

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

---

MASIMO CORPORATION, )  
Petitioner, )  
v. ) Case IPR 2023-00745  
 ) U.S. Patent 10,076,257  
APPLE INC., )  
Patent Owner. )  

---

VIDEOTAPED REMOTE DEPOSITION OF  
THOMAS KENNY, PH.D.

March 26, 2024

9:59 a.m. Central Daylight Time

Reported by: Lori J. Goodin, RPR, CLR, CRR,  
RSA, California CSR #13959

---

DIGITAL EVIDENCE GROUP  
1730 M Street, NW, Suite 812  
Washington, D.C. 20036  
(202) 232-0646

1 REMOTE APPEARANCES:

2

3

4 FOR PETITIONER MASIMO CORPORATION:

5 KNOBBE MARTENS OLSON & BEAR, LLP

6 BY: BEN J. EVERTON, ESQUIRE

7 2040 Main Street, 14th Floor

8 Irvine, California 92614

9 949-760-0404

10 ben.everton@knobbe.com

AND

11 KNOBBE MARTENS OLSON & BEAR, LLP

BY: PAUL SPIEL, ESQUIRE

12 925 4th Avenue, #2500

Seattle, Washington 98104

13 206-405-2000

paul.spiel@knobbe.com

14

15

FOR PATENT OWNER APPLE INC.:

16 FISH & RICHARDSON P.C.

17 BY: RICHARD BISENIUS, ESQUIRE

BY: GRACE KIM, ESQUIRE

18 60 South Sixth Street

Suite 3200

19 Minneapolis, Minnesota 55402

404-724-2807

20 bisenius@fr.com

gkim@fr.com

21

Also Present:

22 Billy Fahnert, document technician

## 1 INDEX TO EXAMINATION

2 WITNESS: THOMAS KENNY, PH.D.

3

4 EXAMINATION BY

PAGE

5 MR. EVERTON

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

1 INDEX TO EXHIBITS  
2 THOMAS KENNY, PH.D.  
3 Masimo Corporation v. Apple Inc.  
4 Tuesday, March 26, 2024  
5 Lori J. Goodin, RPR, CLR, CRR,  
6 RSA, California CSR #13959  
7

8 PREVIOUSLY MARKED EXHIBITS

9 FIRST REFERRAL

10	EXHIBIT	PAGE
11	1001 U.S. patent 10,076,257	33
12	1005 Markel	204
13	1006 Mills	169
14	2003 Kenny Declaration,	18
15	IPR 2023-00745	
16	2005 Embedded definition	166
17	2006 embedded definition	164

18

19

20

21

22

1 TUESDAY, MARCH 26, 2024, 9:59 a.m. CDT

2 PROCEEDINGS

3 \* \* \*

4 Whereupon,

5 THOMAS KENNY, PH.D.,

6 a witness called for examination, having been  
7 first duly sworn, was examined and testified as  
8 follows:

9 \* \* \*

10 EXAMINATION

11 BY MR. EVERTON:

12 Q. Good morning.

13 A. Good morning.

14 Q. How are you doing?

15 A. Oh, pretty good. Thank you. How  
16 are you?

17 Q. Great.

18 So, it sounds like you are in the  
19 Minnesota area, Twin Cities?

20 A. That's correct. Right here in  
21 Minneapolis watching the snow fall.

22 Q. Good. And, do you understand that

1     this deposition that we are taking today is for  
2     the IPR relating to U.S. patent  
3     Number 10,076,257?

4             A.     I do.

5             Q.     And this deposition is for IPR  
6     Number 2023-00745.

7                     Is that correct?

8             A.     I believe so.   Yes.

9             Q.     And that patent in this IPR, do you  
10    refer to that patent as the '257 patent?

11            A.     That is -- I will try to do that  
12    consistently.   Yes.

13            Q.     Okay.   So, it is okay throughout  
14    this deposition if we refer to that as the '257  
15    patent?

16            A.     Sure.

17            Q.     Have you ever been deposed before?

18            A.     Yes.

19            Q.     Approximately how many times have  
20    you been deposed?

21            A.     I would guess somewhere between 10  
22    and 20.   Somewhere in the middle, probably.

1 Q. And have some of those depositions  
2 been in IPR proceedings?

3 A. Yes.

4 Q. Is there any reason why you can't  
5 give truthful and accurate testimony today?

6 A. No, nothing that I can think of.

7 Q. Are you on any medication?

8 A. Blood pressure. That is all.

9 Q. And that won't affect your testimony  
10 today?

11 A. It will not.

12 Q. And you are in good health?

13 A. Good enough, I would say. A shade  
14 better.

15 Q. Good. So, during the deposition,  
16 let me know if you don't understand any of my  
17 questions. Otherwise I will assume that you  
18 understand them.

19 Does that sound okay?

20 A. Yes.

21 Q. And, as usual, let me know if you  
22 need to take a break.

1                   Otherwise, we will plan to take a  
2   break about every hour, if that works for you.

3           A.     Sounds good.

4           Q.     How did you prepare for the  
5   deposition today?

6           A.     There were several steps for the  
7   preparation.

8                   Are you interested in the recent or  
9   the full story?

10          Q.     The -- let's do the full story. How  
11   you prepared for this deposition.

12          A.     Sure, I believe I was contacted by  
13   the attorneys on the Apple side, some time around  
14   last summer with respect to this case. I may be  
15   mistaken.

16                   But, I think that is right. We -- I  
17   spent time looking at the patent, started  
18   thinking about the claims. There was a lull for  
19   a long stretch as I recall, and then things  
20   became more busy in the late fall and into the  
21   winter.

22                   And then the most recent preparation



1 has been reviewing the submitted reports from the  
2 Masimo side. Drafting a report. Reading  
3 deposition transcripts for Mr. Oslan.

4 And then in the last week or so  
5 preparing for today by reviewing all of that  
6 material again.

7 Q. Did you meet with anyone in order to  
8 prepare for this deposition?

9 A. In -- there have been some Zoom  
10 conversations and in-person meetings.

11 Q. With whom did you meet to prepare  
12 for this deposition?

13 A. So, with Rick Bisenius, who is also  
14 on camera today. And with Grace Kim, who is  
15 sitting here with me.

16 Q. Anyone else?

17 A. I don't think so.

18 Q. And for how long did you meet with  
19 counsel to prepare for the deposition?

20 A. Yesterday we spent five or six hours  
21 together. There were Zoom calls over the last  
22 couple of weeks that probably added up to a few

1 hours.

2 Q. Did you speak with anyone else other  
3 than those people about this deposition?

4 A. Well, my wife knows I am here. I  
5 don't know if that is what you are going for. I  
6 am seeing my parents later today. They know I am  
7 here.

8 Q. Okay. Anyone else?

9 A. My brother.

10 Q. Did you speak with anyone from Apple  
11 about this deposition?

12 A. I have not.

13 Q. Did you review any documents to  
14 prepare for this deposition?

15 A. So, there is a list of materials  
16 considered. I have reviewed all of those.

17 Q. Did you review any other documents  
18 other than what is in your list of documents  
19 considered?

20 A. To prepare for today, not that I can  
21 think of.

22 Q. Did you review your declaration that

1     you submitted in this IPR?

2             A.     Yes. I am sorry, maybe that is not  
3     included in the list of materials considered  
4     because it is the document that carries that  
5     list.

6             But, yes, I reviewed my declaration.

7             Q.     Thank you.

8             And are you aware that Apple has  
9     sued Masimo alleging infringement of the '257  
10    patent in the District of Delaware?

11            A.     I have heard that. I don't know the  
12    particulars.

13            Q.     Have you reviewed any documents  
14    related to that Delaware lawsuit?

15            A.     The claim construction brief  
16    associated with that proceeding is among the  
17    materials considered.

18            And I have only really reviewed the  
19    portion that relates to the, one of the construed  
20    terms in this case.

21            Q.     Any other documents from that  
22    Delaware case that you have reviewed?

1 A. No.

2 Q. So you have been retained by Apple  
3 to serve as an expert witness in this IPR for the  
4 '257 patent. Correct?

5 A. Correct.

6 Q. Have you also been retained by Apple  
7 in the corresponding District Court litigation in  
8 Delaware?

9 A. I think the answer is no.

10 Q. You haven't done any work on that  
11 case for the Delaware case?

12 A. No.

13 Q. Have you been retained by Apple for  
14 any other litigation matters?

15 A. Historically, quite a few, yes.  
16 Dating back almost, I think a decade. Yes. So,  
17 quite a few others.

18 Q. And can you give me an estimate of  
19 about how many?

20 A. I am just thinking the best way to  
21 answer that question.

22 I think it is probably half a dozen

1 different instances. Some of them involved a  
2 single patent such as today.

3 Others have involved a group of  
4 patents.

5 Q. And in what jurisdictions have those  
6 been, in IPRs and District Court cases?

7 A. I think -- I'm not sure about some  
8 of the earlier work. But, I believe those, I  
9 believe a couple of earlier cases were District  
10 Court cases.

11 There was some cases between Apple  
12 and Qualcomm that I think were District Court  
13 cases.

14 More recently it has all been IPR  
15 cases.

16 Q. Any other jurisdictions like the ITC  
17 or other jurisdictions?

18 A. I don't think I have been involved  
19 in any ITC cases with Apple. I had some others  
20 over the last four or five years. I just wanted  
21 to think through that for a moment.

22 And, as far as jurisdictions, I

1 think the District Court cases have been in  
2 various places, San Jose, for example, but I  
3 don't know the full list.

4 Q. Regarding your background, in your  
5 experience have you ever worked with cardiac  
6 sensors?

7 A. Worked with, meaning, you know, for  
8 example --

9 Q. Have you ever designed a device that  
10 has cardiac sensors?

11 A. That is a clearer question. Thank  
12 you.

13 I have not.

14 Q. Has any of your work been related to  
15 cardiac sensors?

16 A. So, my work includes my teaching. I  
17 teach a course on sensors at Stanford University.  
18 I have taught for 30 years.

19 Definitely cardiac sensors are a  
20 part of the discussion in that class.

21 Particularly there have been a number of efforts  
22 over the years to include inertial sensors into

1 pacemakers as a way of determining the user's  
2 activity level and make adjustments based on  
3 that.

4 So, I know people who have worked  
5 closely on that. I have worked for a while with  
6 some engineers from Medtronic on developing ultra  
7 low power accelerometers that could be used in  
8 cardiac sensing. That was 20 years ago, I think.

9 So, those are some examples.

10 Q. In those cardiac sensors, did those  
11 include leads and pads?

12 A. The pacemakers, those accelerometers  
13 would be incorporated -- would certainly have  
14 included leads, yes.

15 Q. And, in those cardiac sensors, did  
16 any of those include leaf springs?

17 A. I don't know for sure.

18 Q. Do you recall the arrangement of the  
19 leads in those cardiac sensors that you had  
20 worked on?

21 A. The pacemaker leads?

22 Q. Yes.

1           A.     I know they were positioned relative  
2     to the heart, but I don't know the details.

3           Q.     Do you have any experience with  
4     wrist-worn medical monitors?

5           A.     Again, this would include my  
6     teaching where we describe and discuss different  
7     features and opportunities for designing  
8     wrist-worn monitors.

9                     This has become a very active  
10    discussion in my time at Stanford.

11                    First publications of, for example,  
12    wrist-worn pulse oximetries date back to the late  
13    1980's.

14                    And I have been discussing and  
15    describing the early versions and the more modern  
16    versions of those technologies in my class with  
17    students.

18                    I have worked with Ph.D. students  
19    that have developed wearable instruments for  
20    various kinds of monitoring.

21                    So, I think generally, the answer is  
22    yes.



1           Q.     And do any of those wrist-worn  
2     medical monitors, do they have cardiac sensors  
3     that you are aware of?

4           A.     So, I would say that a pulse  
5     oximeter is an instrument that can detect cardiac  
6     pulse rate. So, that could be included.

7           Q.     Did any of those wrist-worn monitors  
8     include leads with a pad that detected cardiac  
9     signals?

10          A.     I am sorry for the pause here. But,  
11     just to explain.

12                 In my sensors class, the last main  
13     exercise each quarter is for the students to come  
14     up with an application on their own that they  
15     think sensing could be an important part of.

16                 And then they do some patent  
17     searching. They look at some products, and they  
18     write a report on where they think the  
19     opportunity might emerge.

20                 And over 30 years, roughly 50  
21     students and offerings, so I'm thinking among  
22     those 1,500 term papers that I have read, have

1 any included leads for pace -- for heart EKG and  
2 pace sensing, I can't say no for sure.

3 But I don't remember any  
4 specifically at this time.

5 Q. Have you personally designed any  
6 wrist-worn medical monitor?

7 A. I think no is the answer there.  
8 Yes, as far as I can recall.

9 Q. And have you personally in your  
10 design work, worked with any skin contact cardiac  
11 leads?

12 A. In my design work? I think that  
13 is -- the answer is no.

14 Q. I would like to pull up your  
15 declaration. So, this is Exhibit 2003.

16 (Whereupon, previously marked  
17 Exhibit 2003,  
18 first referral.)

19 THE WITNESS: Okay if I pick up my  
20 hard copy of that here from the stack of  
21 papers in front of me?

22 BY MR. EVERTON:

1 Q. Sure. Does that hard copy have any  
2 annotations or notes or anything in it?

3 A. Nope. It is fresh off the press.

4 Q. Okay.

5 Is this Exhibit 2003, is that a copy  
6 of your declaration that you submitted in this  
7 IPR proceeding for the '257 patent?

8 A. Yes.

9 Q. Does this declaration, Exhibit 2003,  
10 set forth all of your opinions regarding the  
11 patentability of the '257 patent claims?

12 A. So, I think it reflects my opinions.  
13 I am capable of having more opinions than were  
14 stated at the time of January 21st, 2024.

15 But, I think this is a fair  
16 reflection.

17 There is no changes to my opinions  
18 relative to what is in this report which I think  
19 is what you are getting at.

20 Q. Right. And, are there any opinions  
21 that you are aware of that you have that are not  
22 represented in this report, Exhibit 2003?

1           A.     I imagine that you might ask me some  
2     questions today that I didn't explicitly write  
3     down the answers to in this report, but for which  
4     I might be willing to provide answers, perhaps  
5     hypotheticals and the like.

6                     So, I think depending on the  
7     questions, I might say things that aren't written  
8     exactly here, that, that is certainly a true  
9     statement.

10           Q.     But there aren't any opinions that  
11     you have intentionally left out about your  
12     declaration regarding the '257 patent, correct?

13           A.     That's correct.

14           Q.     As you sit here today, are you aware  
15     of any corrections that need to be made to this  
16     declaration, Exhibit 2003?

17           A.     Since you mention it, yes.

18                     On Page 34, the first sentence that  
19     describes the Markel reference is, I think  
20     accidentally the transcription of the first  
21     sentence describing the Mills reference,  
22     referenced two pages earlier.

1                   So, I would offer that we should  
2    just strike that first sentence on Page 34  
3    referring to Markel as a compact lightweight  
4    wrist-worn cardiac data and event monitor.

