjustment ring, the tool
5 engages with the tool holes. Because the tool
6 holes inserted in the tool holes while the
7 adjustment ring rotates, a POSITA would have
8 understood that the tool also rotates in order to
9 rotate the adjustment ring.

10 Q. I guess my question is, Why would a POSITA
11 have understood that the tool rotates in order to
12 rotate the adjustment ring 130?

13 A. You said the different ways a POSITA could
14 understand how to rotate it, it would need to
15 rotate. It -- I don't know how to do it without
16 rotating.

17 Q. You don't know how to turn -- you wouldn't
18 know how to turn the adjustment ring without
19 rotating the tool; is that correct?

20 A. Correct. In some form. Whether it's the
21 old -- the old way in Daher back from the 1980s,
22 that is rotating. That's an old way that's not
23 typically used anymore from back then. Way back --
24 this is the from 1980s. Or Berry. So they're --
25 in both ways, the tool is rotating.

1 Q. So for this limitation you're not relying
2 on the rotation of the tool on the axis of the
3 tool, though, correct?

4 A. It can, but it doesn't have to. Or 1.f,
5 specifically 1.f does not say it has to be along
6 axis. So I didn't limit the thought process to
7 just the axis.

8 Q. So when you consider an adjustment where
9 the tool is inserted into the tool holes 131 and
10 adjusting the ring like a lever, would you consider
11 the tool to be rotating in that circumstance?

12 A. Yes, it's rotating with the ring. In
13 the -- it doesn't go through -- around the full
14 revolution, but it's rotating at least partially
15 around the circumference.

16 Q. And how many ways does Yeh describe
17 rotating the ring?

18 MR. PARK: Objection to form. Outside
19 the scope.

20 A. I believe that Yeh only mentions a tool to
21 do it, and it doesn't go into details on how it's
22 done. I didn't analyze any -- every potential way
23 of doing it.

24 Q. In looking at Yeh's upper support body 120,
25 which is shown in annotated Figure 2 on page 90 of

1 115 of your declaration?

2 A. I see it.

3 Q. You see it. Great.

4 Do you agree that Yeh's upper support body
5 120 is divided into four upper support legs 121 in
6 that figure?

7 A. Yes, appears to be four.

8 Q. And each of those support legs 121 have
9 gaps in between them; is that correct?

10 A. Correct.

11 Q. Do you have an understanding of what the
12 purpose of those gaps in Yeh's thread serve?

13 A. One of the features is that so it collapses
14 into the lower support body so you can have -- so
15 it will allow it to expand. So you need to, like,
16 either accordion -- or this one is actually fingers
17 that go inside to allow it to collapse.

18 And then it also, for -- while the ring is
19 rotated, it prevents the upper support body from
20 rotating, so it would -- the motion would then be
21 straight expansion.

22 Q. Does Yeh identify any deficiencies in its
23 adjustment mechanism?

24 MR. PARK: Objection to form.

25 A. I don't recall.

1 Q. You're not aware of deficiencies identified
2 in Yeh with its mechanism, as you sit there today?

3 MR. PARK: Asked and answered.

4 A. I don't recall.

5 Q. Does Yeh identify a need for a new tool in
6 its disclosure?

7 MR. PARK: Objection to form.

8 A. Yeh identifies a need for a tool, again,
9 not giving any specifics of what -- other than the
10 tool adjusts the ring. Or it rotates the ring.

11 Q. Where does Yeh --

12 (Indiscernible crosstalk.)

13 A. Found on paragraph 26. "Adjustment of
14 height of the support member is attained by a tool
15 which is inserted into the tool holes 131 to rotate
16 the adjustment ring 130."

17 Q. And just because I think my question got
18 cut off, I'm going to reask the question.

19 Where does --

20 A. Okay.

21 Q. -- Yeh identify a need for a tool?

22 A. At the -- the last sentence of
23 paragraph 26. "The adjustment of height of the
24 support member is attained by a tool which is
25 inserted into the tool holes to rotate the

1 adjustment ring."

2 Q. Is there anywhere else in Yeh where you
3 believe Yeh identifies a need for a tool other than
4 the sentence you just read?

5 MR. PARK: Objection to form.

6 A. I don't recall. That's -- I don't recall
7 another spot.

8 MS. LaVALLEY: Why don't we take a
9 quick 10-minute break before we move on.

10 THE WITNESS: Okay.

11 (Break: 3:46 p.m. to 3:58 p.m.)

12 MS. LaVALLEY: And I am revealing
13 previously marked Medtronic Exhibit 1009, which is
14 U.S. Patent Application Publication 2004/0059271 A1
15 to Berry, published March 25, 2004.

16 (Previously marked Exhibit 1009 was
17 introduced.)

18 BY MS. LaVALLEY:

19 Q. And you reviewed --

20 A. I see --

21 Q. -- this as --

22 You have a copy of Exhibit 1009 in front of
23 you; is that correct?

24 A. That is correct.

25 Q. And if you could turn to Figure 2, which is

1 on the second page of Berry. And would you agree
2 that Berry discloses an implant assembly 20 and
3 tool for adjusting that implant?

4 A. (Reviewing document.)

5 Correct.

6 Q. And Figure 2 shows that Berry's implant
7 assembly is comprised of tubular body 22 with
8 endplate assemblies 24 and 26, correct?

9 A. 24 and 26? Correct.

10 Q. And would you agree that the rotation of
11 the threaded tubular body 22 causes the threaded
12 engagement between tubular body 22 and the endplate
13 assemblies to drive the end plates apart and lead
14 to expansion?

15 A. So as 22 rotates, that drives 24 and 26
16 apart? I agree.

17 Q. Yes. And Berry includes apertures 28
18 arranged around the circumference of the threaded
19 body, correct?

20 A. Correct.

21 Q. Would you agree that Berry's expander
22 apparatus is designed to work with the geometry of
23 Berry's implant 20?

24 MR. PARK: Objection to form.

25 A. Berry's implant assembly can work with

1 Berry's tool. Is it the only one? Only implant?
2 Too hard to say. Well, obviously it's designed and
3 it could work with Yeh is my opinion.

4 Q. Berry's disclosure describes Berry's
5 expander apparatus as being designed to work with
6 the geometry of Berry's implant. You agree with
7 that?

8 MR. PARK: Objection to form.

9 A. I'm just looking at if it actually states
10 that in the stack. There are cases where there's
11 existing tools and you design the implant for the
12 existing tool.

13 So I don't know what came first. Off the
14 top of my head, I don't recall. So I could read
15 this. You want me to? Unless you have a specific
16 paragraph where it states that.

17 Q. Does -- would you agree that Berry's
18 expander apparatus works with the geometry of
19 Berry's implant?

20 MR. PARK: Objection to form.

21 A. I agree. Berry's expander 50 will work
22 with the implant 20 as I see in Figure 2.

23 Q. And in paragraph 22 of Berry -- sorry,
24 could you please go to paragraph 22 of Berry?

25 A. I am there.

1 Q. And that describes "expansion of the
2 assembly can be achieved by rotating the tubular
3 body 22 using an expander apparatus 50 as shown in
4 Figure 3," correct?

5 A. I see that. Correct.

6 Q. And going back to Figure 2, does Berry's
7 expander apparatus 50 include tooth section 86 with
8 a plurality of teeth 93?

9 A. I see 86 and 93 in Figure 2.

10 (Court reporter requested
11 clarification.)

12 A. And have to -- I just need to confirm the
13 terminology is correct.

14 Q. Sure. And I believe in paragraph 31 of
15 Berry includes the terminology.

16 A. So 93 are teeth? 86 is a tooth section?

17 Q. Okay. So does that confirm that Berry's
18 expander apparatus 50 includes a tooth section 86
19 with a plurality of teeth 93?

20 A. That is correct.

21 Q. Are the teeth 93 spaced to engage apertures
22 28 on Berry's tubular body 22?

23 A. That is -- 93 are spaced apart the same
24 distance or approximately the same distance as the
25 holes 28 in Figure 2. In a horizontal direction.

1 Obviously there's vertical holes. They're not
2 spaced that way, but in the horizontal direction.

3 Q. And as tooth section 86 rotates, does it
4 engage successive apertures 28 around the tubular
5 body of the implant?

6 A. Yes. One tooth 93 will go into the one
7 hole 28 and rotate the body until the next tooth
8 engages the next hole 28.

9 Q. So does that describe successive engagement
10 of the apertures 28?

11 A. (Reviewing document.)

12 Yeah, the -- they sequentially -- as the
13 tool is rotated, 93 will sequentially go from one
14 hole to the next hole, but there will be overlap.

15 Q. What do you mean by "overlap"?

16 A. The one tooth -- one tooth 93 will not
17 completely disengage from the first hole 28 until
18 at least the second 93 engages the second 28.

19 Q. Does Berry describe that?

20 A. I don't recall that described in that, but
21 that's just what a POSITA would understand and
22 design into the system, because with the forces
23 involved, you don't want -- as you're screwing it
24 in, you don't want it to unscrew by disengaging a
25 tooth. You always want to have something engaged

1 to keep those forces holding.

2 Q. And what specifically in Berry are you
3 relying on to form that opinion?

4 A. I'm relying on common knowledge of trying
5 to rotate something on -- with a force. What a
6 POSITA would understand and would design.

7 If you were to take an elastic band, put a
8 popsicle stick in it, and start rotating it, you
9 always want something on there because these are --
10 there's a force involved. As soon as you let it
11 go, that will unwind.

12 We have a threaded situation here with
13 forces in both directions, so the concern is you
14 always want something engaged, or else it would
15 potentially unwind.

16 Q. Does the contact point between a given
17 tooth and a given aperture stay the same as the
18 tubular body 22 continues to rotate?

19 A. I'm not sure I follow the question.

20 Q. Well, as the tubular body 22 rotates, the
21 contact -- isn't it true that the contact point
22 between a tooth and an aperture would change?

23 A. Yes. As you can see on Figure 2, it starts
24 off on one side, and as it rotates, it will end up
25 on the other side of the hole 28.

1 Q. Does Berry describe a locking mechanism
2 once you're done rotating?

3 A. (Reviewing document.)

4 It talks about "fasteners 120 for engaging
5 the apertures 40 on the endplate assemblies."

6 Q. What is the purpose of the fasteners 120 in
7 Berry?

8 MR. PARK: Objection to form.

9 A. Sorry. Can you repeat the question?

10 Q. Sure. Why don't I rephrase it.

11 In paragraph 37 of Berry, Berry describes
12 that its holding assemblies 116 and 118 are
13 intended to maintain its implant in a generally
14 rigid vertical position while it is expanded.

15 Is that -- do you see that?

16 A. Yep.

17 Q. So fasteners 120 are part of the holding
18 assemblies 116 and 118, correct?

19 A. That is correct.

20 Q. So you're not relying on the fasteners 120
21 of holding assembly 116 and 118 in your combination
22 of Berry with Yeh, are you?

23 A. No, I'm not relying on it, but Yeh can be
24 easily modified if needed.

25 ///

1 (Court reporter requested
2 clarification.)

3 A. Yeh. Y-e-h.

4 Q. You don't rely on the holding assemblies
5 116 and 118 at all in your combination of Berry
6 with Yeh, correct?

7 A. (Reviewing document.)

8 That is correct. I don't rely on 116 or
9 118 for the combination with Yeh and Berry.

10 Q. Please turn to page 43 of 115 of your
11 declaration.

12 A. Okay.

13 Q. And the last sentence in paragraph 61
14 states, "Little to no modifications would be needed
15 to the design of Yeh's adjustment ring 130 for use
16 with Berry's expander apparatus 50."

17 Do you see that?

18 A. I see that.

19 Q. So consistent with that opinion, your
20 declaration does not identify any component of
21 Berry that would need to be altered to allow it to
22 work with Yeh, correct?

23 A. No, I say little to no modification would
24 be needed to -- of -- to the design of Yeh for
25 use -- adjustment ring for use with Berry's

1 expander.

2 Q. So your declaration doesn't identify any
3 components of Yeh that would need to be altered to
4 work with Berry's tool, correct?

5 A. (Reviewing document.)

6 I'd just make the same -- that little to no
7 modifications would be needed to the design of
8 Yeh's adjustment ring for use with Berry's
9 expander.

10 Q. But your declaration doesn't identify any
11 components of Yeh that would need to be altered to
12 work with Berry's tool, correct?

13 A. I don't specifically identify changes to
14 Yeh that needs to be made, correct.

15 Q. And your declaration does not identify any
16 component of Berry that would need to be altered to
17 work with Yeh, correct?

18 A. (Reviewing document.)

19 I do not identify any specific changes
20 needed to -- for Berry for it to work, but
21 obviously there may be some minor -- just like Yeh
22 there might be some minor modifications to the
23 design.

24 Q. But your declaration doesn't identify any
25 minor modifications to the design to either Berry

1 or Yeh that would be required, correct?

2 MR. PARK: Objection to form.

3 A. I did not identify specific modifications
4 that need -- needed to be done, no.

5 MS. LaVALLEY: All right. I have no
6 further questions right now.

7 MR. PARK: Okay. I got a couple of
8 questions on redirect. You know what? Can we just
9 take a 10-minute break and wrap this thing up?

10 MS. LaVALLEY: Sure, that's fine.

11 (Break: 4:26 p.m. to 4:35 p.m.)

12 EXAMINATION

13 BY MR. PARK:

14 Q. Mr. Culbert, could you turn to page 55 of
15 115 of Medtronic Exhibit 1002, which is your expert
16 declaration?

17 A. Okay. I'm at page 55/115.

18 Q. Okay. See the first full paragraph? It
19 starts with "The inner sleeves 34, 36"?

20 A. I see that.

21 Q. Can you read into the record the third
22 sentence of that paragraph, which starts with
23 "Schafer" into the record.

24 A. "Schafer further discloses that the
25 opposite surfaces 16 'rest against supporting ring

1 18,' which is part of the expansion mechanism."

2 Q. What, if any, external force keeps the
3 opposite surface 16 resting against supporting
4 ring 18?

5 MS. LaVALLEY: Objection. Form.
6 Leading. Scope.

7 A. Sorry. There was some background noise
8 coming through here.

9 Can you repeat that question again, please?

10 Q. Sure. What, if any, external force keeps
11 the opposite surface 16 resting against supporting
12 ring 18?

13 MS. LaVALLEY: Same objections.

14 A. What external force keeps 16 resting
15 against the support ring 18? That's the
16 threads them- -- of the threaded body hold the
17 opposite surface of 16 against the supporting ring
18 18.