5                   That sentence is the sentence that  
6    was written to describe Mills, and it just got  
7    transcribed here by mistake.

8           Q.     So, that first sentence in  
9    Paragraph 57 is actually a quote from the Mills  
10   reference. And that was a mistake, correct?

11          A.     Yes. It is -- it includes that  
12   quote from the Mills reference. So just a  
13   mistake.

14                  Not -- it doesn't impact anything  
15   except for that one sentence.

16          Q.     Are there any other corrections that  
17   need to be made to your declaration for the '257  
18   patent?

19          A.     Not -- there might be a typo or two  
20   in the headings of certain sections, just the way  
21   they are numbered with letters and numbers.

22                  I don't know if I could find that

1 quickly, and I don't think it matters, honestly.

2 But, otherwise, nothing important.

3 Q. Were you asked to analyze any issues  
4 in this IPR for the '257 patent that do not  
5 appear in your declaration?

6 A. I'm not sure what you mean by  
7 issues.

8 I think the answer is no. But, I  
9 just want to be sure I understand the question  
10 you are asking.

11 Q. Yes. Do you have any other analysis  
12 of the '257 patent that is not included in your  
13 declaration?

14 A. I don't think so. None that was  
15 prepared.

16 Q. Does your declaration contain all of  
17 the legal principles that you considered in your  
18 analysis in this IPR?

19 A. I believe so.

20 Q. And, for example, if you turn to  
21 Pages 123 and 124 of your declaration, you will  
22 see that there is a legal principles section.

1 Do you see that?

2 A. I see that.

3 Q. So, these are the legal principles  
4 that you applied in your declaration and your  
5 analysis of the '257 patent?

6 A. So, that section at the end includes  
7 legal principles that I applied. I am not trying  
8 to be evasive.

9 There are other places in the  
10 declaration that I believe are describing legal  
11 principles.

12 So, for example, on Page 11,  
13 Paragraph 18, at the bottom there is advice from  
14 counsel as to how I ought to consider the  
15 materials.

16 I -- maybe we are into semantics.  
17 That might be considered a legal principle.

18 Q. But, did you rely on any legal  
19 principles that are not stated in your  
20 declaration?

21 A. I don't believe so.

22 Q. Does your declaration set forth your

1 entire opinion regarding the level of ordinary  
2 skill in the art for the '257 patent?

3 A. I believe so.

4 Q. Do you believe that you were a  
5 person of ordinary skill in the art, as of  
6 November 2008?

7 A. So, if I read from Paragraph 23, it  
8 describes my opinion of what the qualifications  
9 of a person of ordinary skill, as of the critical  
10 date.

11 This person, "would have had at  
12 least a bachelor's degree in electrical  
13 engineering, mechanical engineering, biomedical  
14 engineering, computer engineering, physics or a  
15 related field."

16 And I have degrees in physics.

17 And it goes on to say, "and would  
18 have had at least two years of relevant work  
19 experience with capture and processing of data or  
20 information, including but not limited to  
21 physiological information, or equivalents  
22 thereof."



1                   And I have, I think way more than  
2   two years such experience.

3                   And then the last part, "Less work  
4   experience may be compensated by a higher level  
5   of education and vice versa."

6                   I have a Ph.D. in physics, which is  
7   a higher level than what is described as the  
8   requirements for a person of ordinary skill.

9                   And, I would add that, you know,  
10   over my 30 years at Stanford, as I am teaching, I  
11   am always learning.

12                  Interaction with some of the  
13   smartest students in the world has added to my  
14   education on all of the topics we have discussed,  
15   including all of the Ph.D. students that I have  
16   worked with and a much larger number of students  
17   in all of my classes.

18                  So, I would say that it is not  
19   unreasonable to state that I have had 30 years of  
20   educational experience, interacting with these  
21   students at Stanford.

22                  Q.     Focusing on the date of the time

1 frame of November 2008.

2 At that time, did you meet these  
3 requirements in your declaration for the level of  
4 ordinary skill in the art?

5 A. So, I had the degrees I have  
6 mentioned from prior to that time. 1983 and 1989  
7 were my Bachelor's, Master's and Ph.D.

8 I was appointed at Stanford in 1994.  
9 So there would, by then, have been 14 years of  
10 teaching experience, interaction with Ph.D.  
11 students, collaborators, researchers.

12 And that included the time in which  
13 I was in collaboration with the team at Medtronic  
14 over instrumentation for pacemakers.

15 Q. So, you would consider yourself at  
16 least a person of ordinary skill in the art as of  
17 November 2008.

18 Is that correct?

19 A. That's correct.

20 Q. And when designing a device for  
21 detecting cardiac signals in that time frame of  
22 November 2008, where would a person of ordinary

1 skill start to begin that design work for  
2 designing a device for detecting cardiac signals?

3 A. If they were starting from scratch  
4 or if they were part of an organization such as  
5 Medtronic?

6 Q. Let's start with starting from  
7 scratch.

8 A. So, all by themselves out in the  
9 wild, decided to design an instrument.

10 I think they would read textbooks in  
11 the field. I think they might look at  
12 publications and patents.

13 Q. Would they look at anything else for  
14 examples or a starting point for their design?

15 A. I hope they would look at existing  
16 products, perhaps a trip to the hospital or a  
17 clinic. Some research into the product lines  
18 offered by companies in the same domain.

19 Q. Do you think a person of ordinary  
20 skill in the art, in November 2008, would look at  
21 the best available devices for detecting cardiac  
22 signals that were on the market?

1           A.     I think they would look at available  
2     devices, hopefully including the best. Best  
3     available is a matter of, perhaps, opinion within  
4     that space.

5                     Best might mean least expensive,  
6     most readily available, most accurate, most  
7     reliable in the long-term.

8                     You know, I think they would look at  
9     hopefully a collection of devices that would be  
10    perceived to be good at doing the job.

11           Q.     Were there devices for detecting  
12    cardiac signals on the market, prior to November  
13    2008?

14           A.     I think I recall that there were  
15    some maybe on the market. Meaning for hospital  
16    use or for civilian use?

17           Q.     For any use.

18           A.     Both?

19           Q.     Both.

20           A.     I think for sure there were  
21    instruments and products available for detecting  
22    cardiac signals in hospitals prior to that.

1           Q.     What were those products and devices  
2     for detecting cardiac signals at that time?

3           A.     I remember my own trips to the  
4     hospital for checkups where leads were applied to  
5     various parts of my chest and the EKG signal was  
6     captured.

7                     The first versions of that go quite  
8     a ways back.

9           Q.     Did those devices have leads with  
10    pads?

11          A.     I don't know whether that particular  
12    term was used to describe what those leads looked  
13    like.

14                    But, I remember things that were  
15    roughly an inch in diameter, flexible electrodes  
16    that were -- had some adhesive that were applied  
17    to my chest.

18                    One might call those pads, I  
19    suppose. I don't know if that was their official  
20    term of description.

21          Q.     In those devices that you were aware  
22    of, prior to November of 2008, can you describe

1     what the lead looked like?

2             A.     Are you -- so, in this case the lead  
3     is which piece of that structure?

4             Q.     That is what I am asking you, is,  
5     what is the lead? You mentioned that they had  
6     leads. What were those leads?

7             A.     So, there were wires from those  
8     adhesive patches that ran to an instrument, each  
9     one of them. I think there might have even been  
10    things like alligator clips and such.

11            Q.     Did the leads include the wire and  
12    the pad portion that is at the end of the wire  
13    that was attached to the patient?

14            A.     Sorry. I don't know how those  
15    elements would have been described at that time.

16                    If I opened up a kit of those parts  
17    would they each be in packages with labels like  
18    leads and pads and so on? I don't know.

19            Q.     From your view, would you describe  
20    the lead as including the wire and the pad?

21            A.     In that context, frankly in that  
22    context, I haven't really thought about how I

1 would describe those elements.

2 I'm not sure of the relevance to the  
3 materials in my report or in the, in the other  
4 documents that I have considered.

5 So, I'm just -- honest -- I am being  
6 fully honest. It never occurred to me to apply  
7 those specific terms to the items that were  
8 placed on my chest when I had my EKG done prior  
9 to 2008.

10 Q. Currently you don't have an  
11 understanding of whether the lead in that type of  
12 a device would include the wire and the pad at  
13 the end of the wire?

14 A. So, I understand the instrument or  
15 the device includes the pad and the wire, perhaps  
16 some connectors.

17 Honestly, I don't know whether a  
18 doctor or a nurse practitioner would use those  
19 terms to describe those elements in a particular  
20 way.

21 Q. But I am asking how you would  
22 describe it, not a practitioner or a nurse.

1 Just whether you would describe it  
2 that way?

3 A. As a patient lying on the table?

4 Q. As you, yourself, right now.

5 A. So, maybe repeat the question  
6 underneath all of this again.

7 Q. Sure. How would you describe the  
8 lead that you are describing in these devices,  
9 prior to November 2008.

10 Would you describe it as including  
11 the wire part and the pad that is at the end of  
12 the wire that attaches to the patient?

13 A. You know, honestly I hadn't thought  
14 about it. I don't remember that I ever spent  
15 time describing the experience to others.

16 And honestly part of why I am  
17 hesitating is that pads and leads are terms that  
18 are in the claims of the '257 patent.

19 So, I'm a little reluctant to say  
20 things in general that might be interpreted as  
21 statements about the claims.

22 So, I guess my answer is, frankly,



1 in terms of my own experience as a patient having  
2 an EKG, I have never frankly thought through what  
3 I might call the individual pieces of that  
4 assembly.

5 I'm happy to talk about the terms in  
6 the '257 patent.

7 Q. So, in the context of the '257  
8 patent, can a lead include a pad?

9 A. Mind if I take a look at that  
10 patent, just to be sure that I have the right  
11 context?

12 Q. Sure.

13 A. Okay. Thank you.

14 Q. For the record, the '257 patent has  
15 been previously marked as Exhibit 1001.

16 (Whereupon, previously marked  
17 Exhibit 1001,  
18 first referral.)

19 THE WITNESS: Thanks. Sorry.

20 And so the first place I'm looking  
21 here, just so you know what I'm doing, I am  
22 looking at Claim 1, which describes a heart

1 sensor configured to detect the user's  
2 cardiac signal. The heart sensor comprising  
3 a first lead, comprising a pad and --

4 First lead further comprises a first  
5 connector coupled to the pad and configured  
6 to provide the first electric signal detected  
7 by the pad to the processor.

8 So, in this context, if I think of  
9 the structures used for my EKG, I would agree  
10 that one might describe the lead as the  
11 entirety of what I saw.

12 So that included the pad attached to  
13 my chest and the wire that ran from the pad  
14 including whatever connectors were included  
15 with that, all of the way back to the  
16 instrument that captured that signal.

17 BY MR. EVERTON:

18 Q. Okay. So, the lead would include  
19 all of the different parts from the pad that is  
20 attached to the patient, all of the way back to  
21 the processor of the device. Is that correct?

22 A. In -- yes. In the '257 patent, the

1     lead includes the pad. It includes the first  
2     lead further comprising a first connector coupled  
3     to the pad and configured to provide the electric  
4     signal to the processor.

5                     I think, in all honestly, in my  
6     hospital experience, I had a patch, I had a cable  
7     that I think makes up the lead. The cable is  
8     connected to, I believe, a box of some sort. I  
9     don't remember the details of that.

10                    There is probably a number of other  
11    things along the path before it gets to a  
12    processor. And I want to think about whether I  
13    would incorporate all of the stuff inside the box  
14    as part of the lead or not as we are parsing this  
15    out.

16                    But, if I think of the path from the  
17    pad to the processor, there, the lead -- so, I  
18    understand the claim of the patent encompasses  
19    everything from the pad to the processor.

20                    Q.     And by claim you mean Claim 1 of the  
21    '257 patent. Correct?

22                    A.     That's correct.

1           Q.     Other than this device that you have  
2     described pre-November 2008 that was used in  
3     hospitals with a lead and a pad, are you aware of  
4     any other devices for detecting cardiac signals  
5     that were used or available prior to  
6     November 2008?

7           A.     So, I think earlier I mentioned that  
8     there was -- there were some products on the  
9     market for monitoring athletic performance for  
10    people doing various kinds of training.

11                I believe Nike, perhaps some others,  
12    had some wearable instrumentation for measuring  
13    those signals as part of the kit that an elite  
14    athlete might use when training for some elite  
15    sporting event.

16                I believe some of those products  
17    were on the market in the early 2000's. I  
18    don't -- off the top of my head, I don't remember  
19    the names or the specifics.

20                But, I vaguely recall that there  
21    were such things available that had them.

22           Q.     How did those devices detect cardiac

1 signals?

2 A. I believe they had -- I am vaguely  
3 remembering a product, perhaps by Nike, as  
4 something that you would wear around your chest,  
5 an elastic strap that you could tighten.

6 There was a sensor that could be  
7 placed somewhere on the front that had a pair of  
8 electrodes somewhere on that surface contacting  
9 the anatomy of the wearer.

10 And that was detecting electrical  
11 signals associated with heart activity.

12 Q. Do you know whether those devices  
13 had pads in the leads?

14 A. The electrodes -- I believe these  
15 were exposed metal electrodes. And then the  
16 course of putting on the product you might apply  
17 some gel as well to improve the contact with the  
18 skin.

19 I suppose those electrodes could be  
20 called a patent, like the patch that I would wear  
21 getting my EKG taken in the hospital.

22 Q. In those Nike or athletic products

1     that you are describing, did the leads contact  
2     the skin of the wearer?

3             A.     I believe that was the intent.

4             Q.     Why would the leads contact the skin  
5     of the wearer?

6             A.     My understanding is that that was to  
7     provide a good quality signal from the, from the  
8     patient, the wearer, into the instrument.

9             Q.     Would a person of ordinary skill in  
10    the art, in November 2008, be aware of these Nike  
11    or athletic products that you are describing that  
12    had leads in a strap?

13            A.     You know, I would say probably.  
14    But, maybe just backing up, they would certainly  
15    be aware of the more conventional hospital type  
16    instrumentation that I was also describing,  
17    either I think from their own experience or the  
18    experience of family members. That seemed to be  
19    a routine procedure.

20            Q.     Other than this athletic strap with  
21    leads that contacted the skin, are you aware of  
22    any other devices for detecting cardiac signals

1 that were available prior to November 2008?

2 A. I think there might have been  
3 similar instruments for people to do home health  
4 monitoring by 2008.

5 So, might be something a bit more  
6 complicated than the Nike example, because the  
7 intended market probably was for bedside  
8 monitoring. And you don't need something that an  
9 athlete would need to attach to their body while  
10 they are exercising.

11 But, I believe there were things  
12 that people could buy and take home or might be  
13 offered to them by their doctors that would  
14 comprise a bedside cardiac monitor of the kinds  
15 that we have been talking about.

16 Q. Would those take-home bedside  
17 monitors be similar to what you described as  
18 being used in the hospitals with the wire and pad  
19 that is attached to the patient?

20 A. It would include arrangements like  
21 that. But, there might be other arrangements  
22 where, by 2008, there might be some portion of

1     that that would be wireless, just because  
2     wireless technology was becoming well established  
3     by 2008.

4             Q.     What did those wireless designs look  
5     like that were available prior to 2008?

6             A.     So, I don't have direct hands-on  
7     experience with those devices.

8                     I'm more speaking in the context of  
9     examples that were discussed in conversations  
10    with students in my class.

11            Q.     So, you don't know what the design  
12    was or what they looked like?

13            A.     Not at a fully detailed level. I,  
14    you know, the conversations with my students  
15    would have included discussion of what the  
16    possibility for use of Bluetooth or other  
17    communication methods might be for delivering  
18    signals from a wearable instrument to some kind  
19    of a bedside monitor, just as a way of reducing  
20    the size and awkwardness of the full instrument,  
21    so that what the patient is wearing is more  
22    convenient.



1                   So they can get up in the middle of  
2     the night, go to the bathroom and not have to  
3     peel off a bunch of electrodes and then place  
4     them back on afterwards.

5                   Things like that I think were  
6     regarded as convenient and useful in the market  
7     were becoming present in products.

8           Q.     So, prior to November 2008, there  
9     were wearable devices for detecting cardiac  
10    signals that were used and on the market.  
11    Correct?

12          A.     I think that is true. Again, I  
13    don't have a particular example presented in my  
14    report.

15                But, from what I remember of  
16    technology at that time, 2008 and before, maybe  
17    2000 through 2008, there were starting to be a  
18    lot of products on the market that included some  
19    technology for a patient health monitoring,  
20    combined with some features that made them more  
21    wearable and therefore easier to use in different  
22    environments.

1                   And where different kinds of  
2 accommodations of wires and wireless  
3 communication were relied upon.

4           Q.     Let's turn to your declaration that  
5 is Exhibit 2003. If we turn to Paragraph 25, on  
6 Page 14.

7           A.     Okay.

8           Q.     Does Paragraph 25 set forth the  
9 legal standards that you used in analyzing claim  
10 construction for this IPR?

11          A.     I believe so.

12          Q.     In forming your opinions on claim  
13 construction for the '257 patent claims, you  
14 applied the ordinary and customary meaning to a  
15 POSITA, person of skill in the ordinary art, at  
16 the time of the invention. Is that correct?

17          A.     So, if we turn to Paragraph 31,  
18 which describes my opinion on this.

19                    "In my opinion the term 'embedded  
20 in' should be given its plain and ordinary  
21 meaning which does not require an explicit  
22 construction.

1 "A POSITA would have known what it  
2 means for a first material, structure or  
3 component to be 'embedded' in a second material,  
4 structure or component based on both the plain  
5 and ordinary meaning of this term and the way in  
6 which this term is used in the '257 patent  
7 specifications, which conforms with the plain and  
8 ordinary meaning."

9 And, "However, should it be  
10 necessary to define the parameters of the plain  
11 and ordinary meaning for this term, an express  
12 construction for the term 'embedded in' that a  
13 POSITA would have recognized as consistent with  
14 the plain and ordinary meaning of this term is  
15 'at least partially set in or partially  
16 surrounded by a material'."

17 I believe this construction is  
18 consistent with the plain and ordinary meaning  
19 supported by the use of the term in the  
20 specification of the '257, and that it is  
21 consistent with how a person of ordinary skill  
22 would understand that term.

1 Q. Regarding all of the other claim  
2 terms in the '257 patent, you just applied the  
3 plain and ordinary meaning without any specific  
4 construction. Is that correct?

5 A. I believe so. Yes.

6 Q. And even with the "embedded in"  
7 term, you are applying the plain and ordinary  
8 meaning, correct?

9 A. Yes. Which the description of "at  
10 least partially set in or partially surrounded by  
11 a material" is consistent with the plain and  
12 ordinary meaning.

13 Q. So, in your opinion, you don't think  
14 that any of the claim terms of the '257 patent  
15 require a construction that is different from the  
16 plain and ordinary meaning?

17 A. Coupled with my opinion that a  
18 person of ordinary skill in the art would  
19 recognize that the plain and ordinary meaning is  
20 consistent with at least partially set in or  
21 partially surrounded by a material.

22 Q. You just read from Paragraph 31 of

1 your declaration.

2 That first sentence that says, "The  
3 term 'embedded in' should be given its plain and  
4 ordinary meaning which does not require an  
5 explicit construction."

6 What did you mean by that?

7 A. I think the sentence speaks for  
8 itself.

9 And that a POSITA, a person of  
10 ordinary skill in the art, would have recognized  
11 that the plain and ordinary meaning of this term  
12 is consistent with at least partially set in or  
13 partially surrounded by a material.

14 Q. Going back to the first sentence,  
15 just the part where you say, "which does not  
16 require an explicit construction."

17 Why did you say that about embedded  
18 in, that it doesn't require an explicit  
19 construction?

20 A. I think a POSITA would understand  
21 that the plain and ordinary meaning is at least  
22 partially set in or partially surrounded by a

1 material.

2 Q. And that person of ordinary skill  
3 wouldn't need a construction of that phrase in  
4 order to know what it means; is that correct?

5 A. I think they would understand that  
6 the term "embedded in" has plain and ordinary  
7 meaning that is consistent with the phrase "at  
8 least partially set in or partially surrounded by  
9 a material".

10 Q. Further down in Paragraph 31 where  
11 you read, you provide an express construction of  
12 the term "embedded in".

13 Is that correct?

14 A. That's correct.

15 Q. That construction is "at least  
16 partially set in or partially surrounded by  
17 material"?

18 A. By a material, yes.

19 Q. Why did you construe the phrase  
20 "embedded in" rather than the term "embedded"?

21 A. I think it is important to state  
22 what I believe a person of ordinary skill would

1 understand when asked to explain what embedded in  
2 means in the context of a patent.

3 I understand that Mr. Oslan and that  
4 Masimo had proposed alternate constructions.

5 And I want to be clear about where I  
6 think a person of ordinary skill would land when  
7 asked to understand this term in the context of  
8 these alternate constructions.

9 Q. Is there a difference between -- a  
10 difference in meaning between the terms "embedded  
11 in" and "embedded"?

12 A. I believe so, yes.

13 Q. What is that difference?

14 A. The term "embedded" is broader than  
15 "embedded in".

16 Q. How so?

17 A. So, Paragraph 32 provides some part  
18 of my understanding of this distinction,  
19 referring to the '257 patent. And I am just  
20 reading right now from my report.

21 "The '257 patent uses the term  
22 'embedded' throughout, including in the title.

1 The various uses of the term 'embedded' also  
2 indicate that the claim term 'embedded in' has a  
3 narrower meaning than the term 'embedded' on its  
4 own, as used in the specification.

5 "This is demonstrated by several  
6 examples from the '257 patent specification in  
7 which the term 'embedded in' is used in contrast  
8 to other terms such as 'embedded adjacent to' or  
9 'embedded along'."

10 Q. So, you mentioned that the '257  
11 patent uses the term "embedded", but that you  
12 have construed embedded in.

13 So, what does the term "embedded"  
14 mean in the context of the '257 patent?

15 A. So, maybe just thinking of this  
16 linguistically.

17 Embedded is a verb, on its own.  
18 Embedded in adds an adverb that gives me a  
19 relationship between the term "embedded" and  
20 other elements of the surrounding sentence.

21 So, for example, embedded in is  
22 different than embedded adjacent to or embedded



1 along.

2 All three of those phrases use the  
3 word "embedded". But, embedded in is narrower  
4 than just embedded, on its own, in that the term  
5 "embedded" on its own can be attached to an  
6 assortment of different adverbs that broaden the  
7 use of that single word "embedded" relative to  
8 the more specific embedded in, which includes the  
9 word "embedded" and the adverb "in".

10 Q. Removing the adverb "in" in the  
11 other additions that you have mentioned and just  
12 focusing on the term "embedded", what does  
13 embedded mean in this context of the '257 patent?

14 A. So, the term "embedded in" means at  
15 least partially set in or partially surrounded by  
16 a material.

17 Embedded, on its own, could include  
18 terms such as "embedded adjacent to" or "embedded  
19 along" which imply a less particular  
20 relationship, typically would not require that  
21 the object is partially set in or partially  
22 surrounded.

1           Q.     And how is -- so, is what you are  
2     saying that the word "in" after "embedded" limits  
3     the meaning of embedded to be surrounding or set  
4     in; is that how you came to your construction?

5           A.     Yes.   So, I think embedded in  
6     implies a relationship with the next object in  
7     the sentence, embedded in, blank.

8                     And then I understand that to mean  
9     that the item we are discussing is at least  
10    partially set in or surrounded by a material,  
11    which represents the object that would be the  
12    next word in the sentence that included the  
13    phrase "embedded in".

14          Q.     Looking at your construction, if we  
15    go back to Paragraph 31.   About two-thirds of the  
16    way down, the quote, "at least partially set in  
17    or partially surrounded by a material."

18                     That is your construction of  
19    embedded in.   Correct?

20          A.     Yes.   That is -- I understand a  
21    person of ordinary skill would recognize that the  
22    plain and ordinary meaning of the term "embedded

1 in" is at least partially set in or partially  
2 surrounded by a material.

3 Q. In that construction, you say, "at  
4 least partially set in".

5 What does that mean? That it is --  
6 that something is at least partially set in?

7 A. I think it means what it says. I  
8 think it is clear. At least it is at least  
9 partially set in a material or it is partially  
10 surrounded by a material.

11 Q. So, at least partially set in.  
12 So, set in, could that mean placed  
13 on?

14 A. I think there is a distinction  
15 between on and in, in this particular  
16 construction.

17 I think in means, you know, within,  
18 partially surrounded by or set in.

19 And maybe just to relate this to an  
20 example that was discussed in my report and in  
21 Mr. Oslan's report, if I have a book on the  
22 table, these are two flat objects, and at least

1 on the surfaces that they are contacting each  
2 other. Flat parallel surfaces, both objects  
3 being exactly that.

4 I would say, and I understand  
5 Mr. Oslan would agree from his deposition, that a  
6 book on the table is a description of two objects  
7 which neither is embedded in the other.

8 So, in that regard, the distinction  
9 between the book on the table versus the book  
10 partially set in the table or partially  
11 surrounded by the table, would make it clear to  
12 me which -- how to understand whether the book on  
13 the table is embedded in the table or not.

14 Q. So, for, to be at least partially  
15 set in, does the pad need to be inside the other  
16 material?

17 A. So, maybe just referring to this  
18 particular clearer example of a flat object in  
19 contact with a second flat object.

20 I think for one object to be  
21 partially set in the other, there must be some  
22 disruption of that boundary, perhaps a

1 penetration of one into the other.

2 But at least excluding the example  
3 of two flat objects in contact with each other, I  
4 would say partially set in means that some part  
5 of the object that is embedded must go into the  
6 dimensions or the shape of the object to which it  
7 is being embedded in.

8 Q. So, in your example of the book on  
9 the desk, what would you have to do to make the  
10 book embedded in the desk surface?

11 A. So, if the book had some  
12 protrusions, you know, tabs sticking out, for  
13 example, that went into slots in the table, you  
14 know, tab and slot kind of relationship, I would  
15 say the book, including the tab, is embedded in  
16 the table, including the slot in the table, as an  
17 example.

18 Q. Are there any other ways to, that  
19 you could make the book embedded in the surface  
20 of the desk?

21 A. So, partially set in or partially  
22 surrounded by.

1                   So, if we think of maybe the drawer  
2   of the desk, the book could be in the drawer,  
3   that would be partially surrounded by the  
4   material of the desk.

5           Q.     So, if you placed the book in an  
6   empty drawer of the desk, the book would be at  
7   least partially surrounded by the desk in your  
8   opinion?

9           A.     If I am including the drawer as part  
10   of the desk, then yes, there would be at least a  
11   partial surrounding of the book by the sides and  
12   bottom of the drawer.

13          Q.     Would the book need to contact --  
14   have direct contact with the desk in order to be  
15   embedded in the desk?

16          A.     Just hypothetically, you are  
17   thinking of an example where there is a book, it  
18   is wrapped in Christmas paper, for example, and  
19   placed in the drawer of the desk.

20                   That would be an example where the  
21   book itself has contact with the desk but with  
22   this layer of wrapping paper in between.

1                   In that case, I would still regard  
2   the book as partially surrounded by the material  
3   of the desk, even if there were other structures  
4   intervening.

5           Q.     So, let's say that there is a  
6   situation where the book is somehow able to float  
7   within the drawer of the desk.

8           A.     So, it is levitating?

9           Q.     Yes, the book is levitating in the  
10   drawer of the desk.

11                   Is that book embedded in the desk?

12           A.     So I think the understanding of  
13   embedded in is at least partially set in or  
14   partially surrounded by the material of the desk  
15   in this case.

16                   I think if the book is in the drawer  
17   surrounded by paper or by space, somehow floating  
18   within, I would still think the important  
19   relationship is that the book is in a position  
20   where the material of the desk partially  
21   surrounds the book within that structure.

22                   So, yes.

1           Q.     So, in the '257 patent claims, the  
2     pad or the lead does not need to contact the  
3     enclosure in order to be embedded in the  
4     enclosure. Correct?

5           A.     I think if the pad is partially set  
6     in or partially surrounded by the material of the  
7     enclosure, then it would be regarded as embedded  
8     in that enclosure.

9           Q.     Even if the pad doesn't contact the  
10    inside of the enclosure, correct?

11          A.     I think that is correct. That, if  
12    the pad is at least partially set in or partially  
13    surrounded by a material, it would meet -- a  
14    person of ordinary skill would understand that to  
15    be embedded in the enclosure.

16                 And that would be true if there were  
17    intervening layers, yes.

18          Q.     Going back to our example of the  
19    desk.

20                 Now let's say that the desk drawer  
21    is open so that the top of the drawer is not  
22    covered, it is open to the environment. And you



1 place the book in the drawer that is open on top.

2 Would that book be embedded in the  
3 desk?

4 A. So we are still thinking of the  
5 drawer as part of the desk --

6 Q. Yes.

7 A. -- not a separate thing?

8 It is still connected and we all  
9 would agree that if it were embedded in the desk  
10 and embedded in the drawer is the same thing.

11 Q. Right. Let me rephrase it.

12 Let's say, so you put the book in an  
13 open drawer. It doesn't have a top on it. It is  
14 not covered on the top.

15 Is the, is that book embedded in the  
16 drawer?

17 A. Thank you. That is clearer. You  
18 know if the drawer is conventional and that there  
19 is walls in the bottom and the book is below the  
20 top of the walls, or resting in the bottom of the  
21 drawer so that if I am, if I am the book looking  
22 around, I see the surface that I am in contact

1 with.

2 And I see boundaries that reach up  
3 above on some or all sides. Then I would say the  
4 book is embedded in the drawer. And that the  
5 important distinction is that the bottom of the  
6 drawer, if I think of that as a separate element,  
7 a flat piece of material, the book on the bottom  
8 of the drawer is not embedded in the bottom of  
9 the drawer, but it is embedded in the drawer if I  
10 regard all of the drawer, including its bottom  
11 and its sides, as the drawer.