19 Q. And does anything -- and what needs to
20 happen for the -- what, if anything, needs to
21 happen for the opposite surface 16 to stop resting
22 against supporting ring 18?

23 MS. LaVALLEY: Object to the form and
24 scope.

25 A. And an external force, such as the

1 expansion tool 70, would have to go in there, turn
2 the gears to rotate threads to disengage the
3 surface of 16 from the -- the opposite surface of
4 16 from the supporting ring 18.

5 Q. Could I ask you to read into the record the
6 second full paragraph of page 55 of 115 of your
7 expert declaration, which is Medtronic
8 Exhibit 1002.

9 A. The one on the -- the paragraph that starts
10 with "Schafer also discloses"?

11 Q. Yes.

12 A. "Schafer also discloses that the supporting
13 ring 18 has at least one radial opening 22, which
14 allows insertion of the tool into the supporting
15 ring to engage the front surface of the inner
16 sleeve and also guide and support the tool.
17 Accordingly, the contours of openings 22 are a
18 tool-engagement surfaces."

19 Q. And is there a citation in that paragraph?

20 A. (No response.)

21 Q. To Schafer.

22 A. Out of -- there's some folks here that come
23 from Id. 2:63-66.

24 Q. And can we turn to Schafer Exhibit 1010.
25 Can I get you to turn to column 2, line 63.

1 Let me know when you're there.

2 A. 62, 63. Okay. I'm there.

3 Q. If I'm correct, that's -- the first
4 sentence starts "The supporting ring," right?

5 A. I see that.

6 Q. Okay. Can you read the two sentences which
7 are within lines 63 to 66 of column 2.

8 A. "The supporting ring preferably has at
9 least one radial opening. The opening allows
10 insertion of the tool into the supporting ring and
11 to move it to the front surface of the inner
12 sleeve, on the one hand, and to guide and support
13 the tool, on the other hand."

14 Q. Okay. What, if anything, does that --
15 those two sentences tell you, if anything, about
16 the interaction between the tool and the inner
17 surface of the opening 22 in Schafer?

18 MS. LaVALLEY: Object. Leading.
19 Scope.

20 A. Well, the keywords -- the holes are to
21 guide and support the tool. The guide and
22 supporting the tool means that the tool must
23 interact or engage, touch the -- the openings.

24 Q. And which part of the openings?

25 A. The surface of the openings.

1 MR. PARK: No further questions from
2 me. Thank you.

3 MS. LaVALLEY: I have no further
4 questions. Thank you for your time today.

5 THE WITNESS: Thank you.

6 MR. PARK: Thank you.

7 (Time Noted: 4:41 p.m., July 1, 2026.)

8 - - -

9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

1	1003 4:6 8:4 41:13,14 1008 4:7 120:2 120:6,9 127:12 1009 4:9 134:13,16,22 1010 4:11 84:1 84:8,12 145:24 10166 2:5 1051 4:13 60:17,18,19,22 61:2,8,10,14,18 62:2,8,11,13,23 62:25 63:4,13 63:16,23 64:5 64:8,11,18 10:03 1:18 5:1 10:19 15:15 10:21 15:15 10:25 18:3 10:26 18:3 11 8:1,18 11,864,755 1:11 4:5 110 122:14 123:2 115 23:13,17,21 23:24 56:21,23 56:24 67:16,17 67:17 106:17 107:4 108:12 108:19 109:6 110:4,6,15,20 111:3,23	117:11 119:16 124:7,10,14 129:12,23,25 132:1 141:10 143:15 145:6 116 140:12,18 140:21 141:5,8 118 140:12,18 140:21 141:5,9 11:12 41:9 11:22 41:9 12 3:13 13:10 17:13 81:6,17 96:8 99:6,17 99:18,24 100:3 100:6,20 103:12,15,16 103:22,24 104:4 105:3,12 105:17,22 106:11 112:2,6 121:7,8 12.d 117:14 120 4:7 122:15 123:2 125:6,10 125:13,15,23 131:24 132:5 140:4,6,17,20 121 125:24 132:5,8 122 125:14 12:33 75:6 12:35 75:6	12:50 83:20 130 122:16 123:3,9,12 125:1,18,20,21 126:6,25 127:18 129:6,9 130:3,12 133:16 141:15 131 123:21 124:18,21,23 126:5,14,16,24 127:17 129:5,8 131:9 133:15 134 4:9 14 96:8 99:7,17 99:18,24 100:3 100:6,20 105:3 105:12,18,22 106:11 112:3,6 143 3:5 148 1:19 15 3:11 104:12 106:18 16 3:8 68:14 101:13,14,24 102:6,9,9,13,17 102:19,24 103:5,6,8,8,10 103:11,14,18 103:21,24 112:2,6,9,13,15 112:19,23,25 113:2 114:2,6 114:11,14
----------	---	---	--

143:25 144:3 144:11,14,17 144:21 145:3,4 17 13:10 17:13 56:23 81:6,17 121:7 17950 148:23 18 3:9 87:5,11 87:20,22 88:1 88:1,17 89:2 89:10,23 90:20 94:16 95:2,5 96:11,15,18,19 96:23 97:5,15 98:9,16 99:8 99:10 104:23 107:6,17,22 108:14,22 109:1 112:10 112:13,14,20 112:24 113:1,3 114:3 124:10 144:1,4,12,15 144:18,22 145:4,13 19 56:23,24 1980s 130:21 130:24 1:31 83:20	137:25 139:23 145:25 146:7 20 3:10,11 13:11 17:13 81:6,17 135:2 135:23 136:22 200 2:5 2000 43:19 44:2,10 2003 4:8 2003/0045877 4:8 120:7 2004 4:10 134:15 2004/0059271 4:10 134:14 2006 4:12 84:9 2010 42:25 43:5,6,13,14,19 44:2 2023 120:8 2025 19:8,16 27:9,13,15,16 2026 1:18 5:1 147:7 148:5,18 2031 148:24 212 2:6 22 86:12,19,20 86:24 87:3,4 87:10,17,20,22 87:22 88:2,4,7 88:17 89:2,10 89:23 90:9,20 91:19 92:13,15	93:5 95:11,13 95:18,22,24 98:16 107:5,9 107:16,19,21 108:1,9 135:7 135:11,12,15 136:23,24 137:3,22 139:18,20 145:13,17 146:17 22533 5:23 23 4:4 24 104:12 105:5 135:8,9 135:15 25 3:9 4:10 134:15 26 87:24,24,25 88:5,20,22 91:12,14,17 92:5 93:20 94:7,11,22,25 96:5 97:12 99:3 108:13,21 109:1 118:1,4 118:5,11,14 127:10,11,22 133:13,23 135:8,9,15 28 119:16 135:17 137:22 137:25 138:4,7 138:8,10,17,18	139:25 2:38 109:23 2:48 109:23 2:63-66 145:23 3 3 84:18 85:1,5 85:14,16,24 86:1 100:14,16 100:18 102:18 102:20 103:20 137:4 30 3:12 21:22 21:25 22:9,17 22:20,22 31 137:14 148:24 318-6000 2:6 32 118:6 33 59:21 60:3 61:7,20 62:17 63:5,19,21,23 79:3 34 56:19,21,21 57:7 88:25 94:9,10,12,23 94:25 95:8 96:4,12,20,24 97:6,16 98:9 98:18,20 99:1 99:3,18,24 100:7,21 101:9 102:1,6,9 103:22,23
2			
2 131:25 134:25 135:6 136:22 137:6,9			

104:2,3,22 109:7,9,15 118:2 143:19 36 88:25 94:7,9 94:10,12,23,25 95:8 96:4,12 96:20,24 97:6 97:17 98:10,18 98:20 99:1,4 99:18,24 100:7 100:22 101:9 102:1,6,9 104:23 109:7,9 109:15 143:19 37 140:11 38 85:19 101:14,16 105:16 3:46 134:11 3:58 134:11	48 23:13,16,17 23:21,23 4:26 143:11 4:35 143:11 4:41 1:18 147:7 4th 148:18	6	68:15,21 70:7 71:8,18 73:25 76:25 79:2 80:6,15,25 81:7,18,24 106:21,24 110:1 120:17 121:9,13,18,24 122:6
	5	6 4:8,12 13:10 17:12 81:5,16 84:9 91:22 93:2 120:7 121:7 61 4:13 141:13 62 146:2 63 145:25 146:2,7 66 146:7 69 117:10 6a 123:3	8
	5 3:4 50 94:7,7 100:2 100:7,21 102:3 109:17 136:21 137:3,7,18 141:16 500 21:10 50s 94:8,8,9 51 106:15,18 510 51:14,23 52:2,8,17,22,24 53:3,3,3,23 54:4,12,17 54 67:17 100:13 106:17 110:4 55 107:4 108:6 108:12,19 109:5 110:6,15 110:20 111:3 111:23 143:14 145:6 55/115 143:17 55402 2:12 56 67:16,17	7	8 8:18 13:10 17:12 81:5,16 121:7 80 2:11 8:19 8290329 1:24 84 4:11 855 2:12 86 137:7,9,16 137:18 138:3 87 124:7 88 124:14
4		7 3:10,12 19:8 19:16 27:9,13 27:15,16 7,056,343 4:11 84:9 70 87:7,10,16 87:21 88:3 91:11,16 92:13 99:4 145:1 72 87:8 91:9,12 91:16 92:5,21 93:20,20 750-9951 2:12 755 13:11 17:14 21:20 26:3 30:3 59:6 62:22 64:19,23 65:1,3,19 66:7 66:11,18 67:23	9
4 91:21 93:2 40 3:13 140:5 41 4:6 42 104:24 109:7,10,16 43 141:10 45 23:20 28:24 46 100:5,19,24 101:13 102:8 102:13,15,24 103:3			9 3:8 90 28:11 129:12,22,25 131:25 900 2:11 92692 5:24 93 137:8,9,16 137:19,21,23 138:6,13,16,18

a	act 93:5 116:24	125:1,17,18,21	allow 82:14
a.m. 1:18 5:1	acting 11:13,18	126:5,25	132:15,17
15:15,15 18:3	117:3	127:15,18	141:21
18:3 41:9,9	action 148:13	128:1,23 129:2	allows 68:22
a1 134:14	148:14	129:5,8 130:3	69:3 145:14
abbreviation	actual 15:24	130:4,7,9,12,18	146:9
104:6	actually 16:20	131:8 132:23	altered 141:21
able 36:20	19:19 22:24	133:13,16,23	142:3,11,16
45:21 93:1	35:13 48:16	134:1 141:15	amount 23:2
103:22,23	50:25 54:15,25	141:25 142:8	analysis 56:3,4
absolutely	55:3 56:22,23	adjusts 133:10	56:16 59:7
30:23 59:19	57:6 73:21	affect 90:19	78:25 79:17
60:2 69:8	82:18 106:17	148:14	106:20 119:3
78:23	127:8 132:16	affects 148:14	analyze 73:16
access 44:19	136:9	affirmed 5:16	73:18 131:22
48:21	actuate 126:5	148:5	analyzed 76:21
accommodate	actuation 91:6	affixing 116:15	anchor 44:7
49:16	91:15	agilelaw 23:6	ancillary 90:8
accordion	add 42:1	ago 18:18	annotated
132:16	address 5:22	agree 84:21	131:25
account 35:12	52:21 110:7,19	93:8,11 113:2	answer 3:7
accurate 9:15	addressed	114:1,4,5,11	10:18,21,21
22:3,16,23	148:16	122:12 123:4	11:3,22 12:4
24:4 27:16	addresses	126:23 127:25	12:19 13:21
37:20,21 43:1	110:11,24	128:7,13 132:4	14:6 28:22
49:6 51:7 69:1	adjust 123:5,8	135:1,10,16,21	30:8,12 45:19
122:10	123:10,12,15	136:6,17,21	67:4,7 80:18
accurately 25:4	128:2,4,14,18	agreement	80:19 82:10,12
achieve 129:1,2	adjusting	15:22 16:16,18	82:16 96:23
129:10	131:10 135:3	ahead 51:18	97:19 98:5,6
achieved 137:2	adjustment	68:7 88:14	98:13 126:10
acquired 47:4,5	84:16 122:13	align 92:19,24	answered 15:9
	122:15,20,25	alignment 92:6	32:14,15,16
	123:3,9,20	93:14	34:5 64:14

76:6 77:2 79:19 80:17 83:13 96:22 97:25 116:21 133:3 answering 12:6 97:3 answers 35:12 82:18 97:21 anticipates 120:16 121:12 anymore 130:23 apart 20:14 22:10 59:4 96:9,25 101:4 101:5,6,23 112:17,19,19 135:13,16 137:23 aperture 139:17,22 apertures 135:17 137:21 138:4,10 140:5 apologize 11:5 17:24 45:18 56:22 70:1 87:24 94:8 106:9 107:8 124:9 apparatus 105:10 135:22 136:5,18 137:3	137:7,18 141:16 apparent 105:12 appeal 1:3 appear 114:14 appearances 5:5 appearing 2:1 appears 86:2 102:21 117:4 132:7 appendices 30:3,6 appendix 67:18 67:20 107:5 application 4:7 4:9 50:21 120:6 134:14 applied 23:25 42:11 81:24 82:1,5 83:10 apply 59:5,9 approach 50:2 approval 53:6 53:8 54:4,10 55:5 56:12 approximate 21:19 22:9 31:7,12 51:18 approximately 19:11 21:15 22:17 39:18,19 47:12 52:2	137:24 area 100:12 areas 95:7 arguments 40:24 arranged 135:18 art 13:9 17:11 31:3,7,12,23 59:13 60:7 62:18 63:8 74:2 77:3,5 78:13 79:20,24 80:1 81:4,4,15 81:24 82:2,6 83:11 120:23 121:6 ashley 2:10 5:8 asked 13:8 15:2 15:8 17:10 32:13 34:4 35:14,15 57:22 58:3,9,14 64:13 69:14 73:19 75:23 76:5 77:1 79:18 80:16 82:8,11 83:12 96:21 116:20 121:5 122:18 133:3 asking 12:17 14:18,19 20:10 34:13,14 35:19	53:11 73:7 85:10 86:16,19 99:17 106:4 107:12,15 113:7 118:22 aspect 46:12 assemblies 135:8,13 140:5 140:12,18 141:4 assembly 135:2 135:7,25 137:2 140:21 assist 76:13,16 assume 9:22 57:23 58:10,14 115:2 assumed 114:23 115:9 assumption 37:23 attached 29:15 29:25 61:21 117:9 attained 127:16 133:14,24 attorney 5:7 39:6 148:11,12 attorneys 39:8 148:14 audio 27:23,25 33:12 42:4 45:15 74:22 75:5
---	---	--	--