12 I'm sorry. I think that is a  
13 long-winded way of saying, if the book is inside  
14 the drawer, and not somehow above it, it is  
15 actually in the drawer, then it is embedded in  
16 the drawer.

17 Q. So, to be embedded in a pad would  
18 not need to be surrounded by the enclosure on all  
19 sides; is that correct?

20 A. It needs to be partially surrounded,  
21 not fully surrounded.

22 Q. And is the -- would that book inside

1 the drawer be embedded even if the book is able  
2 to shift or change positions within the drawer?

3 A. I think so, yes. The book, as long  
4 as it stays within the drawer, while it is in the  
5 drawer, it is partially surrounded by the  
6 material of the drawer.

7 And therefore, I would say it is  
8 embedded in the drawer.

9 MR. BISENIUS: Counsel, we have been  
10 going for about an hour and 20 minutes. Do  
11 you think we could do a break around now?

12 MR. EVERTON: Yeah, let me just  
13 do -- I have like two more questions on this  
14 section.

15 MR. BISENIUS: Okay, all right.

16 BY MR. EVERTON:

17 Q. What is the difference between set  
18 in and partially set in, in your construction?

19 A. If we are thinking of the book  
20 again, maybe the book has some protrusions of  
21 some sort. I don't know why that would be, but  
22 maybe let's consider that.

1           A protrusion that is part of the  
2   book could be set in the material without the  
3   entire book being set in the material.

4           I think that would be an instance of  
5   a book with some protrusions being partially set  
6   in the material.

7           And I think the earlier example of a  
8   book with tabs and a table with slots, if you can  
9   imagine such a thing, if the tabs were in --  
10   somehow in the slots of the table, that that  
11   book, including the tabs, would be partially set  
12   in the table, which includes those slots.

13          Q.    If any portion of the pad is set in  
14   the other material, then it is embedded in; is  
15   that correct?

16          A.    Yes. I think if, when it says at  
17   least partially set in, I take partially to mean  
18   any portion of the book or the object would be  
19   embedded in the material, if any portion of it,  
20   large or small, is set in the material.

21          Q.    Right. Any amount of being set in  
22   can satisfy this embedded limitation. Right?

1           A.       There is no -- there is nothing here  
2       that asks for a specific percentage of or implies  
3       some threshold. I would say any amount.

4                   MR. EVERTON: Okay. I think we can  
5       take a break. Do you want to do five  
6       minutes, 10 minutes?

7                   THE WITNESS: Five works for me.

8                   (Recess taken -- 11:20 a.m.)

9                   (After recess -- 11:27 a.m.)

10       BY MR. EVERTON:

11           Q.       Let's go back to Paragraph 31 of  
12       your declaration, Exhibit 2003.

13                   We were discussing your construction  
14       for embedded in.

15           A.       Okay.

16           Q.       And your construction states, "at  
17       least partially set in or partially surrounded by  
18       a material."

19                   Is that correct?

20           A.       That's correct.

21           Q.       What do you mean by partially  
22       surrounded, as opposed to surrounded, in your

1 construction?

2 A. I think actually the examples that  
3 we were discussing before the break of a drawer,  
4 an example of an object that has five sides but  
5 not a lid.

6 Objects inside of a drawer can be  
7 partially surrounded by the drawer. Or if the  
8 drawer somehow had a sealed top like a box, that  
9 might be considered fully surrounded.

10 Q. Does your construction of embedded  
11 in require that a certain number of sides of the  
12 pad be surrounded by the material?

13 A. I don't think so, no.

14 Q. But if the pad is placed on a flat  
15 surface of the material, that is not sufficient  
16 to be surrounded -- for the pad to be surrounded,  
17 at least partially, by that material?

18 A. I agree. I think the example we  
19 discussed, and Mr. Oslan also considered in his  
20 deposition, of a book on the table, I think he  
21 and I agree that that book on the table is not  
22 surrounded by the table.

1                   It is two flat parallel surfaces in  
2     contact with each other.

3           Q.     It is not partially surrounded by  
4     the table because it is flat. Is that what you  
5     are saying?

6           A.     I think two flat parallel surfaces,  
7     neither of them is surrounded by the other.

8                   So, the book on the table, the book  
9     is not surrounded by the table and the table is  
10    not surrounded by the book.

11                  I think Mr. Oslan and I would agree  
12    on that sentence.

13          Q.     If any portion of the pad is  
14    surrounded, does that satisfy your construction  
15    of embedded in?

16          A.     Any portion of the pad -- sorry, my  
17    brain, I'm thinking through geometric examples.

18                  Sir, would you be a little more  
19    specific?

20          Q.     Sure.

21          A.     Is there an example that we can talk  
22    about?

1           Q.     Let's go back to the book and the  
2     desk example.

3           A.     Okay.

4           Q.     So, let's say the book -- let's say  
5     the drawer is a very shallow drawer and the book  
6     is placed in the drawer but only a small portion  
7     of the book actually extends down into the  
8     drawer.

9                     Would the book be embedded in the  
10    drawer?

11                    And specifically -- sorry. Would  
12    the book be at least partially surrounded by the  
13    drawer?

14           A.     I want to rule out any extreme  
15    examples where we might be talking about a  
16    tabletop that has a monolayer of atoms in one  
17    location. I mean I think we are talking about  
18    structures that are big enough, we all agree are  
19    important.

20                    But that in general if the book is  
21    in a shallow drawer and perhaps the depth of the  
22    drawer is less than the thickness of the book, I



1 would still say that the book is embedded,  
2 partially embedded, or I would say partly  
3 surrounded by the material of the drawer.

4 Q. So, any amount of surrounding by the  
5 material of the surrounding of the pad, could  
6 satisfy the embedded in limitation under your  
7 construction. Correct?

8 A. Any amount that -- you know, again I  
9 want to rule out a monolayer of atoms on a  
10 surface as being somehow surrounding other  
11 things.

12 I think my understanding is that we  
13 are talking about objects that are, that are  
14 physical, real things.

15 And thickness, they have properties.  
16 But, I -- you know, any amount I think if you are  
17 talking about how shallow the depth of that  
18 drawer is, I think if we all agree that the  
19 drawer has sides to it that are higher than the  
20 bottom of the drawer, that everyone could look at  
21 it and see that.

22 Then we could all agree that the

1 book on the surface of the drawer surrounded by  
2 walls that anyone can see extended upward from  
3 the wall, upward from the bottom of the drawer,  
4 that that would meet this description.

5 That a person of ordinary skill  
6 would see the book partly surrounded by the  
7 material of the drawer.

8 Q. Your construction of embedded in  
9 doesn't require any specific amount of being  
10 surrounded by.

11 Is that correct?

12 A. I think as long as a person of  
13 ordinary skill can look at the structures of this  
14 example and see that there is some material that  
15 is partially surrounding the book, or the object  
16 in this case, then that would be regarded as  
17 partially surrounding the object.

18 Q. Right. If any portion of the pad is  
19 at least partially surrounded by the material,  
20 then that would satisfy your claim construction  
21 for embedded in.

22 A. It would say that a person of

1     ordinary skill recognized that a pad is embedded  
2     in a material, if the pad is at least partially  
3     set in or partially surrounded by the material.

4           Q.     And to be partially surrounded by  
5     the material, only a portion of the pad needs to  
6     be partially surrounded. Right? Not the whole  
7     pad.

8           A.     I'm trying to think if -- some  
9     examples. Again, if we could make this a bit  
10    more physical.

11          Q.     I am just trying to quantify how  
12    much of surrounding is necessary.

13                    You have included the word  
14    "partially", at least partially surrounding --

15          A.     Uh-huh.

16          Q.     -- surrounded by.

17                    What does that mean with regards to  
18    the pad? And why does it, what does the  
19    partially, at least partially mean in that  
20    phrase?

21          A.     And I think we discussed the idea of  
22    a book in a shallow drawer. And I agree that

1 person of ordinary skill would think of that book  
2 as partially surrounded by the drawer, even  
3 though part of that book is perhaps, if you would  
4 imagine a very thick book in a relatively shallow  
5 drawer.

6 That, I think, is what you are  
7 talking about. Where a portion of the book is  
8 surrounded by the drawer, but that the entire  
9 book isn't, you know, within and below the walls  
10 of the drawer.

11 Am I understanding your question  
12 properly?

13 Q. Yes. That is an example.

14 So, going back to the desktop or  
15 bottom.

16 The surface of the desk, and placing  
17 the book upon the surface of the desk.

18 What would you need to do to that  
19 surface of the desk so that it at least partially  
20 surrounds the book?

21 A. I think you would need to have some,  
22 you know, I don't know what to call it on the

1 desk.

2 But, some structures that come  
3 upwards from the top of the desk that would  
4 perform this role of partially surrounding the  
5 book.

6 Q. So, are you saying that you would  
7 have to surround other sides of the book, in  
8 addition to the bottom of the book?

9 A. Well, we know that if it was just a  
10 book on a flat surface, that that is not  
11 surrounded. We all agree on that.

12 So, that you need to construct  
13 something that looks like the sides of a drawer  
14 off of the top of that desk to partially surround  
15 a book on the top of the desk.

16 So you need to make the table look a  
17 bit more like a drawer.

18 Q. Is that because you need to surround  
19 more than just one side of the book?

20 A. Just as a side comment. Having a  
21 Ph.D. in physics and 30 years of education and we  
22 are talking about -- anyway.

1                    Could you ask the question again?

2        Sorry. My fault.

3            Q.        So, you said in order to make the  
4        book on the surface of the desk be at least  
5        partially surrounded by the desk, you would need  
6        to make the table look a bit more like a drawer.

7                    And I asked, is that because you  
8        need to surround more than just one side of the  
9        book for it to be partially surrounded?

10            A.        I don't think we are talking about  
11        surrounding the side of the book. I think we are  
12        talking about surrounding the book or partially  
13        surrounding the book.

14                    And one way to do that would be to  
15        construct some things that look like the sides of  
16        a drawer above the surface of the desk in order  
17        to partially surround a book on the table.

18                    That would be one possible way to  
19        arrive at a situation that a person of ordinary  
20        skill would agree is a book partially surrounded  
21        by this desk which had some kind of a lip on it.

22            Q.        Are there any other ways to make it

1 so the desk, at least partially, surrounds the  
2 book, other than building side walls around the  
3 book?

4 A. You know, these side walls don't  
5 need to be rectangular, orthogonal structures.

6 You could have other shaped features  
7 that have that same function of extending upwards  
8 from the surface, the flat surface that the book  
9 is on, in order to provide some partial  
10 surrounding of the book.

11 Q. So, I think it would be helpful.

12 So, your construction says  
13 "partially set in" or "partially surrounded by".  
14 And we have been discussing those words.

15 Can you just explain maybe the  
16 difference between partially set in or partially  
17 surrounded by?

18 A. So, I think the two examples that we  
19 have talked about are representing those two  
20 concepts in this definition.

21 So, partially set in would be the  
22 notion of the book having a tab and the table

1 having a slot.

2 So, that portion of the book is  
3 protruding into the table. That would be  
4 partially set in.

5 And partially surrounded would be  
6 the example of the book in a shallow drawer that  
7 we have discussed.

8 Q. Wouldn't something that is at least  
9 partially set in always be partially surrounded  
10 by the material?

11 A. You know, I think -- yeah, I mean, I  
12 think these two portions of this description are  
13 describing these two arrangements.

14 One where a portion of the book, the  
15 tab is inserted in a slot in the table. And then  
16 the other where the book is in the drawer and it  
17 is partially surrounded by the drawer.

18 You know, I imagine if we think of  
19 all possible pairs of structures of different  
20 geometric shapes, we might be able to blur the  
21 boundary between partially set in or partially  
22 surrounded by.



1                   And I think a person of ordinary  
2   skill could look at examples and make that  
3   judgment in a, you know, in a consistent way.

4                   So, maybe rather than trying to  
5   answer the abstract question, I would be happy to  
6   talk about some particular geometries and whether  
7   or not they would satisfy this understanding of  
8   embedded in.

9                   I mean, it is just hard for me to  
10   think of the whole universe of geometries and  
11   classify the entire thing all at once.

12                Q.    In your construction, does the  
13   phrase "at least partially set in" require that  
14   the pad contact the material, the other material?

15                A.    I think this example of the tab and  
16   slot, if -- again, we are kind of going into the  
17   minutia here.

18                   But, if the tab and the book,  
19   including the tab, were wrapped in Christmas  
20   paper in a way that the tab was still a  
21   protrusion but inside the wrapper.

22                   And that you could put that

1 protrusion into the slot in the table without  
2 somehow tearing or displacing the wrapper, I  
3 think one of ordinary skill would still consider  
4 that tab, and the book associated with it, to be  
5 partially set in the table, even if there is a  
6 layer of material in between.

7 Q. Okay. So, to be at least partially  
8 set in the material, the pad doesn't need to  
9 directly contact the material of the enclosure.  
10 Correct?

11 A. I think that is right. There can be  
12 intervening layers. I am thinking practically  
13 and not, I mean, the example of a levitated pad,  
14 you know, in a -- I guess we could discuss that.

15 But, I don't think that is what  
16 anyone might have been contemplating in the  
17 context of the '257 patent.

18 I think things -- there would be  
19 perhaps intervening layers but perhaps the  
20 structures would be attached through those layers  
21 in general. I wouldn't want a pad floating  
22 around inside of a product and where its position

1 depends on how I have handled it.

2 That seems like a pretty bad idea  
3 that one of ordinary skill would not want to  
4 consider.

5 Q. Can you give me an example of  
6 something that is at least partially set in but  
7 is not at least partially surrounded by the  
8 material?

9 A. You know again, I think these two  
10 examples of the tab of the book into the slot of  
11 the table is -- I think everyone would agree that  
12 makes sense as partially set in.

13 And the book in the drawer is partly  
14 surrounded.

15 If you are asking would someone go  
16 so far as to say a book in a drawer is somehow  
17 partially set in the drawer, or whether the tab  
18 is partly surrounded by the desk, I guess I would  
19 say I'm not sure I want to draw a boundary  
20 between those two parts of the construction here.

21 I think they are, together, are very  
22 clear. That one might look at a situation and

1 prefer to think of it as partly set in or partly  
2 surrounded by.

3 But, I think given that combination,  
4 one of ordinary skill should be able to make a  
5 consistent and reliable determination of whether  
6 an object is partially set in or partially  
7 surrounded.

8 But I agree with you that one can  
9 maybe get into the weeds of what might be the  
10 boundary between the two parts of this.

11 I just don't think it matters  
12 because we are describing them together.

13 Q. But you can't give me an example of  
14 something that is at least partially set in that  
15 is not at least partially surrounded by a  
16 material. Right?

17 MR. BISENIUS: Objection. Asked and  
18 answered.

19 THE WITNESS: You know, so, I may be  
20 cycling through our examples.

21 So, a book on the table, flat table,  
22 flat book, no fancy protrusions.

1                   We all agree that that book is not  
2                   partially set in and it is not partly  
3                   surrounded by the table and therefore it is  
4                   not embedded in the table.

5                   I think we agree that the book in a  
6                   drawer, whether the drawer is open or closed,  
7                   is partly surrounded by the drawer.

8                   And I think -- I don't know if we  
9                   agree or not, but I think the tab slot  
10                  example is an example where a person of  
11                  ordinary skill would say that the tab is  
12                  partially set in the table.

13                 And again, I, I don't think there is  
14                 a situation where -- well, I don't know. I  
15                 just think that given that -- to be embedded  
16                 in something means that one is either  
17                 partially set in or partially surrounded, to  
18                 me means I don't need to distinguish those  
19                 two, the construction.

20                 This definition allows either or to  
21                 satisfy.

22                 And I, you know -- I think once I am

1           satisfied that at least the example being  
2           discussed is consistent with partially set in  
3           or partially surrounded, I'm done. I don't  
4           need to parse the other part of it.

5                   I have met -- I have reached a point  
6           where a person of ordinary skill would  
7           conclude that the object is embedded in or is  
8           not embedded in.

9       BY MR. EVERTON:

10           Q.     You mentioned that a person of  
11           ordinary skill using your construction would be  
12           able to look at a device or a pad and determine  
13           whether it is embedded in.

14                   So, can you explain how a person of  
15           skill looking at a pad and a device would  
16           determine if the pad is at least partially set in  
17           the enclosure?

18           A.     I think one of ordinary skill would  
19           look to decide whether they believed it was  
20           partially set in or partially surrounded.

21                   That they would look at the  
22           situation and make a yes or no judgment based on

1     that understanding as to whether something is  
2     embedded in.

3                   And, but, you know, it is hard to  
4     tell you the process in the case of the abstract  
5     hypothetical.

6                   I think if we looked at some  
7     particular examples, I could tell you how a  
8     person of ordinary skill would arrive -- I think  
9     had arrived, at a determination as to whether the  
10    object was embedded in the other object.

11           Q.     But as we have discussed with the  
12    previous examples, under your construction of  
13    embedded in, the pad does not need to be in  
14    contact with the surface of the other material or  
15    the enclosure. Right?

16           A.     Yes. For a pad to be embedded in an  
17    enclosure, it needs to be partially set in or  
18    partially surrounded by the material.

19                   That does not require direct contact  
20    between object one and object two.

21                   I think your example of the book in  
22    the drawer somehow magically levitated a little

1 bit off of the surface but still within the sides  
2 of the drawer would meet this description of the  
3 book is still partially surrounded by the  
4 material.

5 I would say in contrast, there could  
6 be many examples of things where they are in  
7 contact and partially set in or partially  
8 surrounded by. And those would be regarded as  
9 embedded in.

10 Having contact doesn't exclude an  
11 object from being embedded in the other object.  
12 The book in the drawer is resting on the bottom  
13 of the drawer, you know, arguably in contact with  
14 the drawer and it is also embedded in the drawer.

15 Q. So, let's go to Paragraph 32 of your  
16 declaration. If you can read the third sentence  
17 there that starts, "This is demonstrated by."

18 A. Okay.

19 Q. It says, "This is demonstrated by  
20 several examples from the '257 patent  
21 specification in which the term 'embedded in' is  
22 used in contrast to other terms such as 'embedded



1 adjacent to' or 'embedded along'."

2 Do you see that?

3 A. I do.

4 Q. Is that your opinion?

5 A. Yes.

6 Q. So, now if we go and look at  
7 Exhibit 1001.

8 A. Uh-huh.

9 Q. This is the '257 patent, Column 9,  
10 Lines 18 through 24.

11 A. 18 through 24. I am just  
12 highlighting so I can find this again and again  
13 if we need to.

14 Q. Do you see the part that says, "Lead  
15 422 can be embedded along the outer surface of  
16 bezel 410 such that lead 422 is exposed to the  
17 user during use"?

18 A. "Lead 422 can be embedded along the  
19 outer surface of the bezel such that lead 422 is  
20 exposed to the user during use."

21 Q. Now, let's look at the corresponding  
22 figure.

1                   If we look -- if we pull up also  
2     Figure 4A from the '257 patent.

3                   Is the lead 422 in Figure 4A  
4     embedded the bezel?

5           A.     So, this section of the patent says  
6     that Figure 4A, which we are looking at, is a  
7     cross-sectional view of an illustrative  
8     electronic device having a bezel with an embedded  
9     heart sensor lead. And so on.

10                  So, the specification is telling me  
11     that this example, the 422, is in -- 422 is the  
12     lead and it describes Figure 4A as an example of  
13     having a bezel with an embedded heart sensor  
14     lead.

15                  So, I believe my report and the  
16     specification would agree this is an example of a  
17     lead that is embedded in a bezel.

18           Q.     And the bezel here in Figure 4A is  
19     part of the enclosure; is that correct?

20           A.     Could I have the question again?  
21     Sorry.

22           Q.     Yes. I just said, so the bezel,

1     that pad 422 is embedded in, is part of the  
2     enclosure. Correct?

3             A.     I agree that item 410, which is  
4     called bezel, is part of the enclosure of this  
5     embodiment.

6             Q.     How is the lead or pad 422 embedded  
7     in the bezel?

8             A.     I think a person of ordinary skill  
9     in the art would see that it is at least  
10    partially set in or partially surrounded by the  
11    material of the bezel.

12            Q.     So, to be clear, is it at least  
13    partially set in the bezel?

14            A.     I think so, in this case, yes.

15            Q.     And is it partially surrounded by  
16    the material of the bezel?

17            A.     Actually, in this case I think  
18    probably a person of ordinary skill would say yes  
19    as well. It is both in this case.

20            Q.     And you said in Paragraph 32 of your  
21    declaration, that this lead 422 is embedded  
22    adjacent to the bezel. Is that correct?

1           A.     I'm just trying to find -- you are  
2     asking me if I have said this example shows a  
3     lead embedded adjacent to.

4                     I guess I'm not finding where I said  
5     that.

6           Q.     So, can you tell me whether or not  
7     lead 422 is embedded adjacent to the bezel in  
8     Figure 4A?

9           A.     So, I just, reading from the bottom  
10    part of Page 19 and on to Page 20, "Based on this  
11    example in the '257 patent, a person of ordinary  
12    skill in the art would have recognized that for  
13    the lead to be 'embedded in' the housing requires  
14    more than the lead in a portion of the housing to  
15    be positioned such that the lead is merely in  
16    contact with a flat interior surface or otherwise  
17    simply adjacent to a portion of the housing.

18                     "Rather, this example from this  
19    specification of '257 would guide a person of  
20    ordinary skill in the art to understand that for  
21    a first object to be 'embedded in' another object  
22    at least a portion of the object, such as the

1 embedded pad or lead, must be at least partially  
2 set in or partially surrounded by a second  
3 material or component."

4 And that this example shown in  
5 Figure 4A of the lead 422 embedded in the bezel  
6 410, I think a person of ordinary skill in the  
7 art would agree that this is embedded in the  
8 bezel. The lead 422 is embedded the bezel 410.

9 Q. And my question was whether or not  
10 that lead 422 is embedded adjacent to the bezel.

11 A. I think a person of ordinary skill  
12 would say this lead is embedded in the bezel.

13 Q. And is that different from embedded  
14 adjacent to the bezel?

15 A. So, I think a person of ordinary  
16 skill would have recognized that for the lead to  
17 be embedded in the housing, requires more than  
18 the lead and a portion of the housing to be  
19 positioned such that the lead is in contact with  
20 a flat interior surface or otherwise simply  
21 adjacent to a portion of the housing.

22 So, embedded in and adjacent to are

1 distinct.

2 And that a person of ordinary skill,  
3 looking at Figure 4A, on the left of the bottom  
4 of the page, would see the lead 422 embedded in  
5 the bezel 410.

6 Q. How about embedded along? Is the  
7 lead 422 embedded along the bezel?

8 A. Sorry about that. May I have the  
9 question again?

10 Q. So, I asked, is the lead 422, in  
11 Figure 4A, embedded along the bezel?

12 A. So, the patent of Line 22 of  
13 Column 9, says, "Lead 422 can be embedded along  
14 the outer surface of the bezel."

15 So, that is the language used by the  
16 patent.

17 Q. And is it your opinion that that is  
18 correct, that the 422 is embedded along the  
19 bezel?

20 A. I think, if we are asking, does that  
21 arrangement represent an example of an electrode  
22 that is embedded in the bezel, that one of

1 ordinary skill would appreciate that.

2 But in this case, the lead would be  
3 partially set in or partially surrounded by the  
4 material. That is clearly shown in the  
5 illustration.

6 I think one of ordinary skill would  
7 agree that the lead 422 is partially set in or  
8 partially surrounded by the material.

9 Q. Let's go to Paragraph 34 of your  
10 declaration, Exhibit 2003.

11 A. Uh-huh.

12 Q. In the first two sentences of this  
13 Paragraph 34, you say, "In a first arrangement  
14 described with respect to Figure 4B, the '257  
15 patent describes that 'lead 472 of the heart  
16 sensor can be positioned against the back surface  
17 of the bezel 460.'"

18 Do you see that?

19 A. Yes.

20 Q. And then you go on to say, "As shown  
21 in the figure, the lead 472 and the back surface  
22 of the bezel 460 are both curved, with the lead

1 472 embedded in the bezel 460 because of the  
2 position of the lead 472 on the inside curved  
3 surface of the bezel 460."

4 Is that correct?

5 A. That is correct.

6 Q. So, now if we go to Figure 4B that  
7 you are discussing in that paragraph.

8 A. Uh-huh, yes.

9 Q. 4B of the '257 patent shows the lead  
10 472 that is embedded in the bezel. Correct?

11 A. That is correct. As described and  
12 as I explained -- as shown in the figure, the  
13 lead 472 and the back surface of 460 are both  
14 curved, with the lead 472 embedded in the bezel  
15 460 because of the position of the lead 472 on  
16 the inside curved surface of the bezel 460.

17 Q. How many sides of the lead 472 are  
18 contacting the bezel 460?

19 A. So, it is a curved object. I think  
20 sides to many people invoke flat surfaces.

21 So, I would call it a curved  
22 surface.



1                   If you want to ask how many surfaces  
2   of the lead are in contact with the bezel, I  
3   would say that the, the inside curved surface  
4   of -- sorry.

5                   The curved surface of the lead and  
6   the curved surface of the bezel are in contact  
7   with each other.

8                   I don't really want to chop that up  
9   into sides. It is a curved surface.

10                  Q.    Other than that curved surface that  
11   contacts the bezel, are there any other surfaces  
12   of the lead 472 that contact the bezel 460?

13                  A.    At least as shown in this drawing, I  
14   don't think so.

15                  Q.    Is the pad 472 set in the bezel?

16                  A.    I think a person of ordinary skill  
17   would agree that the lead 472 is at least  
18   partially set in or partially surrounded by the  
19   material of the bezel.

20                  Q.    But, I would just -- sorry, go  
21   ahead.

22                  A.    Therefore, it is embedded in the

1 bezel.

2 Q. So, I was asking specifically about  
3 the first part of your construction. The "at  
4 least partially set in" and whether or not the  
5 pad in Figure 4B, the pad is 472 is at least  
6 partially set in the bezel 460?

7 A. So, first, I think it would be easy  
8 to agree that the lead is partially surrounded by  
9 the bezel. It is similar to the examples we have  
10 considered earlier.

11 Whether it was partially set in, I  
12 think it is a -- I think probably. The bezel,  
13 maybe like my hand, is a curved surface. The  
14 lead is in that curved surface. It is partially,  
15 at least partially set in the bezel. And it is  
16 partially surrounded by, partially surrounded by  
17 the bezel.

18 So, I think the answer is yes.

19 Q. So, the lead 472 doesn't need to  
20 protrude into the material of the bezel 460 in  
21 order to be at least partially set in the bezel?

22 A. So, we are into the realm of

1 abstract geometry here whether a curved surface  
2 is different from a slot into an object and so  
3 on.

4 I think a person of ordinary skill  
5 looking here would say the lead is embedded in  
6 the bezel because it is partially set in or  
7 partially surrounded by the material of the  
8 bezel.

9 I don't know that an ordinary person  
10 of ordinary skill in the art is going to get into  
11 abstract geometry and attempt to distinguish and  
12 classify shapes based on things like  
13 discontinuities in surface and so on.

14 It is really not relevant here. I  
15 think a person of ordinary skill would see this  
16 lead and this bezel and say the lead is partially  
17 set in or partially surrounded by the material of  
18 the bezel.

19 Q. But earlier we were discussing how  
20 to make the book on the desk at least partially  
21 set in and that you could add tabs that would  
22 protrude into the material of the desk in order

1 to be partially set in.

2 A. That would be one way to do that.

3 Q. But, Tab 472 here in Figure 4B  
4 doesn't have any portions that protrude into the  
5 bezel material 460. Is that correct?

6 A. I think the only reason I am  
7 hesitating here.

8 So, the figure itself as it is drawn  
9 with these aspect ratios and these radii  
10 curvature which are the particulars of this case.

11 I think a person of ordinary skill  
12 would say that the lead is partially surrounded  
13 by the material of the bezel.

14 And, I think they probably wouldn't  
15 say that it is partially protruding into the  
16 bezel.

17 But, I could imagine a similar  
18 geometry where the radii curvature were tighter  
19 and instead of just 90 degrees of curvature, we  
20 were talking about, you know, 300 degrees of  
21 curvature and the electrode on the inside of that  
22 entire curvature, somewhere along the way, I

1 think a person of ordinary skill would start to  
2 think of that as partly set in.

3 But, in either case, it is partly  
4 surrounded and, therefore, embedded in. And I, I  
5 think the opinion of a person of ordinary skill  
6 is clear as to whether that structure has a lead  
7 embedded in the bezel.

8 Q. So, the lead 472 wouldn't be at  
9 least partially set in the bezel, but it would be  
10 at least partially surrounded by the material of  
11 the bezel. Is that correct?

12 A. I think, given the details,  
13 admitting that it is not an engineering drawing,  
14 that is probably how a person of ordinary skill  
15 would look at this. And then based on that, they  
16 would conclude that the lead 472 is embedded in  
17 the bezel 460.

18 Q. How is the lead 472 surrounded by  
19 the material of the bezel?

20 A. Partially surrounded, I think.  
21 Correct?

22 Q. And how is that, that it is

1 partially surrounded by the material of the  
2 bezel?

3 A. In the case of -- it is distinct  
4 from the case of the two flat parallel surfaces,  
5 adjacent to another or in contact with one  
6 another, the book on the table.

7 This is closer to the category of an  
8 object inside of a drawer. And then some portion  
9 of the bezel surrounds the lead.

10 Not that there is a flat part and a  
11 flat part, but there is a curvature. And, the  
12 curvature of the bezel at least partially  
13 surrounds the lead.

14 Q. So, if there is a curvature on a  
15 surface and the lead contacts that curved  
16 surface, then the lead is at least partially  
17 surrounded by the material of that surface; is  
18 that correct?