av 6:23 avantech 2:9 5:9 avantechlaw.... 2:13,13 avenue 2:5 aware 22:8 37:24 38:1 40:24 41:3 133:1 axis 117:17 131:2,6,7	based 25:6 30:4 49:18 53:13 55:17 56:2,2 56:15 89:12 103:20 basically 48:6 basis 21:6 89:9 103:17 becoming 46:20 beginning 5:7 90:16 93:19 behalf 2:3,8 8:20 12:1,10 12:22 15:21 believe 11:18 11:25 12:1 16:5 22:10 24:2 32:15 33:10,25 34:7 54:10 68:3 69:1,22 70:3 87:22 89:10 98:3 101:14,19 101:24 102:2,4 131:20 134:3 137:14 bench 50:9 berry 120:12 120:13 122:2,3 122:4,7 130:24 134:15 135:1,2 135:17 136:23 136:24 137:15	138:19 139:2 140:1,7,11,11 140:22 141:5,9 141:21 142:16 142:20,25 berry's 135:6 135:21,23,25 136:1,4,4,6,17 136:19,21 137:6,17,22 141:16,25 142:4,8,12 better 55:9 bevel 88:5,22 88:24 90:9 91:13,13,14,18 92:23 93:17 108:13,20 109:1 118:1,5 118:10,10 119:24,24 beyond 13:7 30:14 41:4,5 big 127:6 billable 23:2 billed 21:16,20 21:24 22:5,5,7 22:20 billing 22:22 bit 27:24 31:10 38:14 111:13 bleep 70:2 blindly 93:1	blowing 117:1 blows 117:1 board 1:3 88:12 bodies 93:22,24 94:7,10,12,23 96:4,7,7 body 70:16 99:7 107:1 109:8,13,17 122:14,15 123:2,2 125:6 125:6,10,10,13 125:15,23 126:1 131:24 132:4,14,19 135:7,11,12,19 137:3,22 138:5 138:7 139:18 139:20 144:16 bone 57:18,24 58:11,12,16,20 59:2 book 7:16,16 bottom 18:12 56:21 88:20,22 88:25 108:17 108:18 127:19 brad 1:16 3:3 4:4,6 5:14,15 5:23 148:5 break 10:1 15:15,17 18:3 31:20 41:8,9
b			
b 4:1 123:3 bachelor's 42:9 42:11 back 18:5 29:3 29:24 47:23 54:9 56:17 67:21 83:22 85:7 111:19,23 127:3 130:21 130:23,23 137:6 background 41:12 144:7 backwards 67:15 badgering 35:5 band 139:7 bansal 26:21 39:5			

75:6,9 78:17 78:19,22 81:20 83:19,20,23 109:19,20,21 109:23 134:9 134:11 143:9 143:11 breaks 9:24 brief 12:7 15:17 40:9,16 40:16 briefly 9:8 18:1 52:8 75:4 111:10 bring 74:1 bringing 49:21 broad 36:1 37:1 49:25 53:16 54:21 73:23 74:2,3 78:11 broken 31:18 31:25 brought 45:24 build 51:11 built 29:5	cages 9:2 46:14 46:15,16 54:7 california 5:24 call 39:21 40:10,19 67:16 69:20 called 44:4,5 calls 40:7,16 camera 6:25 capable 35:2 84:15 capturing 75:2 career 43:4 case 8:10,22 18:20 41:23 42:5 48:21 50:4 127:5 cases 41:25,25 55:1,2,19 136:10 caught 113:9 cause 90:9 96:11,19 97:5 97:16 98:9,19 99:1,4,16,19,25 100:1,8,22 125:18 causes 97:11 101:1 135:11 caution 3:7 16:9 18:25 20:7,15 center 106:18	ceo 48:6 certain 10:6,7 90:4 104:15 certainly 83:8 certificate 148:1 certify 54:24 148:4 cervical 44:17 challenge 81:17 challenged 13:11 17:13 81:6 121:8 challenging 20:1 change 49:14 49:16 90:21 139:22 changed 24:6,8 29:12,17 changes 55:16 56:7 142:13,19 characterizati... 98:1,12 charge 21:11 charged 21:14 21:14 148:8,9 chart 67:19 charts 29:14,20 29:23,25 30:3 check 111:6,10 checking 111:7 chetan 26:18 26:19,21,24	39:4 40:3,11 circumference 131:15 135:18 circumstance 131:11 citation 145:19 cite 62:25 63:4 63:15,18,23 cited 129:22 claim 29:14,19 29:23,25 30:3 57:1,7 59:4,12 59:14 60:6,8 62:18 63:2,6,9 64:3,9,11 65:3 66:1,2,3,6,10 66:17 67:19,22 68:13,15 70:13 70:14 71:4,8 71:18 79:2,6 79:10,11 80:1 85:12 110:11 110:24 111:14 112:4 117:14 118:19 121:17 121:23,25 122:5,8 claims 13:10,11 17:12,13 29:2 62:13 64:6,23 81:5,6,16,17 105:11 120:17 121:7,8,12 122:2
c			
c 2:1 cadaver 49:13 50:9 cage 44:18,21 44:22			

clarification 33:11 42:3 68:10 75:21 78:6 81:9 91:2 101:3,18 108:3 110:22 113:8 113:24 114:19 121:2 128:20 137:11 141:2 clarified 13:22 58:4 clarify 8:8 9:19 11:24 18:6 21:4 32:4,22 35:15 44:1 56:24 61:1 65:21 69:10,13 72:7 82:23 94:17 106:10 123:23 clarifying 75:18 113:13 113:21,25 115:8 class 54:24 clear 6:18 10:14 14:17 23:21 30:21 32:19 61:13 82:11 clearance 52:11 clearer 14:21	clearly 83:2 102:17 close 92:7,11 92:11,15 coaching 88:10 88:11 coffee 115:1,11 115:21 116:4,5 116:9,10,14,17 collapse 132:17 collapsed 113:4 113:5,9,14,22 114:3 collapses 132:13 column 122:9 122:11 145:25 146:7 combination 111:17 120:12 140:21 141:5,9 combined 122:1,2 come 36:14 145:22 comes 113:5 119:22 comfortable 12:6 coming 28:23 112:12 144:8 comma 117:20 comment 75:24	commercial 45:4 commercializ... 44:15 45:9,10 46:24,25 commission 148:24 common 139:4 communicati... 40:15 comp 52:23 company 39:6 41:23,24 42:1 47:3,5,6,6 51:20 56:3,16 compare 64:1 74:1 compared 48:19 compensated 20:24 21:1,5,7 complete 9:15 10:18 26:15 27:21 28:2,9 28:10,11,19,20 completely 138:17 component 85:22 114:6,12 114:15 123:9 141:20 142:16 components 84:22,24 85:4 85:8,9,16,21,23	86:3 94:24 104:16,20 105:8 122:13 123:5,14,18 142:3,11 comprised 84:22 135:7 comprises 66:5 70:15 comprising 106:25 108:15 108:22 109:12 117:15 concept 45:14 45:24 46:17 47:22 51:10 concern 139:13 conclude 118:10 concurrently 19:21,25 condition 91:21 113:14 conferring 24:13 confidential 16:10 19:1 20:8,16 40:14 41:22,23 42:1 42:6 configuration 106:13 configured 117:17 129:17
--	--	---	--

confirm 36:5 36:20 49:19 50:5 59:22 69:16 102:22 107:15 111:10 137:12,17 confirming 7:10 conjunction 108:10 connected 109:7,9 115:16 connection 17:8 19:14 21:12,16 22:7 22:12 27:7 cons 118:6 consider 13:8 17:11 57:17 64:4,10 71:24 72:18 73:1,9 76:15 77:6 79:1,15 85:24 105:1 116:11 116:17 117:6 121:5 131:8,10 considerat 93:12 consideration 93:12 considered 62:10,10 64:8 73:20 79:20,22 85:21 107:19	116:7,23 considering 49:7 consistent 141:19 construction 57:1 59:15 60:9 62:19 63:10 64:3,11 65:5,12 118:18 118:19 construing 59:12 60:6 63:2,6 consulting 20:13,19 21:12 43:1,2,4 contact 19:6 68:25 69:3 71:22 72:12 87:12,14,17 88:4,12,19 89:23 112:14 112:16 139:16 139:21,21 contacted 19:3 contacts 71:14 71:15,19,21 72:11,19 73:2 73:10 74:10,21 75:12 87:20,22 87:25 89:2,10 contend 120:16	contention 60:17 contentions 59:16 60:10,14 61:6,12,24 62:1,12,20 63:12,16 64:5 64:17 context 36:2,3 48:12 66:10,17 67:22 68:13,15 71:7,17 73:25 76:24 80:6,14 80:25 81:23 115:24,25 116:13 continue 88:10 continues 139:18 continuously 116:24 contours 107:5 107:16,21,25 108:8 124:18 124:20 145:17 contract 15:24 148:13 control 6:21,23 controlling 7:3 conversations 24:11,21 25:3 25:8,11,14,15 25:21 26:4,9 26:13 30:4	cooperate 123:5 copies 148:9,10 copy 23:5 84:6 120:9 134:22 correct 6:7 7:13,14 8:21 9:13 10:4,5 12:2 15:19,23 17:18 18:16,17 18:21,22 19:11 20:3,12 22:4 22:19 23:24 24:4,5,18 33:14 41:17 42:7,8,10,14,15 42:17 43:6,10 43:14 44:2,3 45:23 47:9,10 51:15,16 57:22 58:9,14,19 59:1,7,9 60:1 60:11,12,15,20 61:3,8,19,20,21 62:9 63:13,14 64:24 65:7,13 66:12,19 67:19 67:20 69:19,24 70:5,21 71:2 71:21 74:11 78:9 79:12 80:6 84:16,17 84:22 85:3,5 86:7 87:3,5,6,9
--	--	--	---

88:5 89:23	137:4,5,13,20	counterbore	74:17 90:15
90:3,11 91:15	140:18,19	104:5	95:14 113:19
92:17,18 94:23	141:6,8,22	county 148:3	124:2 128:8
94:24 95:3,4	142:4,12,14,17	148:24	133:12
97:23 99:20	143:1 146:3	couple 19:8,9	crr 1:25 148:23
100:5,19	correctly	19:15 38:7,7	culbert 1:16
104:10,16,17	114:10	38:12 40:10	3:3 4:4,6 5:14
104:25 105:1,4	corresponding	53:18 95:7	5:15,19,23 6:1
105:5 106:22	57:23 58:10,15	143:7	7:21 35:21
106:23 107:2,3	112:3	coupled 110:2	41:11 83:4,22
107:7,24,25	cost 148:8	110:13,25	88:14 143:14
108:15,19,24	counsel 5:5 6:6	115:12,14,22	148:5
109:2,3,8,9,15	10:3,20 14:8	116:6,11,18,23	cup 115:1,11
110:3,9,16	14:14 15:18,20	117:4,6	115:12,21,22
111:3 112:4,7	20:20,23 24:12	coupling	116:4,5,9,10,14
112:11,21,22	24:22 25:3,6	114:17,22	116:18
113:25 114:17	25:15,21 26:2	116:8 117:5	currently 20:4
114:22 117:8	26:10 27:18	court 5:2 13:23	21:14
117:22 118:3,8	29:24 30:5,9	42:3 58:5	curriculum 4:6
118:18 119:5	30:13,20 33:4	75:20 78:5	customary 21:8
119:21 120:12	34:19,22 38:21	81:8 91:1	59:10 65:8
120:15,17	38:23,25 39:1	101:2,17 108:2	79:5,11,16
121:13,18,24	39:12,18,22	108:8 114:18	80:9,21 81:12
122:6,8,11	40:5,7 43:18	121:1 128:19	81:25 82:4
124:19,22,24	79:7 81:19	137:10 141:1	83:9,15
125:2,4,7,11,12	82:7,17 83:23	cover 61:19	cut 27:24 31:9
125:14,16	88:9 98:2	covers 122:8	42:20 48:17,18
126:12,14,25	107:13 109:18	crc 1:25 148:23	61:4 102:16,16
128:15 129:6	115:5,5 148:11	create 103:10	102:24 103:4,6
129:20,21	148:12	criticizing	103:25 106:3
130:19,20	counsel's 28:6	35:11	133:18
131:3 132:9,10	30:16,18 33:5	crosstalk 13:22	cutting 48:15
134:23,24	count 7:25	28:15 35:1,9	48:16
135:5,8,9,19,20		55:20 58:4	

cv 8:4 41:17,18 41:21 43:24 cylinder 91:24	34:1,3,15 36:12,14,21 37:15,24 38:19 40:22 41:4,19 56:18,19,25 57:7 60:3,22 61:10,22,25 62:9,17 65:6 65:13,24 67:9 67:10,19 79:1 89:15 104:11 106:15 107:4 107:22 108:13 108:20,25 109:6,11 110:4 110:7,10,23 112:1 114:17 114:22 117:11 118:18 119:1,9 119:18,21 120:11 121:11 124:7,10,15,25 125:5,9 126:12 129:13,23 132:1 141:11 141:20 142:2 142:10,15,24 143:16 145:7	119:6 defined 85:11 defining 28:23 definitely 29:17 34:24 47:15 53:25 54:9 93:11 definition 28:18 36:10 37:2 57:15 58:24 65:8,14 68:11 73:7 79:8 85:23 114:16,21,23 115:15 117:5,7 118:12,25 119:2 121:14 degree 42:9,12 depending 52:20 depends 50:1 53:2 depicts 87:7 deposed 7:21 7:23 8:13 deposition 1:15 6:11 9:9 14:20 21:23,23 22:2 22:2,11,12 35:15 38:4,22 38:24 40:8 148:5,9,16 depositions 8:6	describe 129:4 131:16 138:9 138:19 140:1 described 77:8 138:20 describes 84:14 122:9 136:4 137:1 140:11 describing 18:19 design 44:24 49:3,5,8 50:24 51:3,9 55:11 55:16 136:11 138:22 139:6 141:15,24 142:7,23,25 designed 50:15 123:19 135:22 136:2,5 designing 50:12 93:13 desired 93:12 desk 115:4,11 115:12,22,22 116:1,5,6,10,11 116:15,18 detail 52:14 128:6 details 16:24 45:17 50:19 94:1 128:17,25 131:21
d			
d 3:1 d.c. 6:3 38:15 daher 130:21 danger 48:25 date 19:7,12 27:3,8,12,19 43:18 dates 29:8 43:9 43:24 day 38:9,11 39:16,21,23 148:18 days 38:7,7,8 38:12,13,14,14 deal 127:6 declaration 4:4 7:16 13:7 17:16,19,21 18:7,16,19 19:10 22:13,15 22:18,21,24 23:3,6 24:3,10 24:15,25 26:11 26:17 29:11,13 29:15 30:1 31:4,13,17,19 31:23 32:2,6,8 32:12,20 33:1 33:14,16,19,23	deep 126:4,15 deficiencies 132:22 133:1 define 27:22 28:1,9 74:8 84:24 85:8		

determination 56:16	different 32:16 42:1 47:11	discloses 59:13 60:7 62:18	document 4:16 8:2 37:2 59:8
determine 8:3 55:18,22 63:22	50:2 65:21 82:18 84:25	63:8 78:13 112:9 121:17	60:21 62:24 63:7,18,20
80:4,13,23 82:3 83:8	86:14 95:7 96:1,23 97:3	121:23 122:5 127:25 128:4	64:16,25 66:13 66:25 70:10,22
105:6,8,11	119:23 126:20 130:13	128:13,17 129:7 130:1	72:2,15,23 76:12 78:14
determined 105:14	difficult 93:3	135:2 143:24 145:10,12	87:1,13,19 88:8 89:3 91:7
determining 81:15	dimension 92:7 92:10,12,15,20	disclosing 129:15	96:13 100:10 101:11 109:14
develop 45:17 49:4	dimensioned 92:2	disclosure 133:6 136:4	111:12 117:24 118:7 119:15
developed 44:15 46:1	dimensions 92:16 93:9,13	discuss 41:11 83:22	120:1,14,22 121:19 122:17
47:18,21,25 49:9	direct 25:13	discussed 23:7 41:3	122:24 123:16 125:3 127:23
developing 44:13 49:11	direction 95:12 95:16,17,19	discussing 20:22	135:4 138:11 140:3 141:7
development 47:8,13,16	120:20 137:25 138:2	disengage 138:17 145:2	142:5,18 documentation
48:1 51:4 53:24	directions 95:21 96:1	disengaging 138:24	37:4 51:3,23 documented
device 6:10 46:22 52:18,19	directive 48:6 77:13 78:12	disruptive 48:24	50:23 documents
56:6,8 91:6,15 114:7,13,15	79:25 81:3 directly 94:4,22	distal 92:18 distance 137:24	7:13 52:21 doing 17:10
122:10,11 126:1	disagree 98:14 disclose 13:9	137:24 distorted 42:4	42:2 51:21 93:15 95:11
devices 9:2,4,5 9:6 44:16,17	17:11 81:4,15 120:23 121:6	divided 132:5 doctor 44:25	131:23 draft 24:9,12
44:17 54:11	122:7 129:23 disclosed	45:6 91:21	24:14,20 25:2 25:5,17,22
diameter 104:8 104:9	111:20		

26:5,6,10,14,15 26:16 27:2,4,6 27:11,15,20,21 28:2,9,10,19,19 28:20,23,24 29:10,14,16,25 30:21 31:23 drafted 30:4,6 drafting 37:18 drive 105:18,22 106:12,14 129:17 135:13 driven 100:12 drives 125:25 135:15 due 7:18 42:4 duly 5:16 148:5	109:1 132:16 142:25 elastic 139:7 electronically 24:1 email 2:6,13,13 embodiment 105:24 employee 51:25 148:11,12 empty 116:9,17 116:25 endplate 135:8 135:12 140:5 engage 68:22 68:24 76:8,9 76:17 101:8,25 102:3,6 125:22 125:22 137:21 138:4 145:15 146:23 engaged 19:13 129:19 138:25 139:14 engagement 16:14,22,25 19:22 20:21,22 51:5 64:24 65:4,6,9,12,17 65:22 66:4,5,9 66:17 67:22 68:13,14 69:2 69:11,22 70:3 70:12,16,19,25	71:5,7,17,25 72:10,19,20 73:2,3,8,11,11 73:20 74:9,19 75:10,16 76:3 76:18,24 77:8 78:4 79:16,23 80:5,14,24 81:23 82:1,4 83:9 87:14 107:1,7,9,18,20 107:24 108:4,9 117:15 124:21 124:24 126:21 129:19 135:12 138:9 145:18 engages 66:1 66:12,19 68:1 70:20 71:10,12 71:13 130:5 138:8,18 engaging 140:4 engineer 45:16 45:25 engineered 51:7 engineering 42:10,12 entire 60:17 105:10 entirety 96:5 entitled 98:6 epitome 30:24	equal 97:1,10 eric 2:10 especially 49:11 97:9 esq 2:4,10,10 eventually 50:10 exact 4:16 16:24 19:7,12 29:8 38:6,10 39:20 47:14,20 49:8 53:24 55:8 68:6 82:8 82:9,11,12,16 99:14 exactly 66:2 72:16 73:21 78:2 82:15 examination 3:4,5 5:17 143:12 examined 5:16 example 98:16 111:17 119:12 119:17 excluding 22:1 excuse 68:14 101:6 105:7,21 exhibit 4:4,6,7 4:9,11,13,13 8:4 17:17,20 18:13,15,21 23:8,9 41:13 41:14 56:18,25
e			
e 2:1,1 3:1 4:1 141:3 earlier 11:15 68:12 earned 42:9,11 easier 69:7 easily 92:2 93:9 93:11 140:24 eastern 1:18 eight 38:11 39:19 84:25 85:4,20 86:2 eighth 2:11 either 12:1,10 14:21 92:23			

60:16,17,19 61:2,8,10,14,18 61:18 62:2,2,8 62:11,13,25 63:4,13,16,23 64:5,18 65:2,2 84:1,8,12 104:12 120:2,9 127:12 134:13 134:16,22 143:15 145:8 145:24 exhibits 4:3,15 7:17 17:25 31:20 38:19,20 existing 136:11 136:12 expand 46:23 48:20 86:10,22 93:25 97:12,12 101:4 123:17 126:1 132:15 expandable 9:2 44:18,21,22 54:7 expanded 114:7,13,14 140:14 expander 135:21 136:5 136:18,21 137:3,7,18 141:16 142:1,9	expanding 76:13,17 99:13 expansion 45:14 66:4,21 66:21 67:2,23 67:25 68:4,16 68:23 69:3,4 69:12 70:13,15 70:20 71:9,12 71:19,20,23 72:5,6,10,13 74:10,20 75:11 76:8,14,16,17 77:7 87:2 98:19 99:2,5,6 99:9,11,16,19 99:25 100:1,8 100:22 101:10 101:16,20 102:1,3,7 104:16,19,21 104:24 105:2,4 105:9,15,18,22 105:24 106:12 106:14,25 110:1,12,25 112:11,15,17 112:18,20,24 113:1 117:15 122:18 129:16 129:17 132:21 135:14 137:1 144:1 145:1	expansive 68:5 experience 41:20 49:18 53:13,19 89:13 89:16 expert 12:18,19 12:21 17:5,6 19:20,24 30:10 30:25 37:8,12 37:22 143:15 145:7 expires 148:24 explain 102:5 explains 128:1 expounded 10:12 expressed 24:3 expressly 59:12 60:5 63:1,6 extendable 84:14 external 93:24 116:23,24 117:3 144:2,10 144:14,25 f facilitate 97:2 98:17 104:20 facilitated 105:14 fair 9:21,23 28:12 71:16 79:22	fall 27:11 96:25 family 1:8 5:4 5:10 20:2 far 21:20 76:23 126:13 fascia 48:16,18 fasteners 140:4 140:6,17,20 fda 52:10,21 54:2,5,9,18,25 55:12 56:10 feature 68:3,22 features 13:10 17:12 51:11 81:5,16 99:3 109:12 118:9 121:7 125:21 132:13 feed 6:18 17:24 33:7 69:9,15 89:7 feedback 49:13 49:14 feel 80:2 figure 52:16 84:18 85:1,5 85:14,16,24 86:1,14,16,20 87:7 100:14,16 100:18 102:18 102:20 103:20 104:15 123:3 131:25 132:6 134:25 135:6
--	--	---	---

136:22 137:4,6 137:9,25 139:23 figures 94:18 file 51:12 52:23 filed 20:11 50:20 filled 116:1,5 financially 148:13 find 52:17 92:21 93:1 fine 7:7 69:16 143:10 fingers 132:16 finished 10:15 firm 15:14 16:2 first 4:3 18:7 19:5,20 24:9 24:12,14,20 25:1,5,17,22 26:4,6,10,14,15 26:16 27:2,4,6 27:11,15,20 28:19,23,24 29:16 47:22 50:20 51:25 54:11 105:13 106:6 110:2,13 111:1,2 112:3 129:18 136:13 138:17 143:18 146:3 148:5	fit 14:7,24 92:8 92:21 104:3,3 five 25:24 fix 75:3,4 fixation 44:16 44:17 122:9,11 fixed 46:15,16 115:25 116:8 117:2,4,6,8 flat 102:19,21 flight 38:15 focus 79:25 focusing 70:18 folks 145:22 follow 30:16,18 72:11 139:19 following 57:6 124:9 125:2 follows 5:16 force 94:4,21 95:2,16,17,23 96:11,17,19 97:4,11,14,15 98:8 127:7,9 139:5,10 144:2 144:10,14,25 forced 95:5 forces 94:6,11 94:14,16 95:9 95:11 96:15 97:2,9 98:16 116:24 117:3 126:9 138:22 139:1,13	forgetting 121:3 form 11:11,21 12:3,12 13:4 14:5 15:8 16:19 21:3 23:1 24:19 26:2,12 27:17 28:21 30:2 31:8,14 32:3,7 36:24 41:2 43:7 47:19 49:23 50:7,17 51:8 53:15 54:20 55:14,25 56:13 63:24 64:7,13 69:25 70:6 71:3 72:1 72:14,21 73:4 75:17 77:20 80:8,16 81:1 84:23 85:6,18 88:6 89:24 90:10 91:12 92:4,25 94:5 97:7,18,24 98:11 102:25 103:13,19 110:18 112:5 114:8 115:13 115:23 116:20 120:18 125:19 126:7,18 128:3 128:16,24	130:20 131:18 132:24 133:7 134:5 135:24 136:8,20 139:3 140:8 143:2 144:5,23 formally 19:13 formed 123:1 forming 61:7 61:24 62:8,11 64:11,16 122:13 forms 119:23 formulating 65:23 104:18 forth 29:3 54:9 forward 69:14 found 100:25 133:13 four 132:5,7 frame 19:5 front 6:19,20 7:10 18:8 61:19 69:18 84:6 100:12 112:2 134:22 145:15 146:11 froze 25:18 full 5:21 30:9 31:10 38:8,14 39:21,21,23 53:3 111:2 131:13 143:18 145:6
--	--	---	---

fully 14:14 15:10 113:4,5 113:8,14,22 114:3 function 57:8 57:12,16 58:23 79:7,9 further 77:17 143:6,24 147:1 147:3 fusion 57:18,24 58:11,13,16,20 59:2	36:23 37:3,4 46:14 51:10 65:8,15,17 89:19 114:24 115:15 117:4,7 118:12,25 119:2,7,10,19 generally 8:8 8:24 12:17 35:24,25 52:10 52:13 53:13 54:16 84:22 86:17 94:1 99:13 102:21 116:7,12 125:20 126:3 140:13 geometry 135:22 136:6 136:18 getting 12:5 35:13 82:10 98:13 give 8:18 9:14 14:16 29:7 33:8,8 47:14 52:6 82:13 97:19 121:20 given 30:13 77:4,4,12 79:21 82:9,12 83:14 97:21 121:14 139:16 139:17	giving 58:22 78:9 133:9 glass 116:16 go 9:8 18:1 46:18,22 49:13 50:10 51:18 68:7 75:4 76:3 78:10 80:2 84:5 88:14 90:20 102:8,9 102:13 103:15 111:18 124:13 126:4,14,15 128:5,10 129:12 131:13 131:21 132:17 136:24 138:6 138:13 139:11 145:1 goes 52:24 63:11 87:3 93:14 101:12 126:2 going 7:25 13:7 13:25 18:5 30:7,11,16 37:1 41:6,12 67:21 69:14 74:13 75:8 78:15,21 82:14 83:4 84:5 86:20 94:14,15 95:2 101:12,13 111:18,23	133:18 137:6 good 5:19,20 78:17 109:19 gotten 20:11 gravity 117:3 great 7:12 46:21 132:3 grew 51:20 52:1 ground 9:9 guess 21:21 53:20 61:11 73:7 85:7 115:24 130:10 guidance 52:20 guide 93:6 145:16 146:12 146:21,21
g			h
gaps 132:9,12 gear 90:21 91:13 94:7 96:5 117:16,18 118:3,11,12,18 119:2,8,11,12 119:13,18,20 119:22,24,24 119:25 geared 91:13 gears 90:19,22 92:8,20,21,22 93:1,6,20,21 94:6,22,25,25 97:12 98:17 99:3 118:15 145:2 general 16:17 35:24 36:16,18			h 4:1 141:3 hand 146:12,13 148:18 happen 72:17 144:20,21 happening 41:4 91:22 98:5 happens 93:17 harassing 82:10 hard 92:9 136:2 harder 92:21