19 A. Yes. So, in my report a little  
20 second sentence in Paragraph 34 that is shown in  
21 the figure, "The lead 472 and the back surface of  
22 the bezel are both curved, with the lead 472

1 embedded in the bezel because a portion of the  
2 lead 472 is on the inside curved surface of the  
3 bezel 460."

4 Because -- I'm sorry. "Because the  
5 position of the lead 472 is on the inside curved  
6 surface of the bezel 460."

7 Q. What if the bezel 460 was not  
8 curved, it was a flat surface where it contacts  
9 the lead 472, would the lead be embedded in the  
10 bezel?

11 A. The bezel is flat, the entire bezel,  
12 like a tabletop?

13 Q. Yes.

14 A. I think an object on a flat surface  
15 like that is not embedded in that flat object.  
16 Like, if we had the desk drawer without the sides  
17 on it, it was just the bottom of a desk drawer,  
18 that book is not embedded in that part of the  
19 desk drawer.

20 If the drawer has the side walls,  
21 then it would be embedded.

22 MR. BISENIUS: Counsel, we have been

1           going for over an hour again, and I think  
2           they have had lunch delivered at the  
3           Minneapolis office.

4                        Would now be a good time to break  
5           for lunch?

6                       MR. EVERTON: Yes. Let me just  
7           finish my last question.

8                       MR. BISENIUS: Okay.

9   BY MR. EVERTON:

10           Q.     So, following that, let's say the  
11   bezel 460 is flat where it contacts the lead 472,  
12   but then curves at different portions of the  
13   bezel where it is not contacting the lead 472,  
14   would the lead be embedded in?

15           A.     I think that is similar to the  
16   example of the book in the shallow drawer of a  
17   desk.

18                       So, the book is a flat object and  
19   the drawer has at least that flat bottom.

20                       But, because there is sides to the  
21   drawer of, you know, perceptible height, it is  
22   embedded in the drawer because the drawer has



1     those sides.

2                     It doesn't matter that a portion of  
3     the drawer is flat, as long as the drawer --  
4     other locations extends up beyond and partially  
5     surrounding the book.

6             Q.     Does it matter which way the bezel  
7     curves, whether it curves toward the lead 472 or  
8     curves outward?

9             A.     I think it matters, just as it would  
10    with the example of the desk drawer.

11                    The book, if it is inside the drawer  
12    of the desk where we would normally place it, it  
13    is surrounded by a portion of the desk drawer.

14                    If alternately I have the desk  
15    drawer partially out and I take the book and  
16    place it underneath the bottom of the desk drawer  
17    so that the shape of the drawer is like this, and  
18    the book is below on the other side, I don't  
19    think anyone would say that that book is  
20    surrounded by the drawer.

21                    So, it matters.

22             Q.     So, in order for the tab, for the

1 lead to be at least partially surrounded by the  
2 bezel, there would need to be some curvature in  
3 the bezel that extends toward or around the lead  
4 itself, 472.

5 Is that what you are saying?

6 A. I don't think it has to be a  
7 curvature. You know, the desk drawer example,  
8 the sides of the drawer are abrupt. Changes in  
9 the surface, you know, 90-degree angles, I don't  
10 know that anyone would refer to that as  
11 curvature.

12 You need some departure from a flat  
13 surface to come up and partially surround the  
14 book in order for the surface to surround the  
15 book.

16 That can be a flat section with a  
17 curved area, like a lip or something, or it can  
18 be a flat section with a right angle upwards. It  
19 could be any angle, frankly.

20 As long as it partially surrounds  
21 the book then it would be, the book would be  
22 embedded.

1           Q.     What about a 5-degree curvature of  
2     the material that is contacting the pad 472,  
3     would that be enough curvature to at least  
4     partially surround the pad?

5           A.     I think if one of ordinary skill  
6     looking at this structure sees that the surface  
7     protrudes upwards in a way that partially  
8     surrounds the book, that person wouldn't care  
9     about the angles of those departures from a flat  
10    surface.

11                   It doesn't have to be 90 degrees. I  
12    think it just has to look like it comes upwards  
13    some amount.

14                   MR. EVERTON: Okay, I think we can  
15    go ahead and take a break.

16                   Did you say you wanted to do a lunch  
17    break, a longer break?

18                   MR. BISENIUS: Yes, would 45 minutes  
19    be okay?

20                   MR. EVERTON: Yes, 45 minutes.

21                   MR. BISENIUS: Let's reconvene at 20  
22    after the hour.

1 MR. EVERTON: 20 after, okay, sounds  
2 good.

3 MR. BISENIUS: Sure.

4 (Recess taken -- 12:38 p.m.)

5 (After recess -- 1:19 p.m.)

6 BY MR. EVERTON:

7 Q. So, Dr. Kenny, we left off looking  
8 at Figure 4B of the '257 patent.

9 A. Uh-huh.

10 Q. That is Exhibit 1001. We were  
11 talking about the bezel 460 and the lead 472.

12 A. Yes.

13 Q. Do you know how the pad 472 is  
14 secured to the bezel of the enclosure?

15 A. The patent only says that it is  
16 positioned against the back surface of bezel 460.

17 Q. Okay. So, we don't know exactly how  
18 this pad 472 is attached or positioned there.

19 Is that correct?

20 A. At least just looking at that one  
21 description of Figure 4B.

22 I'm looking quickly to see if there

1 is other places where the assembly is described  
2 in more detail. I'm not finding it.

3 Q. What if the pad 472 were glued to  
4 the bezel in Figure 4B, would the pad 472 still  
5 be embedded in the bezel?

6 A. Yes, I think consistent with some of  
7 the earlier examples of a material layer between  
8 the book and the desk drawer, such as may be a  
9 layer of Christmas wrapping, that the presence of  
10 that layer doesn't change the way a person of  
11 ordinary skill would understand whether an object  
12 was embedded in another object.

13 Q. What if the pads 472 in Figure 4B  
14 were deposited on the inside of the bezel 460,  
15 would it still be embedded in the bezel?

16 A. It is deposited on such as with the  
17 molding process?

18 Q. Let's start with that, yes.

19 A. I think as long as we were still  
20 talking about the same shapes.

21 And as I described in the example,  
22 the lead and the back surface of the bezel are

1 both curved, and it is that physical arrangement  
2 that a person of ordinary skill would interpret  
3 to determine whether one was embedded in the  
4 other.

5 I don't think it would be important  
6 to know how the parts were produced as long as  
7 this is the final arrangement.

8 Q. So, if the pad 472 was deposited on  
9 the inside of the bezel, would that make the pad  
10 472 at least partially set in to the bezel?

11 A. I think if you ended up with this  
12 arrangement of shapes, a person of ordinary skill  
13 would agree that this was partially surrounded by  
14 the material of the bezel, and therefore it is  
15 embedded in the bezel.

16 I don't think there would be any  
17 important distinction for how the part 472 is  
18 manufactured.

19 Q. What other ways could the pad 472 be  
20 deposited on the inside of the bezel there?

21 A. Well, in the most general sense, you  
22 know, depositing could be the same as placing.

1                   So, I could -- one might say I am  
2     depositing my Coke can on the table, in which  
3     case any way of making 472 would line up and be  
4     consistent.

5                 Q.     So, long as --

6                 A.     I could deposit this Coke can on the  
7     table without knowing anything about how it is  
8     made.

9                 Q.     Right. So long as the pad 472 is  
10    ultimately in that position relative to the bezel  
11    460, then it would be embedded in the bezel.

12                   Is that what you are saying?

13                 A.     As long as it would be partly set in  
14    or partially surrounded by the material of the  
15    bezel, yes.

16                 Q.     And how about a -- if the, if the  
17    pad 472 were deposited by chemical vapor  
18    deposition onto the surface of the bezel, would  
19    it still be embedded in the bezel?

20                 A.     Yes. I'm trying to think why it  
21    would matter how it was made. And I don't think  
22    it does.

1 Q. And are you familiar with that  
2 method of depositing this chemical vapor  
3 depositing, CVD?

4 A. I am.

5 Q. So, if that pad is chemical vapor  
6 deposited onto the bezel, would that increase the  
7 likelihood that it is at least partially set in  
8 and that there would be maybe a transfer of  
9 material from the pad into the bezel?

10 A. I don't think there would be any  
11 transfer in a normal physical vapor deposition  
12 process, if that is what you are referring to.

13 I think in fact normally that is  
14 something you are hoping doesn't happen. In the  
15 most cases where such processes are used, you are  
16 trying to confine the layers to their, you know,  
17 to their form and not have much interdiffusion.  
18 At least during the deposition process that is  
19 the objective.

20 Q. So, if the pad were chemical vapor  
21 deposited onto the bezel 460, then it would be at  
22 least partially surrounded by the bezel but not



1 set in to the bezel.

2 Is that correct?

3 A. I think it would be partially  
4 surrounded by the bezel, by the material of the  
5 bezel, yes.

6 Q. Uh-huh.

7 A. And therefore, it would be embedded  
8 in the bezel.

9 Q. But the pad being chemical vapor  
10 deposited onto the bezel wouldn't prevent the pad  
11 from being at least partially set in to the bezel  
12 460, correct?

13 A. If the bezel had some notches or  
14 grooves or slots carved in it and then one  
15 deposited material that filled up those slots and  
16 grooves, at the end of the process you have a  
17 structure that we would call a lead that includes  
18 those protrusions into the bezel, I think a  
19 person of ordinary skill would say those are  
20 partially set in.

21 And that otherwise the rest of the  
22 structure is still partially surrounded.

1           Q.     And in that chemical vapor deposited  
2     pad onto this bezel, with surfaces like you would  
3     expect here, wouldn't there always be some  
4     protrusions and grooves at, at least some scale  
5     that would make the pad 472 at least partially  
6     set into the bezel 460?

7           A.     Are you maybe describing atomic  
8     scale roughness?

9           Q.     Or even larger. I don't know. Is  
10    there -- there is those imperfections on such a  
11    surface?

12          A.     You know, if the part is gouged or  
13    scratched intentionally prior to the chemical  
14    vapor deposition, to form features like that.

15                 You know, as I said earlier, I think  
16    if, you know, if we are talking about the table  
17    and a book. I am overlooking atomic scale  
18    structures as being able to partially surround  
19    the book.

20                 I think one of ordinary skill is  
21    going to look at the object and they will see  
22    what they see. With the naked eye they are not

1 going to be able to see atomic scale roughness.

2 If there is micrometer to millimeter  
3 scale features that are formed, then one might  
4 begin to see an arrangement where the film that  
5 is grown is partially set in the underlying  
6 structure.

7 I think it is kind of a gray zone,  
8 frankly. It depends on size and shape. And it  
9 really doesn't matter anyway because the film is  
10 embedded in the bezel as long as it is partly  
11 surrounded by the material of the bezel which is  
12 true for this geometry regardless of those micro  
13 or nanoscale features.

14 Q. Looking at Figure 4B again, the '257  
15 patent.

16 Would the pad 472 be embedded in the  
17 bezel 460, regardless of the thickness of the pad  
18 472?

19 A. We are not concerned with whether  
20 the pad that we are describing here meets all of  
21 the other limitations of the first pad of the  
22 patent. Just talking about geometry is all here.

1           Q.     Yes. Is there any requirement to,  
2     for the thickness of the pad 472, for it to be  
3     embedded in the bezel 460 here?

4           A.     I think one of ordinary skill would  
5     want to focus on structures that are, you know --  
6     that are not so thin that one begins to question  
7     whether they are actually a structure.

8                     So, a monolayer of atoms, there  
9     would be no way to do anything to it without  
10    destroying its properties and therefore it would  
11    begin to be doubtful whether it really should be  
12    called a pad.

13                    But, I think any kind of, any  
14    macroscopic thickness that one could see with the  
15    naked eye would be satisfactory.

16           Q.     And the bezel 460, would it have to  
17    be a certain thickness in order for the pad 472  
18    to be embedded in the bezel 460?

19           A.     You do start to encounter some  
20    practical problems if that layer 460 is super  
21    thin.

22                    Just structurally in the Figure 4B

1 and the description in the patent, that structure  
2 460 is regarded as part of the overall housing of  
3 the system. And at least the electrode 472 is,  
4 as shown here is, you know, attached or placed in  
5 contact with it without any other obvious means  
6 of supporting it.

7 I think -- so, I have considered  
8 these geometries in the context of things like  
9 460 being thick enough to be structurally  
10 meaningful in the design of the product to, you  
11 know, provide some sort of role as an enclosure.

12 And therefore those structures need  
13 to have some kind of physical strength and  
14 ability to be freestanding elements that don't,  
15 you know, disintegrate the minute they are on  
16 their own.

17 Q. But specifically talking about the  
18 embedded in.

19 For the pad to be embedded in that  
20 portion of the bezel, that portion of the bezel  
21 could be any thickness, right, if you ignore the,  
22 any needed structural integrity of the bezel?

1           A.     So earlier we talked about a book  
2     and wrapping paper. The wrapping paper around  
3     the book, one could regard the book embedded in  
4     the wrapping paper.

5                     You know, in that case the wrapping  
6     paper is orders of magnitude thinner than the  
7     whole book. If it is a 1,000 page book, it is  
8     1,000 times thinner.

9           Q.     So, the material --

10          A.     I don't think there is any explicit  
11     limitation on the dimensions of that structure.

12                     But, if we are going to talk about  
13     that structure in the context of the claim, it  
14     describes a system that performs a function. I  
15     wouldn't want that structure to be arbitrarily  
16     thin.

17                     It begins to lose its capability of  
18     performing its obvious required features.

19                     If it is an atomic layer thick and  
20     you somehow temporarily create such a thing, it  
21     disintegrates on its own almost immediately. It  
22     is kind of a meaningless consideration.

1           Q.     But to satisfy the embedded in  
2     limitation, the material that the patent is  
3     embedded in doesn't have any -- doesn't need to  
4     have any specific thickness; is that correct?

5           A.     I think that is correct. I mean,  
6     perhaps it could be embedded in another object  
7     but the object that it is embedded in has to be  
8     an object. It can't just be an arbitrary  
9     temporary assortment of a bunch of atoms in free  
10    space. It has to be an object.

11                And so, I think there is a  
12    reasonable boundary between macroscopic things  
13    that are centimeters, millimeters and atomic  
14    things that might be a single atomic layer thick.

15                And I think, I don't think an  
16    atomically thin structure shaped like 460 with  
17    that curvature or as thin as an atomic layer  
18    would be regarded as an object that is capable of  
19    surrounding something.

20                It is just -- it is not an object.  
21    It is -- the minute you create it, it  
22    disintegrates on its own.

1           Q.     You mentioned previously that the  
2     pad 472 is embedded in the bezel 460 in Figure 4B  
3     because of the curvature of the bezel 460.

4                     Do you recall that?

5           A.     Correct. Paragraph 32.

6           Q.     How much curvature does the surface  
7     of the enclosure need to have in order for the  
8     pad to be embedded in that material?