hastings 2:4 5:13 6:2 12:24 15:23 16:6 19:4 26:21,24 head 44:20 100:4 136:14 heal 48:19 hear 11:6 31:10 33:12 42:20 74:24 75:9 heard 114:10 height 46:15,16 46:17 84:15 122:13,20,25 123:5,10,13,15 125:18 127:15 128:2,5,14,18 133:14,23 held 116:8 helped 45:16 helpful 65:1 100:14 hennepin 148:3 148:24 hennigan 15:25 16:1,4 hold 16:8 33:3 108:7 115:5 144:16 holding 116:1 139:1 140:12 140:17,21 141:4	hole 89:14,17 90:20 126:22 127:4 138:7,8 138:14,14,17 139:25 holes 123:21 124:1,3,4,18,21 124:23 126:5 126:14,16,22 126:24 127:17 129:5,8 130:5 130:6,6 131:9 133:15,25 137:25 138:1 146:20 honest 17:20 horizontal 137:25 138:2 hour 9:24 21:10 38:10 39:24 41:7 78:16 hourly 21:6,8 hours 21:16,22 21:25 22:9,17 22:20,22 31:2 31:16,18 38:6 38:9,11 39:19 hueston 15:24 16:1,4 19:3 human 50:10 hypothetical 76:20 77:11	i i.e. 102:16 ideal 127:1,4 ideally 48:18 ideas 24:11,13 24:22 25:2,6 29:2 identification 61:15 identified 94:21 108:5 118:1 133:1 identifies 108:13,20 109:6 112:1 122:12 124:25 125:5,9 133:8 134:3 identify 54:12 54:18 89:21 101:8 104:15 107:5,16,23 108:25 112:8 124:17,20 132:22 133:5 133:21 141:20 142:2,10,13,15 142:19,24 143:3 impact 56:7 impartiality 148:15	implant 44:9 47:21,22 48:5 48:8 49:4,16 49:21,25 50:1 50:6,12,13,22 51:5 55:12,17 55:23 58:2,12 58:16 65:25 66:11,18 84:15 84:21 86:10,22 99:11 104:21 113:4,23 114:3 122:19 123:6 123:11,13,15 123:19 125:18 126:9 128:2,5 128:14 135:2,3 135:6,23,25 136:1,6,11,19 136:22 138:5 140:13 implanted 46:18 113:6,15 113:23 implants 9:3,4 9:5,6 47:17 48:12 53:1,12 53:14,17 54:17 54:21 implications 12:14 impossible 89:8 inches 91:22 93:2
---	---	--	--

incision 48:15 48:24	indication 52:16 104:4	102:5 104:22 104:23 108:14	50:6,14,18,20 54:13,19,23
incisions 46:21	indiscernible 13:22 28:15	108:21 109:6	55:3,5
include 21:23 85:3 104:22 105:3 106:2 125:22 137:7	35:1,9 55:20 58:4 74:17 90:15 95:14	118:2,5,15 143:19 145:15 146:11,16	instruments 47:8,11,12,17 50:23
included 32:2,6 32:12 33:1 62:24	113:19 124:2 128:8 133:12	inputs 49:10	intel 50:1
includes 57:8 96:5 106:20 125:13,15 135:17 137:15 137:18	individual 85:12 86:3	inserted 86:11 86:23 92:19 93:6,16 127:17 129:4,7 130:6 131:9 133:15 133:25	intend 14:15 intended 50:13 50:22 54:13,19 140:13
including 36:18 36:22 62:22 85:19	individually 51:2 109:12	inserting 92:9	intentionally 51:7
incomplete 76:19 77:10	inform 64:18	insertion 145:14 146:10	inter 4:5
incorporated 29:23	information 16:10,12 19:2 20:9,17 25:6 26:5 30:11 36:13 77:4	inside 95:22 100:6,20,25 101:7 104:9 125:21 132:17	interact 98:19 99:1,4,15,18,24 100:6,20 146:23
incorrectly 43:8	infringement 59:16 60:10,14 60:14 61:6,11 61:23 62:1,20 63:12,15 64:4	instruct 30:7 30:11	interacting 91:13
increase 97:10	inherently 89:6 111:19	instruction 10:13	interaction 146:16
independently 11:19,19 32:1 32:5,11,25 33:13,16,18,22 34:9,11 80:4 80:13	initially 29:24 30:4,6	instructions 3:7,15 30:17 30:19	interest 148:14
indicate 4:16	inner 96:9,12 96:20 97:5,16 98:9,18,25 99:16,24 100:7 100:11,21 101:5,9,22,25	instructs 10:20	interested 148:13
indicating 23:18		instrument 49:5 51:6	interface 50:13 51:5
		instrumentati... 44:18 47:24 48:2,4,9,10 49:12,15,17,20	interfacing 94:24
			interject 14:11 14:11
			internal 100:3 102:8,12,15,23 103:3,12,15,15

internally 55:17 internet 74:25 interrupted 106:8 interruption 7:19 interventional 43:5,13,15 44:1,3,8,13 51:13,24 52:4 52:5 intervertebral 84:15 introduced 16:6 19:4 23:10 41:15 84:2 120:3 134:17 invasive 44:19 46:20 48:7,11 48:13,23 49:1 49:6 invented 44:15 invention 79:14 80:11,22 81:14 83:16 inventor 45:13 46:3,8,10 inventor's 47:23 involve 8:23 involved 18:23 20:5 37:16	44:13 47:7,10 47:13 48:1 138:23 139:10 involvement 37:18 ipad 7:10 ipr 10:24 11:10 13:3 14:4 15:6 18:16 22:18,21 22:25 37:7 41:23,25 ipr2026-00121 1:11 iprs 8:11 19:20 19:25 20:1,4 20:12,14 issue 8:25 issued 84:9 issues 27:25 74:22 item 85:13 items 85:20 86:3 iterations 29:8 44:24 iterative 24:24 29:1 46:1 51:9 j j 2:4 j&j 47:4 j1 4:13 60:16 61:18 62:2	january 148:24 jittering 75:1 job 1:24 johnson 1:25 148:23 july 1:18 5:1 147:7 148:5,18 june 4:12 84:9 k k 51:14,23 52:2 52:8,17,22,24 53:3,3,3,23 54:4,12,17 keep 14:12,18 48:8 82:24 91:23 93:23 100:11 101:22 121:3 139:1 keeps 144:2,10 144:14 keywords 146:20 kind 6:18 45:21 49:18 knew 59:24 know 9:9,19,25 9:25 10:15 17:20 19:19 22:11 25:9,12 25:25 27:10,25 30:9 31:5,16 37:14,16 38:10 39:20 47:1,3	49:21,21 50:5 55:4 56:20 61:9 62:3 69:15 77:21 78:16 98:4 108:18 109:18 117:11 130:15 130:17,18 136:13 143:8 146:1 knowledge 36:15,16,18,23 37:3,5 45:8,9 89:19 139:4 l labeled 88:20 labs 49:13 50:10 lag 75:1 128:11 128:12 laptop 69:17 large 48:14,23 larger 47:5 92:20 lavalley 2:10 2:13 3:4 5:8,9 5:18 7:8,20 11:2,8,17 13:18 14:8,10 14:23 15:3,16 16:13 17:23 18:1,4,11 23:11,20,22
--	---	---	---

24:17 28:16 30:15,20 31:1 34:22 35:2,7 35:20 41:6,10 41:16 43:23 55:21 58:6 61:16 74:18 75:7 78:18,23 78:24 81:21 82:17,22 83:3 83:18,21 84:3 88:9,13 91:3 95:15 107:11 107:14 108:11 109:20,22,24 111:9 113:20 114:20 115:3,7 115:10,18,20 120:4 121:10 124:14 128:9 134:8,12,18 143:5,10 144:5 144:13,23 146:18 147:3 law 2:9 5:9 15:14 16:2 lawsuit 60:15 lead 135:13 leading 144:6 146:18 leave 7:6 led 118:10 leeway 30:13	left 47:6 legal 12:5,13 57:15 58:22 121:14 legs 125:24,24 132:5,8 letter 16:25 20:22 level 52:14 lever 128:23 131:10 licensed 42:19 42:22,24 life 91:25 light 116:25 limit 131:6 limitation 57:8 57:12 58:23 59:14 60:8 62:18 63:9 79:7,10 80:1 105:6 106:21 106:24 107:7 107:17 109:25 109:25 110:7 110:12,24 111:15 117:14 118:11 121:17 121:23 122:5 129:16 131:1 limitations 63:6 line 3:8,9,10,11 3:12,13 78:18	145:25 lines 146:7 listed 17:9 18:12 70:12 85:20 105:7,9 litigation 8:10 8:22 42:2 little 31:9 38:14 41:7 70:1,1 126:2 128:11 141:14,23 142:6 llc 1:8 5:4,9 llp 2:4,9 5:13 locked 109:15 locking 104:24 109:7,10,16 140:1 long 29:6 31:2 39:17 52:25 53:21 54:3,6 59:24 91:22 longer 48:25 look 36:7 53:9 56:6 66:1 78:12 100:14 102:11 105:10 105:11 116:12 120:21 looked 29:2 67:8 looking 6:19,24 8:2,3 43:21 46:20 52:15	53:10 86:1 115:24,25 116:15 131:24 136:9 lost 17:24 lot 29:17 30:13 47:15 49:1,10 52:15,24 74:5 93:14 94:1 116:2 lower 122:14 123:2 132:14 lunch 78:22 83:19 m machine 103:9 103:9 machined 102:16 machines 103:4 madam 108:8 made 24:24 40:25 142:14 maintain 140:13 majority 9:1 46:14 make 6:18 10:7 10:15 18:6 32:18 35:18 36:9 46:17 47:25 59:25 63:25 66:7,24
--	--	--	--

74:23 99:20 114:10 142:6 making 33:4 48:24 manner 4:15 14:7 march 4:8,10 43:6,14,19 44:2 120:7 134:15 marked 4:3 18:21 23:7,9 41:13,14 61:14 84:1,7 120:2,5 134:13,16 market 46:15 47:2 49:22 52:11 54:8 marketed 54:11 mass 116:14 mate 90:24 91:5,16 93:7 93:20 material 36:8 36:14,18,22 40:23 57:19,24 58:11,13,17,21 59:2 62:21,22 64:21 104:1,2 materials 38:5 38:17,17 42:10 42:12	mates 91:14 92:5 93:16 matter 5:3 17:8 17:16 19:14 21:2,6 22:7,10 27:7 42:6 mba 42:13,14 md 42:18 mean 6:15 9:4 9:5 29:21 35:25 37:9 38:13 45:5 48:11 54:1 56:4 57:16 62:16 66:23 67:25 68:2,19 68:24 72:4,5 95:19 102:13 103:1,5 104:6 106:3 112:19 117:6 138:15 meaning 25:9 59:5 65:15,17 65:22 79:2,11 79:16 80:21 81:12,25 82:4 83:9,15 90:18 104:18 114:24 115:15 127:2 meanings 59:10,10 79:6 80:9 means 11:23 35:22,23 48:13	57:8,12,17,18 57:24 58:11,20 58:23 59:1,4 79:7,9,23 80:5 80:14,24 111:19 113:22 146:22 meant 113:8 mechanism 66:4,21 67:2,2 67:24 68:1,5 68:16,23 69:3 69:4,12,12,23 70:4,13,15,17 70:20,24 71:1 71:9,12,19,20 71:23 72:11,19 73:2,11 74:10 74:20 75:11 76:8,14,16,17 77:7 78:4 87:15 99:9 100:1 101:1 104:16,19,24 104:25 105:2,4 105:9 106:25 107:2 108:15 108:23 109:2,4 109:7,10,16 110:2,12,25 112:11 117:15 122:14,18,20 123:1,14 125:1 129:17 132:23	133:2 140:1 144:1 medical 44:7,7 medicine 42:19 42:23,24 medtronic 1:5 5:3,13 11:16 12:25 13:2 14:4 15:6,12 15:21 16:4 18:12,15,21 19:17,22 20:5 20:14 23:7 37:6 39:6 41:13,24 42:2 60:15 61:8,18 62:13 65:2 84:8 104:11 120:6 134:13 143:15 145:7 medtronic's 6:6 10:3 15:14,18 61:2 meet 38:21,25 39:3,12 40:1 80:1 118:11 meeting 39:9 39:14,17,22 40:2 107:6,17 meetings 40:5,7 meets 106:21 110:11,24 121:15
---	---	--	---

member 127:16 128:21 133:14 133:24 memorized 16:16 mention 19:15 72:6,9 94:12 111:5 mentioned 15:18 25:1 28:22 38:16 39:11 44:21 45:12 46:3 47:7 68:12 70:19 95:1 96:14 102:12 129:10 mentions 123:7 131:20 merged 85:21 merilee 1:25 148:23 met 38:23 39:1 39:4,12,15 metals 42:10,12 micro 99:12 microphones 7:1 mind 47:23,23 48:8 49:5,8 minimally 44:18 46:20 48:7,11,13,23 49:6	minneapolis 2:12 minnesota 2:12 148:2,24 minor 142:21 142:22,25 minus 39:19 minute 25:19 41:8 109:21 134:9 143:9 minutes 40:10 mischaracteri... 88:16 mischaracteri... 72:22 misheard 32:18 misrepresenti... 34:19 mission 5:23 misspeaking 101:22 mix 8:15 mixture 25:12 modification 141:23 modifications 141:14 142:7 142:22,25 143:3 modified 55:11 55:23 56:11 140:24 moment 18:18	monday 39:1,9 39:12,13 40:6 monday's 39:17 monitor 6:24 months 19:8,9 19:15 27:16 53:18,18 morning 5:19 5:20 moskowitz 1:8 5:3,10 20:1 motion 44:16 96:16 99:12 118:16 132:20 move 10:17 14:22 90:6,21 95:8 96:8 99:12 111:22 112:17,18,19 112:23,25 134:9 146:11 movement 118:13 moving 45:14 45:15 84:4 94:15 95:10,25 multiple 73:5 110:19 muscle 48:20 muscles 48:16 48:17,20 muted 42:4	mw 1:24 n n 2:1 3:1 name 5:8,21 26:18,20,25 39:5 45:4 named 45:13 46:8,10 names 43:16 44:4,5 narrow 36:1 50:3 62:3 75:24 necessarily 4:16 49:8 92:5 necessary 7:9 27:18 63:22 need 10:1 52:18 55:23 56:11 72:13 73:5,18 75:3 77:18 80:2 86:11,23 97:25 98:4 123:21,24 124:3 126:4,15 126:21 130:14 132:15 133:5,8 133:21 134:3 137:12 141:21 142:3,11,16 143:4 needed 48:9 51:11 105:23
---	---	--	--