9           A.     I think it has to be sufficient for  
10    a person of ordinary skill in the art to look at  
11    it and see that there is a departure from a flat  
12    surface that is sort of visible to the eye.

13                    I mean, I don't think -- again, a  
14    layer of atoms around the perimeter that forms  
15    perhaps a slight ledge isn't what we are talking  
16    about here.

17                    We are talking about persons of  
18    ordinary skill looking at structures that are,  
19    you know, associated with the sides of a handheld  
20    instrument, like we are talking about in the 5,  
21    in the 5 -- '257 patent.

22                    I don't want to -- I want to try to



1 draw some boundary down in the micrometer scale  
2 where it is or it isn't.

3 I think one of ordinary skill in the  
4 art knows when they see curvature that leads to a  
5 thing being partly surrounded by material. It  
6 could be millimeters. It could be more.  
7 Somewhere below what they can see and it seems to  
8 be functionally relevant would probably not  
9 matter.

10 Q. What about microns, could it be  
11 microns of curvature?

12 A. I think somewhere in the microns.  
13 You know, more than one, less than a million,  
14 maybe.

15 If I handed you a very smooth  
16 surface and there was a micron layer deposited on  
17 part of that, you would be able to see it. You  
18 probably would be able to see the edge of it and  
19 detect with your eye by tilting it around in the  
20 light.

21 You could detect that there was a  
22 discontinuity in the shape of the surface.

1                   Again, I think in this context we  
2   are not talking about a micron. You know, there  
3   is no scale in Figure 4B, but I understand we are  
4   talking about millimeters to centimeters here and  
5   not microns or fractions thereof.

6                   Q.     And in that context, what about  
7   1 degree of curvature, would that be sufficient  
8   to the embedded in?

9                   A.     It would depend on the radius as  
10  well as the radius of the curvature.

11                   Again, you are trying to get me into  
12  a space where I am going to define things based  
13  on some amount of distance. And I think,  
14  frankly, a person of ordinary skill is going to  
15  look at it and they are going to see the drawing.

16                   Would they see Figure 4B? Yeah.  
17  That is a lead embedded in a bezel.

18                   If you take them through a  
19  progression of things that are sort of flatter  
20  and flatter all of the way to flat, they will  
21  probably get uncomfortable somewhere along the  
22  way, and at the end say no, it is not embedded.

1                   You know, whether they make that  
2    decision at one degree or one micron, I just  
3    don't think it is relevant for this case.

4                   No one is proposing any examples of  
5    any kind where we are talking about one micron  
6    departures in the shape of a surface in the  
7    context of whether something is embedded in  
8    something.

9                   I think it is -- I think the meaning  
10   is straightforward on a scale of the examples we  
11   care about.

12                Q.     Right. But we need to know the  
13   scope of the claims. And so, can you explain to  
14   me where along that spectrum that you have  
15   described of a person of skill looking at  
16   different curvatures, where would it be that the  
17   person of skill would say okay, that is, that is  
18   no longer a sufficient curvature to be embedded  
19   in?

20                A.     I think if we are looking at  
21   drawings of scale bars, I mean, if we are really  
22   going to try to make an absolute determination

1 based on a dimension, we would want to look at  
2 examples that were not artist rendering. Like we  
3 have here, the really engineering drawings with  
4 dimensions and tolerances and all of that.

5 I think at least an engineer or  
6 someone of ordinary skill would understand that  
7 there are certain tolerances in the specification  
8 of the shapes of things.

9 And it would maybe specify the  
10 surface of the bezel of having a roughness of  
11 plus or minus a micron, or 10 microns or more,  
12 depending on how it is made.

13 And an understanding of the  
14 tolerances is basically we have an understanding  
15 of what matters and what doesn't.

16 If the change in the shape is, you  
17 know, larger than the tolerance on the shape, you  
18 know, so if the shape is specified to plus or  
19 minus a mil, or 100 microns, maybe, the  
20 departures from flat that are larger than the  
21 tolerance would be considered relevant.

22 And the departures that are kind of

1 within the tolerance, I think not intentional,  
2 probably wouldn't be considered relevant.

3 Q. Referring to --

4 A. The table here is not atomically  
5 flat.

6 If I place a book on this table, I  
7 don't know how precisely it was manufactured but  
8 it might have a little, a slight -- I don't know,  
9 a very slight bow to it, depending on how it was  
10 polished.

11 I think that would be something that  
12 would be regarded as within the tolerance of the  
13 manufacture of the table and therefore not  
14 relevant.

15 Q. So, if that table did have a slight  
16 curvature in it, would that be sufficient for --

17 A. It would depend on how that  
18 curvature depended on the specifications for the  
19 shape of the table.

20 I can tell you with absolute  
21 certainty this table is not atomically flat. And  
22 I could tell you a person of ordinary skill in

1 the art would call this a flat table. Those  
2 things are both true.

3 Q. Is any surface atomically flat?

4 A. You can make atomically flat  
5 surfaces on a fairly small scale in certain very  
6 careful manufacturing processes.

7 There are atomic force microscope  
8 images of regions of a single crystal silicone  
9 that are flat to the atomic level.

10 No one would try to make a table  
11 that flat because nobody would ever care. And  
12 certainly nobody would want to pay for that kind  
13 of precision on the scale of this table.

14 The table does its job. It is flat  
15 enough to the eye to do its job. It is probably  
16 regarded by anyone of skill in the art to be a  
17 flat table.

18 And if I put a book on it, everyone  
19 is going to agree that the book is not embedded  
20 in the table because you have two flat parallel  
21 objects, even admitting that there are some  
22 imperfections in the flatness of both objects at

1     some scale which is relevant to the discussion at  
2     hand.

3                     If you want to draw a boundary,  
4     probably I would ask what are the tolerances  
5     associated with these objects, and what is  
6     understood to be the important understanding of  
7     the actual shape of the surface.

8                     And things that are smaller than  
9     that don't matter. And things that are bigger  
10    than that which are intentional can matter and  
11    might, for example, lead to shapes that would be  
12    capable of partially surrounding an object.

13                    But, you know, at the atomic scale,  
14    there is no absolute thing. It is situational.  
15    And I think one of ordinary skill would  
16    understand that.

17                    Q.     So, any interior surface of an  
18    enclosure would not be absolutely flat. Correct?

19                    A.     There can be -- no, not absolutely  
20    flat, no.

21                    There can be interior surfaces of an  
22    enclosure that are flat to within the tolerances

1     that matter for that enclosure and that I think  
2     one of ordinary skill would look at it and go,  
3     yeah, that looks flat.

4                 They would look at this bezel and  
5     say yeah, that is curved.

6                 You know, the two objects in  
7     Figure 4B, there is 452, which I think is a  
8     portion of the display, and there is 460, which  
9     is this curved bezel.

10                If I asked people of ordinary skill  
11     which is flat and which is curved, I am  
12     100 percent sure they would all agree one of  
13     those is flat and one of those is curved.

14                Even though if I took that drawing  
15     under a very high quality microscope, I might see  
16     some raggedness in the boundary between the black  
17     and the white on the page.

18                And if I took the real object into  
19     the right kind of laboratory, I might see some  
20     roughness on some scale within the tolerances.

21                But, you know, I think one of  
22     ordinary skill in the art would look at this or



1 look at the physical objects this represents and,  
2 yeah, the bezel is curved. The lead is curved.  
3 The display 452 is flat.

4 Q. So, you agreed that the, that any  
5 inner surface in an enclosure like this will not  
6 be absolutely flat. Right?

7 A. At the atomic scale? I don't think  
8 anyone of ordinary skill in the art would imagine  
9 that any of the companies working in this space  
10 would ever bother to manufacture an atomically  
11 flat interior surface. It is just huge cost and  
12 no benefit.

13 Q. So then whether or not the pad on  
14 the interior of that surface is embedded in would  
15 depend on the tolerances for manufacturing that  
16 device; is that correct?

17 A. Yes. And on whether the shape of  
18 that structure was intentionally departing from  
19 what would be the tolerance for a flat surface.

20 Q. What do you mean by that,  
21 intentionally departing?

22 A. I think, you know, I think once

1 designing a structure with some portions that are  
2 intended to be flat and some portions that are  
3 intended to be curved, I think one of ordinary  
4 skill in the art can look at any of the  
5 illustrations and any of the examples of prior  
6 art or any of the illustrations of this patent  
7 and anyone could tell, oh, here is a part that is  
8 flat and here is a part that is not flat. This  
9 part is curved.

10                   They don't need to get out their  
11 microscope or go to a laboratory and look at  
12 these things and distinguish the flat from the  
13 curved parts.

14                   There is just -- they are not --  
15 they are in different groups. They are not close  
16 together.

17           Q.     So, if the interior surface of an  
18 enclosure was intended by the designers to be  
19 flat, but it ended up actually being curved at  
20 some level, at some dimension, then would the pad  
21 on the interior of that surface be embedded in?

22           A.     I want to look at some examples

1 here. It is hard to make an absolute statement.

2 I think it would depend on, you know, what you  
3 can see with the naked eye, what seems to be  
4 roughness that is accidental versus intentional  
5 shape changes.

6 You know, again, I don't think  
7 anyone is going to look at these claims and say  
8 that two objects like a book on a table are  
9 anything but not embedded in one another and that  
10 one doesn't have to get out precision instruments  
11 and look at those curvatures to make that  
12 determination.

13 I think there are things that are  
14 flat. Everyone knows what they are when they see  
15 them.

16 There are things that are curved and  
17 I think everyone else knows what they are when  
18 they see them.

19 And it is obvious in this case that  
20 if a curved object is placed on the interior  
21 curved surface of another object, that one of  
22 ordinary skill would describe that as being

1 partially surrounded by that object.

2 I don't think -- you know, I don't  
3 think anyone -- no person of ordinary skill is  
4 going to get out microscopes and look at where  
5 the atoms are to make these determinations.

6 Q. Okay. So a person of ordinary skill  
7 would just eyeball it and determine whether or  
8 not a surface is flat or curved and therefore the  
9 corresponding pad embedded in or not; is that  
10 right?

11 MR. BISENIUS: I don't think this is  
12 that hard a process. We could look at every  
13 single figure in every piece of prior art and  
14 every figure in this patent, look at any  
15 particular line in any of those figures.

16 I think a person of ordinary skill  
17 would agree -- groups of them would agree on  
18 which of those are flat and which are not.

19 It is not like there is a big  
20 ambiguous gray zone here. These structures  
21 in these products in these patents, there are  
22 some parts of them that are flat and plus or

1           minus a few atoms. Nobody cares.

2                   And there are some parts that are  
3           curved which, you know, within the  
4           tolerances, nobody cares.

5                   And I, again, we could look through  
6           all of these illustrations, but I think it is  
7           kind of obvious. You know, some things are  
8           flat. Some things are not. This table is  
9           flat to ordinary thinking.

10                   I don't need a microscope or an  
11           atomic force microscope or any fancy  
12           instruments. Yeah, it looks pretty flat.  
13           The floor in this room is pretty flat.

14                   So, I -- and again we are talking  
15           about books and tables. We are talking about  
16           leads and bezels. I don't think this is that  
17           hard.

18                   I know you are trying to find some  
19           precision boundary between the two. And  
20           there are no examples that live in that  
21           boundary.

22                   It is, things are flat or they are

1 curved. And, we can look through every  
2 single figure here and identify hundreds and  
3 hundreds of elements.

4 And I think it is absolutely trivial  
5 to say which ones are flat and which ones are  
6 curved.

7 There is no, there is no controversy  
8 here. I'm sorry. Just, maybe just for  
9 context, my Ph.D. thesis was measurements of  
10 the heat capacity of a monolayer of helium  
11 atoms.

12 So, I know a little something  
13 professionally about flatness of the atomic  
14 scale. And none of the things we are talking  
15 about here are in that context.

16 It is, you know, this table is flat.  
17 The side of my Coke can is curved. No one is  
18 going to disagree about that. That is what  
19 we are talking about.

20 BY MR. EVERTON:

21 Q. But, if the inner surface of the  
22 enclosure has a curvature but that curvature is

1 imperceptible to the naked eye, would the pad on  
2 the inside be embedded in?

3 MR. BISENIUS: Objection, asked and  
4 answered.

5 THE WITNESS: I mean,  
6 imperceptible -- again, I think, one of  
7 ordinary skill would pick the part up and  
8 look at it and say yeah, that is flat. Or  
9 no, that looks like it is curved.

10 Your eyes are pretty good at  
11 detecting relatively small amounts of  
12 curvature in, you know, just by looking at  
13 reflections and shapes of things.

14 I don't think anyone would have any  
15 doubt about whether an object was flat or  
16 not.

17 BY MR. EVERTON:

18 Q. So, previously we talked about the  
19 table example with the book.

20 So -- and you testified that if you  
21 have a flat tabletop and you place a book on top  
22 of it, that book is not embedded in the tabletop.

1 Correct?

2 A. Myself and Mr. Oslan have made  
3 exactly that statement, yes.

4 Q. Now, let's say that the table is an  
5 old table and so it has now bowed. And you can  
6 see that it has bowed a little bit. There is  
7 some curvature on the top of the table.

8 And you place a paperback book on  
9 top of that slightly bowed table in the middle of  
10 that table. Is that paperback book embedded in  
11 that table?

12 A. I think one of ordinary skill in the  
13 art walking in and looking at that, if they could  
14 see the table was curved, bowed, you know, just  
15 kind of on impression, not with instruments and  
16 much effort, if it was just obviously oh, yeah,  
17 the table has got some warp to it.

18 And then the book on the table, sort  
19 of in the middle of this bow, and it is on the  
20 inside of that curvature and not the outside of  
21 it.

22 I think given this definition that



1     they would see that the table is, it partly  
2     surrounds the book in that concept.

3                 They would see the curvature and  
4     they would see the book on the table and that  
5     would be consistent with the definition.

6                 Very much like the example of the  
7     desk drawer where we are talking about a big book  
8     and kind of a shallow drawer.

9             Q.     But if the table that we are talking  
10    about -- let's say a new scenario where you have  
11    again an old tabletop that is bowed but you can't  
12    really tell. It is imperceptible, at least to  
13    the naked eye.

14                And you can't tell at first glance  
15    whether the tabletop has or has not bowed. And  
16    you place a paperback book on top of that bowed  
17    tabletop, would that be -- would the book be  
18    embedded in the table?

19             A.     So, you know, I think if you walk in  
20    the room and there is a table in the room, your  
21    first impression is that it is a table and  
22    probably has a flat top, flat enough for its use.

1                   If just in the course of looking at  
2     it for a minute or two, while you are doing what  
3     you normally do in a room with a table, which by  
4     the way doesn't include giving out measuring  
5     sticks or rolling balls across the surface to see  
6     what the actual shape might be, but just, hey,  
7     here is a table. It has got stuff on it.

8                   If the first impression is that it  
9     is flat, then I would say the person of ordinary  
10    skill would not say that the book is embedded in  
11    the table.

12                  If the first impression is like wow,  
13    that table has been around a long time, look how  
14    warped it is. I can see with the naked eye. It  
15    took me a second to notice that.