105:23 106:13 123:8 127:2 140:24 141:14 141:24 142:7 142:20 143:4 needs 41:21 55:18 71:5 72:16 96:25 142:14 144:19 144:20 neither 56:22 new 2:5,5 55:12 56:11 65:14 77:22,23,25 133:5 nicely 92:8 93:7 nine 8:11 20:12 20:14 41:25,25 noise 144:7 nonresponsive 115:19 normally 21:11 notary 148:24 note 4:15 51:24 noted 147:7 noticed 148:9 noticing 5:7 novel 46:12 november 19:8 19:16 27:9,13 27:15,16 nuances 66:3 number 17:20 23:20 29:8	38:6 47:14 52:7 84:8 99:20 100:4 numbers 31:24 94:18 numerous 80:17 o oath 9:12 object 24:16 88:10 98:12 115:18 144:23 146:18 objection 11:11 11:21 12:3,12 13:4 14:5 15:8 16:19 18:10 21:3 23:1 24:19 26:2,12 27:17 28:21 30:2 31:8,14 32:3,7,13 34:4 36:24 41:1,1 43:7 47:19 49:23 50:7 51:8 53:15 54:20 55:6,14 55:25 56:13 57:13 63:24 64:7,13 69:25 70:6 71:3 72:1 72:14,21 73:4 73:13 75:17	76:5,19 77:1 77:10,20 79:18 80:7,7,16 81:1 82:7 83:12 84:23 85:6,18 88:6 89:24 90:10 92:4,25 94:5 96:21 97:7,18,24 98:11 102:25 103:13,19 110:18 112:5 114:8 115:13 115:23 116:20 120:18 125:19 126:7,18 128:3 128:16,24 131:18 132:24 133:7 134:5 135:24 136:8 136:20 140:8 143:2 144:5 objections 10:7 14:12,15,16 35:8,11 82:25 88:12 144:13 obviously 21:24 26:5 109:16 123:21 123:23 126:2 136:2 138:1 142:21 occur 71:23 72:12	od 92:13,18 104:3,7 offer 121:16,22 122:4 offered 34:15 36:21 offering 58:18 office 1:1 6:2 oh 19:18 25:20 40:13 61:11 67:6,11 69:19 74:23 78:23 102:11 106:2 108:16 113:12 118:4,19 122:21 124:12 127:19 okay 7:12,21 8:5 9:8 10:1,2 10:13,18,19,20 11:9 12:7 13:14 15:17,22 18:5 21:25 23:19 28:4 31:11 33:6,13 34:7 36:10 39:11 40:17 41:6,11 45:20 57:1 59:23 61:13 67:14,21 69:13,21,21 70:18 71:6 73:17 74:7,23 75:3,8 76:1
--	---	--	---

79:15 84:4,10 84:20 88:3 90:16 97:22 98:6 100:17 101:21 102:11 104:14 106:8 109:21 110:21 111:21 112:1 113:16,21 114:1 115:17 116:4 117:10 117:20,23 118:8 119:17 124:6,8,16 127:9,13 133:20 134:10 137:17 141:12 143:7,17,18 146:2,6,14 old 130:21,21 130:22 once 48:7 50:16 54:4 87:10,17 87:21 88:3,3 88:17,18 93:16 94:13 114:14 140:2 open 7:11 69:17 120:10 opening 87:10 87:17,21 88:4 90:9 107:5,16 107:21,25 108:9 145:13	146:9,9,17 openings 86:11 86:23,24 87:4 87:4 91:19 92:3,15 93:10 145:17 146:23 146:24,25 operated 128:22 operates 86:17 operating 91:21 opine 57:16 73:15 80:2 112:10 121:12 opined 76:21 76:23 77:3,12 90:17 opinion 32:1,5 32:11,20,25 33:14,18,23 34:2,15 36:3,4 36:6,7,9,9,11 36:15 37:2 58:18,22,24,25 59:3,13 60:7 61:7 77:13,14 77:16,23 102:5 103:17 126:11 126:13 136:3 139:3 141:19 opinions 13:1 13:12 14:3 15:5 24:3,6,8	24:25 29:22 32:8 33:25 34:6,8,11,12 36:17,21 37:3 61:24 62:9,11 62:23 64:1,2 64:12,16,22 65:23 104:18 121:16,22 122:4 opposed 28:6 opposite 97:1 97:11 110:2,3 110:13,14 111:1,2 112:4 112:6 143:25 144:3,11,17,21 145:3 opticage 44:23 45:12,22 46:2 46:6,13,24 48:3,5 50:3,8 50:16,16,25 53:10,22,23 54:11,12 order 86:10,22 92:1,6,7,19 112:24 123:10 124:4 130:2,8 130:11 ordered 148:9 ordinary 59:10 79:5,10,16 80:9,20 81:12	81:25 82:4 83:9,15 114:24 115:15 orifice 58:2,12 58:15 original 45:14 45:23 148:8 outer 98:19 99:1,15,17,23 100:6,20 101:7 101:23 105:3 105:17,20,21 106:2,6,11 112:2,6 outside 55:6,15 55:25 56:13 57:13 73:13 80:2,3 100:7 100:21 104:8 120:18 126:18 131:18 overlap 138:14 138:15 own 33:16 64:1 98:1 121:25 owner 1:9 2:8 5:10 8:13,17 12:10 40:25 63:15 owner's 40:17 59:16 60:10,13 62:20 63:12 64:9,11,17
---	---	--	--

owners 64:2	pale 30:14	23:1,16,19	103:13,19
p	paper 7:12 23:5	24:16,19 26:2	107:10,13
p 2:1,1	84:6	26:12 27:17	108:7 109:18
p.m. 1:18 75:6	paragraph	28:1,7,21 30:2	109:21 110:17
75:6 83:20,20	17:9,15 18:20	30:7,23 31:8	111:6 112:5
109:23,23	57:7 59:21	31:14 32:3,7	114:8 115:2,5
134:11,11	60:3 61:7,20	32:13 33:3,7	115:8,13,23
143:11,11	62:17 63:5,19	34:4,17,24	116:20 120:18
147:7	63:21,23 67:9	35:5,10 36:24	124:12 125:19
page 3:3,8,9,10	67:10 79:3	39:4,14 40:3	126:7,18 128:3
3:11,12,13 4:3	108:19 109:5	40:12,14 41:1	128:16,24
18:7 23:13,13	110:19 111:2	43:7,17,21	131:18 132:24
23:20,23 56:19	124:11,17	47:19 49:23	133:3,7 134:5
56:21,21,23,23	127:10,11,22	50:7 51:8	135:24 136:8
56:24 57:4,6	133:13,23	53:15 54:20	136:20 140:8
61:18 67:15,16	136:16,23,24	55:6,14,25	143:2,7,13
67:17,17	137:14 140:11	56:13 57:13	147:1,6
104:12 105:5	141:13 143:18	60:23 63:24	parlance 60:24
106:15,17,18	143:22 145:6,9	64:7,13 69:25	part 12:15
106:18 107:4	145:19	70:6 71:3 72:1	39:16 45:18
108:6,12,17,19	paragraphs	72:14,21 73:4	60:4 68:5,15
109:5 110:4,6	67:13,14	73:13 75:17	68:22 69:2,11
110:15,20	paraphrasing	76:5,19 77:1	69:12,23 70:4
111:3,23,24	67:5,6	77:10,20 78:15	70:20,23 71:1
117:10,12	park 2:4,5 3:5	78:21 79:18	71:20 72:10
124:6,7,9,10,14	5:12,12 6:5,6	80:7,16 81:1	73:17 74:3,4,9
129:12,22,25	6:13,23 7:2,5	81:19 82:7,20	74:20 75:11
131:25 135:1	11:1,3,7,11,14	83:1,12 84:23	77:25 78:25
141:10 143:14	11:21 12:3,12	85:6,18 88:6	79:17 93:20
143:17 145:6	13:4,16,21	88:15 89:24	104:24 105:2,9
pages 1:19	14:5,14 15:8	90:10 92:4,25	106:5,6 112:10
28:24	16:8,12,19	94:5 96:21	114:10 140:17
	17:22 18:10,25	97:7,18,24	144:1 146:24
	20:7,15 21:3	98:11 102:25	

partes 4:5	64:23 65:1	period 45:1	picture 103:20
partially	66:7,11,18	permit 49:5	118:4
131:14	67:23 68:15	perpendicular	piece 29:4
participate	70:7 71:8,18	95:23	piecemeal
52:3	76:25 79:2,14	persisting	24:21
particular 48:2	80:6,11,11,15	35:18	pieces 84:25
49:20 50:5	80:23,25 81:7	person 19:3	place 25:8,11
64:19 65:11	81:14,18,24	25:10 51:23	110:23
71:24	83:17 84:8	personal 89:13	placed 126:9
particularly	106:21,24	89:16	placement
59:15 60:9	110:1 120:6,17	personally	57:18,24 58:11
62:19 63:11	121:9,13,18,24	29:10,12	58:20
parties 148:9	122:6 134:14	persons 148:14	plates 45:15
148:11,13	patents 20:1	perspective	135:13
parts 74:5	46:4,6,9,10,11	65:18	platform 23:6
111:14	patient 48:25	petition 4:4	please 5:5,21
party 12:2,22	49:2 56:8	37:6,8,10,11,13	9:18 10:15
148:9	113:15,23	37:14,17,19,22	11:24 14:21
passes 87:10,17	paul 2:4 5:12	37:25 38:2	21:4 23:13
87:21 88:3,17	6:2 12:24	60:19,25 61:9	28:4,8 32:4
passing 117:17	15:22 16:6	petitioner 1:6	33:21 35:4
past 88:18	26:21	2:3 5:13 8:14	56:24 63:3
115:9	paulhastings....	8:21 12:10	66:14 68:7
patent 1:1,3,9	2:6	petitioner's	72:24,25 74:12
1:11 2:8 4:5,7	pause 78:9	20:20	82:24 83:7
4:9,11 5:10	paused 7:18	petra 5:23	88:14 104:12
8:13,17,23	people 51:21	pgr 8:10	117:11 121:21
12:10 13:11	percent 8:19	phd 42:15,16	124:7 125:8
17:14 40:17,25	28:11 75:2	phone 2:6,12	127:11 128:10
45:24 50:17	90:4	25:10	129:12 136:24
59:6,15 60:9	percentage	physically	141:10 144:9
60:13 62:20,22	8:16	91:25	plurality 137:8
63:12,15 64:2	perfectly 35:2	physician	137:19
64:8,10,17,19	91:24 126:1	42:17,18 49:12	

plus 39:19,20 57:8,12,16 58:23 79:7,9 point 9:17 10:1 66:3 139:16,21 pointed 6:25 pointing 100:24 points 10:6 popr 40:19,21 40:25 pops 127:5 popsicle 139:8 portion 29:10 30:21 90:24 91:5,8 98:18 99:15,23 portions 28:23 29:12 98:20,25 99:18 posita 36:16,16 36:19,23 37:5 65:9,18 79:13 80:10,22 81:13 83:16 89:5,12 89:19 93:4 103:21 114:24 117:8 118:25 126:23 130:1,7 130:10,13 138:21 139:6 posita's 119:7 119:10,19	position 30:22 140:14 positions 13:2 14:3 15:6 possible 91:20 91:25 92:7,11 92:16 posterior 44:16 potential 56:7 131:22 potentially 49:15 96:24 139:15 practice 42:19 42:22,24 precise 62:7 predicate 52:17 52:18,18 54:8 preferably 146:8 preliminary 40:18 prep 21:23 22:2 22:14 38:23 preparation 22:11,15,21 prepare 24:9 24:14 38:21 40:7 prepared 37:15 79:1 preparing 22:12,17,24 23:3 30:10	38:3,7,8 51:14 51:17 53:6,8 54:17 present 39:8 47:2 77:23 presented 23:5 45:1 preservation 44:17 pretty 14:17 49:25 94:14 prevented 125:25 prevents 132:19 previous 28:22 75:23 previously 4:3 18:21 21:13 23:7,9 41:14 84:1,7 120:2,5 134:13,16 primarily 43:3 primary 42:25 99:3 100:1 101:1 prior 13:9 17:11 19:8,9 19:15,18,21 20:21,21,23 25:5 26:4,14 27:8,12 31:3,7 31:12,13,22 38:23 43:4,16	44:4,5,8,10 49:21 59:13 60:7 62:17 63:8 71:14 74:1 75:15 77:3,5 78:12 79:20,24 80:1 81:4,4,15,24 82:2,5 83:10 85:15 103:7 120:23 121:6 privilege 30:24 privileged 16:12 19:1 20:8,16 30:10 30:22 probably 93:5 procedure 48:10,14 49:1 49:6 procedures 46:19 proceeding 5:11 10:25 11:10 12:2,11 12:22 13:3 14:4 15:7,13 15:19 17:4 18:24 21:17,21 26:3 61:3 proceedings 5:1 7:18 8:5,9 8:12,25 9:1
---	--	--	--

process 14:15 24:24 29:1,7,9 29:18 30:10 46:1 50:24 51:3,4,9,9 52:13,25 53:5 53:6,7,21 54:4 54:9,10 72:6 131:6 produce 26:6 product 20:9 20:17 30:24 45:3,5 47:16 52:11,20 55:11 56:11 products 44:12 44:14,22 49:11 55:2 professional 41:12,20 projecting 90:24 91:5,8 pronounce 26:20 properly 33:12 propose 65:5 65:11,14 114:16,21 118:17,24 proposed 118:24 provide 10:21 17:5 21:19 25:5 51:23	59:11 60:5 119:10,19 126:13 128:25 provided 24:11 24:22,22 25:2 25:7,16,22 26:16 29:2,22 30:21 62:4 64:15 79:21 126:11 providing 37:22 63:5 provisional 50:20 public 148:24 publication 4:8 4:10 120:7 134:14 published 4:8 4:10 120:7 134:15 purely 21:21 purpose 132:12 140:6 put 36:4 89:13 89:17 116:25 117:1 127:3 139:7	12:14,15 13:15 13:17,24,25 14:1,6,22 15:1 15:10 21:4 22:4 25:20 30:8,12 31:10 32:10,10,15,16 32:23 34:13,16 34:18,20 35:4 35:17,19 42:21 43:11,12 53:5 58:8 59:18,24 65:20 66:15 67:7 68:8 69:5 69:16 70:8 72:8,12 73:9 73:17 74:4,6 74:14 75:8,9 75:23 77:15,19 77:25 78:8,11 80:12,12,19,23 82:8,12,14 83:5,6 85:7,10 85:15 86:16,18 86:21 90:2,7 97:3,4,13,14,15 97:20,23,25 98:4,5,7,8,22 100:17 101:15 106:4 107:13 111:21 113:10 114:9 115:21 121:20 122:22 130:10 133:17	133:18 139:19 140:9 144:9 question's 78:11 questioning 78:19 questions 12:19 14:19,24,25 35:11,15 82:19 98:2 143:6,8 147:1,4 quick 134:9 quickly 48:19 quite 13:14 quotations 4:15 quote 4:16 quoting 59:20
			r
			r 2:1 radial 145:13 146:9 raises 10:13 range 21:19 rate 21:8,9,11 21:13 148:10 rdr 1:25 148:23 reached 16:2 reaction 97:11 read 4:15 37:6 37:13 38:1 43:24 59:18 62:5 69:5,7,15 79:3 86:6,8

89:25 134:4 136:14 143:21 145:5 146:6 148:16 reading 17:15 17:19 18:20 59:20,20 67:3 67:5 68:11 81:10 86:2 reads 71:4 129:16 ready 77:23 real 91:25 really 27:18 35:17 41:3 47:20 73:23,23 103:2 realtime 33:7 69:9,15 reask 34:20 43:10,12 59:21 74:13,14 86:18 86:21 100:17 133:18 reason 9:14 59:11 60:5 62:2 63:5 reasonable 59:14 60:8 62:19 63:9 reasons 63:1 recall 25:23 26:3 27:1,3,8 27:12,20 31:15	31:18 44:19 50:19,21,25 53:24 54:3,6 54:15,16 62:14 62:15 64:20 132:25 133:4 134:6,6 136:14 138:20 receive 58:12 58:16 95:2,20 95:20,25 123:20 received 26:10 27:1,3,6,11,14 28:20 82:18 95:17,18,23 98:7 receives 94:3 receiving 94:13 94:21 recite 63:20 recited 13:10 17:12 60:1 81:5,16 121:7 recollection 26:22 27:5 31:6,11 record 4:16 5:2 5:6,22 10:14 11:14 14:12 17:17 18:2 28:5 32:19 34:19 75:4 82:20,24 83:2	113:9 115:8 143:21,23 145:5 148:7 record's 82:11 recovery 48:25 redirect 143:8 redlined 29:12 redlines 29:22 refer 111:19 reference 100:18 referenced 36:17,22 references 13:9 17:11 81:15 120:23 121:6 referred 4:3 85:20 111:15 referring 38:18 60:13,16 61:20 68:17 75:13 76:10 84:11,12 85:2,11,14 86:14,15 88:23 90:11 91:9 123:3 reflected 4:15 reflection 22:23 reflects 36:9 refresh 26:22 regard 75:25 regarding 63:1	regulatory 51:21 related 9:2,7 46:4 relates 77:5 relative 148:11 148:12 relatively 48:19 rely 89:16 109:11 120:11 129:15 141:4,8 relying 52:17 61:7 131:1 139:3,4 140:20 140:23 remain 112:14 remaining 8:20 remember 26:18,25 27:19 29:8 68:6 73:21 78:2 90:12 93:2 111:4 remote 1:15 2:1 148:4 remove 104:1 repeat 11:9 13:24,25 15:1 25:20 28:4 33:21 45:21 58:7 59:19 63:3 66:14 68:7 72:24 74:12 75:8
---	--	---	--

83:6 98:23 107:10 108:16 114:9 121:20 122:22 123:25 140:9 144:9 repeated 37:25 repeating 75:14 rephrase 12:7 28:17 53:4 72:7 140:10 replacement 59:1 report 12:18,21 12:23 13:12 17:5,7 30:10 30:22 37:9,12 37:22 reported 1:25 148:4 reporter 5:2 13:23 42:3 58:5 75:20 78:5 81:8 91:1 101:2,17 108:2 108:8 114:18 121:1 128:19 137:10 141:1 reporter's 4:15 148:1 reports 30:25 represent 5:10 representation 33:4	representing 5:6,13 10:24 11:1,10,12,15 represents 12:25 16:4 requested 42:3 75:20 78:5 81:8 91:1 101:2,17 108:2 114:18 121:1 128:19 137:10 141:1 requests 3:15 require 54:18 required 49:19 55:13 97:19 105:18,22 106:11 143:1 requirements 55:9 56:10 requires 106:25 110:1 117:14 requiring 110:12,25 reread 89:4 rereading 70:14 research 77:17 77:19 respect 14:14 45:11,22 79:20 79:23	respond 9:21 10:16 34:16 58:8 77:19 83:4 90:2 responded 28:3 response 6:12 8:7 18:6 33:8 40:18 82:23 88:16 89:9 94:17 95:18 96:3 97:20,23 102:12 106:10 115:19 129:18 145:20 responsible 51:14,16 responsive 13:14 rest 112:9,13 113:3 114:2,6 114:12,14 115:1,11,21 116:5,9 143:25 restate 60:2 resting 144:3 144:11,14,21 resubmitted 55:19,24 56:12 retained 15:12 15:14,18,20 17:8 27:7 reveal 16:9 19:1 20:8,16 40:12	revealed 84:7 120:5 revealing 134:12 review 4:5 24:13,23 29:5 33:17,17,22 60:25 61:23 64:16 69:15 77:17,18 78:12 90:5 reviewed 33:9 33:10,13,15 38:5,16 40:17 40:21 55:17 60:18 61:10 62:1,8,10 63:17,19 64:1 64:8,21 67:11 67:13 77:24 86:4,5 90:19 90:22 134:19 reviewing 23:4 25:6 26:14 31:3,7,12,17,19 31:22,23 33:7 37:19 59:8 60:21 62:21,24 63:7 64:25 66:13,25 67:9 67:12 69:9 70:10,22 72:2 72:15,23 75:14 76:12 78:14
--	---	--	--

87:1,13,19 88:8 89:3 90:3 91:7 96:13 100:10 101:11 109:14 111:12 117:24 118:7 119:15 120:1 120:14,22 121:19 122:17 122:24 123:16 125:3 127:23 135:4 138:11 140:3 141:7 142:5,18 revise 14:24 revising 37:19 revisions 29:19 revolution 131:14 right 6:20 9:12 26:23 30:14 32:19 42:13 81:19 83:18 87:8 111:8 124:20 143:5,6 146:4 148:16 rigid 140:14 ring 86:24 87:5 87:11 88:1 92:24 94:15 95:2,5,8 96:11 96:18,19 97:5 97:11,15 98:9 99:8,10 104:23	107:6,17,22 108:14,22 109:1 112:10 112:13,14,20 112:24,25 113:3 114:2 122:15 123:3,9 123:17 124:5 125:1,17,21 126:6,17,25 127:18 128:23 129:3,6,8 130:3,4,7,9,12 130:18 131:10 131:12,17 132:18 133:10 133:10,16 134:1 141:15 141:25 142:8 143:25 144:4 144:12,15,17 144:22 145:4 145:13,15 146:4,8,10 rings 92:3 93:10 risk 56:3,4,15 risks 56:6,8 role 17:3,5 45:11,21 room 6:4,8 rotatable 118:2 118:11	rotate 90:21 91:18 93:20,21 93:21 96:2,6,8 96:24 99:8,10 117:17 123:10 123:12,15 124:5 125:20 126:20 127:17 128:23 129:5,8 130:2,4,9,12,14 130:15 133:15 133:25 138:7 139:5,18 145:2 rotated 98:15 118:13 132:19 138:13 rotates 125:24 129:9 130:2,7 130:8,11 133:10 135:15 138:3 139:20 139:24 rotating 95:6 117:16 125:25 126:21,25 129:19 130:16 130:19,22,25 131:11,12,14 131:17 132:20 137:2 139:8 140:2 rotation 90:9 96:12,15,16,18 96:19 97:2,5	97:16 98:9 125:17 126:17 131:2 135:10 rotational 94:4 94:21 roughly 8:12 8:16 38:10 rsa 1:25 148:23 rules 9:9 55:8,9 55:10 running 19:21 19:25 s s 1:25 2:1 4:1 54:17 148:23 safety 52:23 saying 28:24 33:5 55:1,1 75:2 92:14 96:17 102:23 says 34:17 41:23 61:18 89:22 127:15 scenario 116:22 schafer 67:19 68:21 84:5,9 84:12,14,19 85:5,14,17,25 86:4,7,9,12,17 86:24 87:5,7 87:16,23,25 88:5 89:1,11
--	--	---	--

89:22 90:3,11 90:23 91:4,11 92:1 93:18 96:2 100:15 101:7,25 105:8 106:21 107:23 110:11,24 111:18 112:8,9 112:12 118:2 119:25 143:23 143:24 145:10 145:12,21,24 146:17 schafer's 84:21 86:10,22 87:18 107:6,16,22 108:13,20 112:2 science 42:11 scope 16:7,14 16:18,22 17:6 17:9 18:19 55:7,15 56:1 56:14 57:14 73:14 120:19 126:19 131:19 144:6,24 146:19 screen 6:20,21 6:23,24 25:18 61:17 screwing 138:23	screws 85:3,3 101:19 105:16 seal 148:18 second 16:8 33:3 45:3,5 61:4 105:13 106:7 108:8 110:3,14 111:1 112:3 115:6 118:14 122:23 129:18 135:1 138:18,18 145:6 section 57:1 117:20 137:7 137:16,18 138:3 see 6:17,17,19 14:7,24 18:14 36:8 50:17 57:9,10 59:24 60:18 78:13 79:25 85:19 89:4 91:20,24 94:16 95:9 108:16 110:5 111:18 117:19 117:25 127:14 127:24 132:2,3 134:20 136:22 137:5,9 139:23 140:15 141:17 141:18 143:18 143:20 146:5	seeing 26:4 seems 73:23 seen 46:2 77:24 self 54:24 sense 16:17 35:18 sentence 60:4 127:14,20 133:22 134:4 141:13 143:22 146:4 sentences 110:20 146:6 146:15 separate 84:25 85:4 separately 70:12 73:16,18 sequentially 138:12,13 series 50:8 seriously 82:8 serve 132:12 set 101:19 105:15 seven 82:9 several 19:20 19:24 29:6 44:14,24 46:16 77:2 79:19 shane 111:17 shell 105:13,13 106:7,7 129:18 129:18	shells 93:25 105:15,22 106:6,11 short 41:7 53:2 78:19 show 41:12 showed 119:23 shown 61:17 84:25 85:4,16 85:24 102:17 102:19 131:25 137:3 shows 32:19 86:20 135:6 sic 43:5,13 104:13 121:8 124:10 side 90:18 92:23 95:8,9 97:8 139:24,25 sign 148:16 signature 23:13 23:23,25 148:23 signed 12:24 24:2 signing 31:3,13 similar 82:18 119:25 single 121:25 122:8 sir 109:25 sit 16:21 17:2 24:7 26:8
---	--	--	--

89:21 133:2 sitting 116:18 situation 116:22 139:12 six 82:18 84:22 size 126:9 skin 48:15,18 skipped 33:20 sleeve 104:22 104:23 106:2 118:2,6,15 145:16 146:12 sleeves 96:9,12 96:20 97:6,16 98:9,18,19,25 99:1,15,16,17 99:23,24 100:6 100:7,12,20,21 101:6,7,9,22,23 101:25 102:6 105:3,17,20 108:14,21 109:6 112:2 143:19 slender 91:23 slightly 39:24 95:9 slip 126:16,24 127:1,2,8 slips 127:3 small 46:18,22 smaller 46:20 46:21 49:1	soliciting 82:15 soon 94:14 117:1 139:10 sorry 10:11,12 13:25 25:18,20 27:24 31:9 36:25 42:22 51:18 61:4 67:15 81:10 86:15 94:9 105:19 106:2 108:7 111:7 113:7 116:15 118:4 123:23 124:14 125:8 127:10 128:10 128:11,12 136:23 140:9 144:7 sort 25:13 sound 26:23 south 2:11 spaced 137:21 137:23 138:2 speaking 14:12 14:15,16 35:8 35:10 82:24 88:11 116:7 speaks 82:20 83:2 spec 86:2 special 3:15 53:3,3 59:5,9	specific 12:22 48:4 49:24 57:21 67:9 79:8 86:16 114:23 118:9 118:17 119:13 119:18 136:15 142:19 143:3 specifically 31:19 39:3 50:15 65:19 66:20 72:3 75:24 86:19 89:5,18 115:14 119:6,24 122:14 124:4 131:5 139:2 142:13 specification 86:6,8 specifics 64:20 73:6 133:9 specify 72:16 spells 52:22 spend 31:3,22 38:3 spent 22:1,10 22:14,16,24 23:3 31:7,12 31:16 38:6,8 spin 93:22 spinal 9:5,6 44:9,12 47:16 48:12 49:25	53:1,11,14,17 54:17,21,23 55:23 122:9,11 spine 9:2 43:5 43:13,15 44:1 44:3,8,11,13,18 46:11 48:22 51:14,24 52:4 52:5 55:2,12 55:16 spot 99:14 134:7 ss 148:3 stack 136:10 stand 85:12 standard 21:7 21:9 56:5 standards 55:18,22 start 35:14 39:11 49:12 51:10 76:1 94:13 103:14 103:18,21,24 139:8 started 39:14 40:2 43:2 67:15 starting 94:14 99:5 starts 112:16 139:23 143:19 143:22 145:9 146:4
--	--	---	--

startup 51:25	structure 57:23	suggest 13:9	93:10 94:15
state 5:5,21	58:10,15,19	17:12 29:19,21	95:1,5,8 96:11
36:4 113:4,5,9	59:1 87:11,16	81:5,16 120:24	96:16,18,19
113:14,22,22	94:3 107:23	121:6 122:7	97:4,15 98:8
114:3 148:2	118:13,14	suggests 59:13	99:8,10 104:23
statement	123:19	60:7 62:18	107:6,17,22
62:16 63:1,5	structures	63:9 78:13	108:14,22
63:16 76:11	94:20 96:2	130:1	109:1 112:10
110:10,17	101:8,24 102:2	suite 2:11	112:13,14,20
125:2	stuff 20:10 62:4	summarize	112:23,25
states 1:1 41:22	subjective	25:3	113:3 114:2
52:12 89:5,18	51:12 126:10	supplied 24:12	143:25 144:3
91:11 136:9,16	submission	25:2	144:11,17,22
141:14	41:18,19 52:9	support 4:4	145:4,12,14
stating 112:8	52:10 54:18	13:2 14:3 15:5	146:4,8,10,22
stay 139:17	55:12	36:8 51:22	supports 96:18
stem 37:3	submissions	86:12,24 87:4	supposed 17:7
step 29:24	51:15 52:2	97:9 122:14,15	sure 6:15 10:15
sterilization	submit 12:21	123:1,2 125:6	18:6 21:5
52:23	53:23,25 54:1	125:10,13,15	24:24 32:18
stick 97:21	54:1,25 55:3,4	125:23,24	34:12 36:9
139:8	submitted	126:1 127:16	47:3 52:14
sticking 66:6	12:23,24 13:13	128:21 131:24	59:25 63:25
stop 34:18	17:16 18:16	132:4,5,8,14,19	66:7,16,24
144:21	19:10 22:18	133:14,24	67:8 74:24
straight 91:24	37:7 41:21	144:15 145:16	78:18,23 98:25
132:21	54:4 56:18	146:12,21	99:20 109:22
stratosphere	substantial	supported	111:21 114:10
61:12	27:22 148:14	36:17,22 97:1	137:14 139:19
street 2:11	substantially	supporting	140:10 143:10
strike 17:1	27:21 28:2,10	36:14 37:4	144:10
74:13,14 96:9	28:19,20	40:22 62:22	surface 64:24
99:9 100:13	successive	64:15 87:11	65:4,6,10,12,17
129:24	138:4,9	88:1 92:3,24	65:23,25 66:4

66:5,10,11,17 66:18,20,21 67:22,23,25 68:13,14,16 69:2,11,23 70:4,12,16,19 70:25 71:5,7,9 71:11,15,17,18 71:25 72:10,20 73:3,8,12,20,21 74:9,20 75:11 75:16 76:3,7,7 76:15,18,24 77:4,6,9 78:3,7 78:8 79:17,23 80:5,14,24 81:23 82:1,5 83:10 87:15 95:22,24 100:13 101:14 101:24 102:6,8 102:13,17,19 102:19,24 103:1,4,6,8,11 103:12,14,16 103:18 107:1,7 107:9,18,19,20 107:24 108:4,9 110:2,3,13,14 110:14 111:1,2 115:4,11,22 116:6,10,18,19 117:16,21 123:21 124:1	124:21 129:20 144:3,11,17,21 145:3,3,15 146:11,17,25 surfaces 88:1 112:2,4,6,7,9 112:12,15,19 112:23 113:2 114:2,5,11 124:4,23,24 143:25 145:18 surgeon 123:10 surgical 47:8 47:11,12,17 50:14 51:6 54:13,19 system 47:18 51:1 138:22 systems 44:9,11 44:19	134:8 139:7 143:9 taken 13:2 14:4 15:6 talking 19:25 40:10 53:11 92:12 99:5 talks 140:4 target 50:4 team 45:16 technical 7:18 technician 45:16,25 technologies 8:24 technology 46:5,7 teeth 87:8,24 87:25 88:5,20 88:22,24 90:9 91:9,12,12,14 91:16,17,18 92:23 93:17 94:9 108:13,21 109:1 118:1,5 118:10,11,14 125:14,16,23 137:8,16,19,21 telephone 25:14 tell 21:15 23:14 52:8 76:2 146:15 148:6	telling 35:3 tendency 148:14 tense 115:9 term 59:4 64:19,23 65:3 65:22 80:5,13 80:24 85:24 terminology 56:5 87:18 137:13,15 terms 12:5 59:6 60:6 64:9 79:2 79:11 test 50:9 testified 5:16 testify 11:25 testifying 5:25 9:11 11:19 12:1,9 34:23 34:25 testimony 9:15 28:5,5,7 59:17 75:15 83:23 148:7,7 testing 49:19 50:5,9 52:22 thank 62:6 69:21 110:21 147:2,4,5,6 thanks 68:9 thing 40:22 143:9
	t		
	t 4:1 t2 61:12 table 7:1 116:16 take 6:10 9:24 25:8 41:7 52:25 53:18,21 54:4,24 73:24 78:19,21 81:20 83:18 90:1 103:9 109:20 111:13 123:17		

things 49:14 51:1 think 6:17 13:16 14:16 20:18 30:23 39:5 43:17 60:23 62:14,15 63:25 70:25 73:19 74:3 82:10 83:2 88:6 89:18 98:4,13 106:4 113:9 116:3 133:17 third 143:21 thought 50:18 123:25 131:6 thread 93:24 100:25 101:13 132:12 threaded 70:16 96:4,6,7 99:7 107:1 109:8,13 109:17 125:6 125:10,14,15 125:23 135:11 135:11,18 139:12 144:16 threads 93:24 96:7 100:2,2,3 100:5,7,19,21 101:5,6,9,21,23 101:25 102:5,8 102:10,13,15	102:23 103:3,5 103:7,9,10,10 103:11,14,18 103:21,24,25 104:1 105:17 105:20,21 106:11 109:17 125:22 144:16 145:2 three 8:20 39:8 39:10 53:17 122:13 123:4 throw 97:25 time 14:19 19:5 22:1,6,14,22,23 23:2 24:2 31:7 31:12,22 38:3 39:20,20 41:18 41:19 45:2 46:19 47:21,24 48:6,25 51:11 51:13 53:24 54:7 59:3 71:24 72:3,4 77:16,22 78:17 79:14 80:10,22 81:14 82:14 83:16 90:1 92:9 98:24 109:19 111:4 121:21 147:4,7 timeline 53:9 times 7:24 8:1 29:7 77:2	79:19 80:17 82:9 tissue 93:3 title 61:17 titled 61:11 today 5:25 6:11 7:13 9:12,15 9:17 10:3,14 11:19,20 16:21 17:2 24:7 26:8 34:23 38:4 40:8 89:21 133:2 147:4 together 45:25 47:18 50:23 91:12 108:14 108:21 109:3 109:15 116:8 told 35:16 57:17 tony 39:7,15 40:3 took 25:11 tool 64:24 65:4 65:6,9,12,17,22 65:25 66:4,5,9 66:12,17,19,22 66:23 67:1,22 67:24 68:1,2 68:13,14,17,18 68:20,22 69:2 69:3,11,22 70:3,11,12,16 70:19,21,25	71:5,7,10,12,15 71:17,19,21,22 71:25 72:10,11 72:19,20 73:1 73:3,5,8,10,11 73:19,20 74:3 74:5,6,9,10,19 74:21 75:10,12 75:13,16,23 76:3,8,10,13,16 76:18,24 77:7 77:8 79:16,23 80:5,14,24 81:23 82:1,4 83:9 86:11,23 87:3,7,10,12,14 87:16,21,22 88:3,4,17 89:2 89:6,10,13,17 89:22 90:8,20 90:24 91:5,11 91:14,16,18,23 92:2,8,9,16,18 92:19,24 93:6 93:13,16,17,21 94:4,14,22 95:3,6,10,18,21 95:21,24 96:3 97:8 98:15 99:4 107:1,7,9 107:18,20,24 108:4,9 117:15 123:7,20 124:18,21,21
---	--	--	--

124:23,24 126:4,5,14,15 126:16,16,22 126:24,24 127:16,17 128:1,1,4,13,17 128:22 129:1,3 129:4,5,7,8,19 129:19 130:2,4 130:5,5,6,8,11 130:19,25 131:2,3,9,9,11 131:20 133:5,8 133:10,14,15 133:21,24,25 134:3 135:3 136:1,12 138:13 142:4 142:12 145:1 145:14,16,18 146:10,13,16 146:21,22,22 tools 73:5 93:8 136:11 tooth 91:13 137:7,16,18 138:3,6,7,16,16 138:25 139:17 139:22 top 6:25 44:20 88:20,22,24 100:4 136:14 total 21:18	touch 77:8 90:18 146:23 touches 73:19 touching 89:7 89:14,17 90:8 90:17 91:19 97:8 trademark 1:1 transcribed 148:7 transcript 32:19 33:11 43:22 69:20 transcription 43:25 translate 118:15 translates 118:13 triage 44:7 trial 1:3 trials 50:11 true 33:19,24 34:1,3,6,8,9,15 139:21 148:7 truth 36:5 148:6 truthful 9:15 try 9:19,24 10:16 26:19 49:13 74:7 89:7 105:11 trying 14:25 26:18 36:25	59:23 74:1 75:22,24 82:23 89:13,16 100:23 103:2 116:13 121:4 139:4 tubular 135:7 135:11,12 137:2,22 138:4 139:18,20 tuesday 39:1,9 40:1,6 tuesday's 39:22 turn 7:4 23:12 56:17,19,24 84:18 93:25 95:8,21 96:6 104:12 117:10 127:11 130:17 130:18 134:25 141:10 143:14 145:1,24,25 turned 92:2 93:9,18 turning 67:1 69:11,23 70:4 70:17,23 71:1 87:15 93:11 94:13 95:3 96:3 98:17 102:11 104:11 106:15 107:2 108:15,22 109:2,3 124:6	125:1 tv 6:24 two 8:22 27:15 38:13,14,14 53:17 98:23 100:11 105:15 146:6,15 type 6:24 50:4 119:23 121:4 types 8:8 44:12 typically 47:17 47:24 48:14 49:3 52:25 56:2 83:14 130:23
u			
u.s. 4:5,7,9,11 120:6 134:14 unable 90:2 under 8:19 9:12 14:9 59:14 60:8 62:19 63:9 understand 6:13 9:11,18 10:6,10,12,22 10:23 11:22 12:4,13,16 13:1,5 14:17 15:10 23:4 34:7,10,18,21 35:16,17,21,23 60:23 62:13			

64:5 65:9 66:8 68:17 73:24 74:8 75:22 80:18 81:2 83:14 84:11,13 85:9 89:6,12 103:2 114:25 130:14 138:21 139:6 understanding 13:20 14:2 15:4 16:22 17:3 46:13 57:11 64:18 65:16 66:9,16 70:7 71:6,13 71:16 72:7,9 74:11,16,19 75:10,15 76:2 81:22 86:13,25 87:2 88:18 119:7,11,19 132:11 understands 13:16 35:3 understood 9:22 62:6 68:9 79:13 80:10,21 81:13 83:16 118:25 130:8 130:11 united 1:1 52:11	unscrew 138:24 unwilling 34:16 97:22 unwind 139:11 139:15 updating 41:21 upper 122:15 123:1 125:5,9 125:13,15,23 126:1 131:24 132:4,5,19 use 52:16 62:12 64:23 65:3,8 65:23 76:13,16 79:5,8 104:19 117:8 141:15 141:25,25 142:8 used 23:3 36:13 37:23 47:1 48:2,5 50:8 54:14 59:10 66:2 67:1 79:10 80:9,20 81:3,12 97:9 111:16 115:15 117:7 118:12 119:3,25 128:2 128:4,6,14,18 130:23 user 56:9 using 6:10 28:14,18 36:10	49:14 58:24 60:24 85:23 87:18 88:11 98:15 137:3 usually 47:21 v v 1:7 variable 46:17 126:8 verified 32:11 32:25 34:14 verify 32:1,5 33:5,18,23 34:2,9,11 35:22,23 36:7 36:11,11 90:1 100:23 verifying 100:9 versus 5:3 vertical 102:24 103:1 138:1 140:14 video 6:21 70:2 74:22 videoconferenc... 2:1 videoconferenc... 25:13 viejo 5:23 view 59:15 60:9 62:20 63:12 102:22	viewed 32:9,17 32:21,23 33:9 vii 57:1 vitae 4:6 vital 28:7 w wait 10:15 40:12 want 6:18 18:6 26:19 32:18,22 33:5 34:20 41:11 43:9,10 56:17 59:22 64:10 66:7 69:16 74:23 90:1 92:6,10 92:14 93:4,19 93:23 106:16 111:6 114:9 124:12 126:24 127:2 136:15 138:23,24,25 139:9,14 wanted 59:25 63:25 washington 6:3 wasting 14:19 water 116:1 way 14:2 15:4 15:11 31:21 53:19 58:18 60:1 65:21 71:4 76:22
--	--	--	--

77:15 96:23	111:7 121:3	x	127:10,11,22
103:25 130:21	134:10 147:5	x 3:1 4:1	127:25 128:4
130:22,23	148:5,7,16,18	y	128:13,17,25
131:22 138:2	wondering	y 141:3	129:4,15,23
ways 126:20	68:19	yeah 11:24	131:16,20
129:1,2,10	word 55:9 79:5	13:6 16:11	132:22 133:2,5
130:13,25	wording 68:6	24:20 28:8	133:8,11,21
131:16	work 19:17,22	33:9 36:13	134:2,3 136:3
we've 20:22	20:8,13,16,19	38:5 39:21	140:22,23
41:6 78:15	20:23,24 21:12	40:13 45:9	141:3,6,9,22,24
webex 25:12	30:24 42:25	47:3 49:24	142:3,11,14,17
wednesday	44:22 47:25	51:19 53:16	142:21 143:1
1:18	49:3,20 50:6	56:15 58:3,7	yeh's 123:5,14
week 27:15	52:13 92:1	59:23 62:15	123:19 124:25
39:2 40:6	109:3 135:22	66:14 68:9	130:2 131:24
weight 116:13	135:25 136:3,5	69:19 72:24	132:4,12
welcome 83:22	136:21 141:22	74:25 75:18	141:15 142:8
went 29:17	142:4,12,17,20	77:12 78:20	yep 61:1 69:21
36:8 44:24	worked 43:5,12	83:6 87:25	100:16 106:19
withdraw	43:15 44:1,9	94:19 98:23	108:18 117:25
85:15 90:6	44:10,14 45:1	99:22,23	140:16
111:21	48:9	100:23 106:5	york 2:5,5
withhold 35:7	working 14:24	107:19 112:12	young 2:4 5:12
witness 3:3	48:8	115:14 119:22	6:5 39:4,14
5:14 7:4,6 11:5	works 126:3	122:25 124:3	40:2
11:16 12:20	136:18	138:12	youngpark 2:6
13:6 14:17,18	wrap 143:9	year 53:25	z
16:9,11 18:25	write 29:16	years 53:19	zelepugas 2:10
20:7,15 23:17	writing 25:9	yeh 111:18	2:13
30:8,11 33:6	36:5	120:7,11,13,16	zoom 25:12
34:23 35:6,13	wrong 43:9,18	121:12,16,22	
40:13 43:19	43:25	122:9,12 123:1	
78:20 81:10	wrote 12:18,23	123:7 125:18	
88:11 98:14			

Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS

COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

Veritext Legal Solutions is committed to maintaining the confidentiality of client and witness information, in accordance with the regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended with respect to protected health information and the Gramm-Leach-Bliley Act, as amended, with respect to Personally Identifiable Information (PII). Physical transcripts and exhibits are managed under strict facility and personnel access controls. Electronic files of documents are stored in encrypted form and are transmitted in an encrypted

fashion to authenticated parties who are permitted to access the material. Our data is hosted in a Tier 4 SSAE 16 certified facility.

Veritext Legal Solutions complies with all federal and State regulations with respect to the provision of court reporting services, and maintains its neutrality and independence regardless of relationship or the financial outcome of any litigation. Veritext requires adherence to the foregoing professional and ethical standards from all of its subcontractors in their independent contractor agreements.

Inquiries about Veritext Legal Solutions' confidentiality and security policies and practices should be directed to Veritext's Client Services Associates indicated on the cover of this document or at www.veritext.com.