16                  I think that is different. I think  
17    a person of ordinary skill would perceive the  
18    curvature of the table and would appreciate that  
19    the book is partly surrounded by some elements of  
20    that curved table.

21                  But, it is -- if they have to get  
22    out, you know, instruments to determine whether

1 something is flat or not, you know, in this weird  
2 hypothetical of a table in a room, whether it is  
3 flat or not, you know, again it is a little bit  
4 like with many definitions. You know, you sort  
5 of know it when you see it.

6 Look at the table, like this table,  
7 this looks pretty flat.

8 The table in my cabin up in northern  
9 Minnesota that has been there for generations of  
10 other owners, the top of that thing is like, oh,  
11 that thing is not flat.

12 And it is just, I think one of  
13 ordinary skill in the art is going to base their  
14 determination of whether something is embedded in  
15 something else based on what they see.

16 Q. So, looking at Figure 4B here, of  
17 the '257 patent.

18 If the inner surface of the  
19 enclosure has undulations and the pad 7 -- or 472  
20 conforms to those undulations, is the pad  
21 embedded in the enclosure?

22 A. So these could both be flat in that

1 case, for example. Like a table with a  
2 corrugated surface, like a washboard, for  
3 example.

4 Q. Let's say that the inner surface of  
5 the enclosure is otherwise flat, other than  
6 undulations along the surface.

7 And then when the pad is placed on  
8 that surface, it conforms to those undulations.  
9 Would that be embedded in?

10 A. If those undulations were bigger  
11 than atomic scale. Again, can you see them? Are  
12 they there for a reason? What is going on?

13 One of ordinary skill I think would  
14 look at it and say that would correspond to an  
15 example of the item -- the lead, I guess, as we  
16 are calling it here in this hypothetical, being  
17 partially set in that corrugated surface.

18 That would be distinct from two  
19 things that are flat to the naked eye.

20 Q. Okay. So, undulations on a flat  
21 surface could allow for the pad to be embedded in  
22 that surface so long as the undulations are large

1 enough.

2 Is that what you are getting at?

3 A. Yeah, we could go down the same kind  
4 of set of questions that we just talked about  
5 with respect to the curvature of the table.

6 I think, you know, one of ordinary  
7 skill would look at the structure and say looks  
8 pretty flat to me. And that if at the atomic  
9 scale there were undulations, I think one of  
10 ordinary skill would overlook those.

11 But, if the undulations were there  
12 perhaps for a purpose or they were just apparent  
13 to the naked eye that there is something there,  
14 then one might see that as an object being partly  
15 set in the other object by having a surface that  
16 corresponds to those undulations on its own side.

17 Maybe just as a counter example: If  
18 I put a book on a washboard, the book is probably  
19 rigid enough that it doesn't, it doesn't follow  
20 the shape of the undulations. And I think  
21 everyone would agree the book was not partially  
22 set in the washboard.

1                   But if the book was a different  
2   object that was more compliant and it sort of  
3   filled in all of that space, if it was made of  
4   putty, for example, then I think one would say  
5   that layer of material that sort of corresponded  
6   to the undulations of the shape of the washboard  
7   is partially set in the washboard.

8                Q.     And you agree with me that all inner  
9   surfaces like this for an enclosure of this type  
10  of device would have some undulations on the  
11  inner surface, right?

12             A.     I think a person of ordinary skill  
13  would distinguish undulations that were large  
14  enough to be sort of noticeably visible or  
15  perhaps even obviously useful, from undulations  
16  that were just, you know, within manufacturing  
17  tolerance of the part and not obviously important  
18  in any way.

19                   But that same thing we have been  
20  talking about with respect to a flat table. I  
21  will admit that the inside surface of any of  
22  these structures is not going to be atomically

1 smooth.

2 And I think a person of ordinary  
3 skill would make a judgment about whether those  
4 undulations are -- you know, are important for  
5 thinking about whether an object is embedded in  
6 another object.

7 I don't think we have very many  
8 examples of undulated surfaces amongst the  
9 various references that are on the table today.

10 So, I can't point at a bunch of  
11 things. But, I think it is the same test.

12 A person of ordinary skill would  
13 look at it and say yeah, those are undulations  
14 that part is embedded in the other part.

15 Or they would say, that is just  
16 unintentional roughness. It is irrelevant and  
17 not important, and therefore not sufficient to  
18 say that one part is embedded in the other.

19 Q. If we could turn now to Paragraph 36  
20 of your declaration.

21 A. Okay.

22 Q. About two-thirds of the way down

1     that Paragraph 36 you say, "To be clear, a  
2     lead/pad can be both embedded in and embedded  
3     behind a portion of an enclosure, and indeed  
4     Claim 1 requires this configuration."

5                     Do you see that?

6                     Sorry. Maybe you didn't hear my  
7     question. I'm just asking if you see that  
8     sentence.

9             A.     Sorry. I am admittedly unpacking  
10    all of that that is discussed in Paragraph 32 and  
11    looking at Paragraph 36 now.

12                    All right. So, I think I have  
13    caught up.

14            Q.     Okay. So, my question is, how can a  
15    lead be embedded in and embedded behind the  
16    enclosure at the same time?

17            A.     So, the claim requires that the lead  
18    is embedded in a first portion of the enclosure  
19    and that it is positioned underneath the exterior  
20    surface of the first portion.

21                    So, it requires two things. It must  
22    be embedded and it must be positioned underneath



1 the exterior surface.

2 So, I think this is the  
3 understanding that it must be embedded in, which  
4 is the required language.

5 And it must be behind or underneath  
6 the portion of the enclosure in order to meet all  
7 of the limitations of Claim 1 and not just the  
8 embedded in, entirely.

9 Q. Okay. So, the position beneath  
10 corresponds to what you say is embedded behind?

11 A. Well, it has to be embedded in and  
12 it has to be underneath.

13 So, yes. I say yes, I think.

14 Q. And can you give me an example of a  
15 lead that is embedded in and embedded behind the  
16 enclosure?

17 A. 4B is such a thing. So, it is -- we  
18 have spoken a lot. I think a person of ordinary  
19 skill would say that the lead 472 is embedded in  
20 the bezel 460.

21 And it is also positioned such that  
22 the -- it is positioned underneath the exterior

1 surface of the first portion. So, it has both  
2 features.

3 Q. How about Figure 3 of the '257  
4 patent.

5 If we look at Figure 3, is the lead  
6 326 embedded in and embedded behind the display  
7 screen?

8 A. So, I am just reading from Column 8  
9 of the spec from about Line 40 down.

10 It describes the lead 326 shown here  
11 on Figure 3 as embedded in or behind display 302.

12 Q. So, is that lead 326 embedded in and  
13 embedded behind the display screen?

14 A. I am just reading literally the  
15 words of the spec. It says embedded in or behind  
16 display 302.

17 So, it could be on the surface, you  
18 know, like, for example, electrode 422 on the  
19 bezel. Or it could be beneath like electrode 472  
20 under the bezel in the 4A, 4B examples.

21 Drawing -- this drawing is not -- a  
22 cross-section would be helpful.

1                   But, in the absence of that, I am  
2    relying a bit on the text which says embedded in  
3    or behind the display 302.

4                   Q.     So, if the lead 326 is behind the  
5    display screen, then would that lead be embedded  
6    in and embedded behind the display?

7                   A.     I don't know from this drawing  
8    whether we are looking at a curved surface or not  
9    for either these elements. This doesn't give any  
10   information about that. It could be curved. It  
11   might not be.

12                   I don't know anything about the  
13   inside surface.

14                   So, I can't say for sure it is  
15   embedded in -- that it is embedded behind, I  
16   should say.

17                   The patent says it is embedded in  
18   the display or behind the display.

19                   I think if it is -- we are talking  
20   about the case where it is embedded in, then we  
21   are talking about an arrangement similar to  
22   Figure 4A.

1                   And otherwise, it is embedded in or  
2    behind. I don't know whether the patent is  
3    saying that it is simply behind the display or  
4    whether it is embedded behind the display. I  
5    can't give you a yes or no.

6           Q.     Okay. So, it is unclear whether it  
7    is embedded behind.

8                   But if the -- if the lead 326 is  
9    behind the display as shown, but it is behind,  
10   then it is embedded in the display screen, at  
11   least.

12                   Is that correct?

13           A.     You are asking me if item 326 is  
14   underneath the display screen 302?

15           Q.     Yes. --

16           A.     Is that the case where it is  
17   embedded in the screen?

18           Q.     Yes.

19           A.     I would love a cross-section. But  
20   my impression here is that 302 is probably flat,  
21   and that the back surface, the underlying surface  
22   of 302 is probably flat.

1                   And then an object placed in contact  
2   with that is just like a book on a table.

3           Q.     Okay.  So, the lead 326 cannot be  
4   embedded in the flat display; is that correct?

5           A.     So, unless the back side of the  
6   display has a recess that the electrode 326 is  
7   placed into, I don't know if that is the case  
8   here.

9                   So, I can't say for sure.  If it is  
10   the case that the back surface is flat and the  
11   electrode 326 is flat, then it is like a book on  
12   the table.

13                   But, I don't know if that is an  
14   accurate description of all of the details here  
15   because this illustration isn't sufficient to  
16   say.

17                   I would love a cross-section like we  
18   have in figures 4A and 4B.  That would make it  
19   possible to say definitively.

20                   But, without that, I can't really  
21   give you a yes or no.

22           Q.     Would embedding the layers -- let's

1 say you embedded the lead 326 in the layers of  
2 the LED display, would that disrupt the  
3 functionality of the display?

4 A. Maybe. I don't think necessarily or  
5 absolutely.

6 It would depend on where those  
7 layers are and how much other structural material  
8 there might be underneath those layers to use for  
9 doing this.

10 Q. Going back to the desk example, the  
11 desk and the book.

12 So, if we say that the desk is flat,  
13 the top of the desk. And we are only considering  
14 the top of the desk right now, or the, the flat  
15 top part of the desk.

16 But it has a thickness. And there  
17 is an opening in the top of the desk.

18 If you put the book down into that  
19 opening in the top of the desk so that the book  
20 extends through the opening, from one side to the  
21 other of the opening, through the thickness of  
22 the desk, is the book embedded in the desk?

1           A.     I am probably looking at this table  
2     which has one of these openings for electrical  
3     connections. I may or may not be able to get  
4     into.

5                     So, there is like a pocket here in  
6     the table right in front of me.

7           Q.     Uh-huh.

8           A.     Probably not too visible on the  
9     camera because the flat opens the wrong way.

10                    But, there is a pocket with some  
11    electrical things that I can plug my computers  
12    and things into.

13                    If, you know, if I take this object  
14    and put it in here, it is embedded in the table.  
15    It is partly surrounded by the table.

16           Q.     So -- and, so my question is a  
17    little bit different.

18                    There is not a pocket. There is  
19    just an opening. So, the item -- the object is  
20    hovering within that opening in the table, so  
21    that the -- so that this object, the book, is  
22    surrounded around its perimeter by the thickness

1 of the table, of the desk, but it is not -- there  
2 is nothing -- no part of the desk is on, you  
3 know, is around either end of the top of the  
4 bottom of the book.

5 Do you understand what I am saying?

6 A. I think so.

7 Q. So, basically you have the pad and  
8 then you have a flat surface -- not just a flat  
9 surface but a flat desktop around the pad.

10 And there is just an opening that  
11 the pad fits into so that only the edges of the  
12 pad are surrounded by the material and not the  
13 top or the bottom.

14 Would that pad be embedded in?

15 MR. BISENIUS: Objection, relevance.

16 THE WITNESS: So, yeah, if there was  
17 a hole through the table and extending  
18 through to the bottom, and I, somehow the  
19 book part way into the hole, I think one of  
20 ordinary skill would say the book is partly  
21 set in or partly surrounded by the material  
22 of the table.



1 BY MR. EVERTON:

2 Q. So, it would be embedded in?

3 A. I think so.

4 Q. And maybe to make it easier, let's  
5 go to Figure 4A of the '257 patent.

6 A. Okay.

7 Q. And, you can see that under the lead  
8 422, there is another layer of material, right?  
9 The bezel.

10 Do you see that?

11 A. Yeah, I am interpreting that as a  
12 portion of item 410.

13 Q. Right. So there is a layer of bezel  
14 underneath the lead 422.

15 A. Uh-huh.

16 Q. What if in Figure 4A, there was no  
17 layer of bezel there under 422; there is only the  
18 portions of bezel at the sides of the lead 422.

19 Would that lead 422 still be  
20 embedded in the bezel?

21 A. I think one of ordinary skill would  
22 say that the lead 422 is at least partially set

1 in or partly surrounded by the material of the  
2 bezel, even if that lower slice of bezel were  
3 absent.

4 I think I answered the question you  
5 asked.

6 Q. So, it would be embedded in,  
7 correct?

8 A. It would still be embedded in. It  
9 would still be partially set in or partly  
10 surrounded by.

11 Q. So, for the pad to be embedded in,  
12 it doesn't need any enclosure material, above or  
13 below the pad, so long as there is enclosure  
14 material around the sides of the pad. Is that  
15 correct?

16 A. Yeah, I think you have just asked  
17 the same question I answered where you replaced  
18 bezel with enclosure material.

19 I don't think the label on that  
20 surrounding material affects the way a person of  
21 ordinary skill would look at this situation.

22 But am I misrepresenting your

1 question?

2 Q. So, I was putting it more in terms  
3 of the claim language, right. Or enclosure  
4 instead of bezel. Just what you said.

5 Let me just ask it again to make  
6 sure we are clear.

7 So, the pad does not need to have  
8 enclosure material above or below the pad to be  
9 embedded in the enclosure so long as there is  
10 enclosure material around the sides of the pad?

11 A. As long as one of ordinary skill in  
12 the art would agree that the pad is at least  
13 partially set in or partly surrounded by the  
14 material or enclosure in this case, then one  
15 would say it is embedded in.

16 Q. And if it is -- if the material is  
17 surrounding only the sides of the pad, that is  
18 sufficient for partially surrounded by the  
19 material, right?

20 A. Yeah, I think so.

21 Could you restate that just so I am  
22 sure?

1           Q.     I need to reset my Realtime here so  
2     I can --

3           A.     Sorry about that. I wandered off  
4     into geometry world for a moment there. I forgot  
5     your question.

6           Q.     Okay. So, if the enclosure material  
7     is surrounding only the sides of the pad, that is  
8     sufficient for partially surrounding the pad and  
9     satisfying the embedded in requirement. Right?

10          A.     So, looking at Figure 4A, if  
11     item 422 was positioned relative to the bezel as  
12     shown, except that that thin -- that thinner  
13     slice of the bezel underneath the pad was gone.

14                     So, we have this arrangement of the  
15     pad surrounding by the bezel on the sides but not  
16     beneath.

17                     I think one of ordinary skill would  
18     agree that that would represent the pad being at  
19     least partially set in or partially surrounded by  
20     the material of the bezel.

21          Q.     Okay. So, I think we are clear.  
22     So, what I am trying to get at is yes, the pad

1 can be partially surrounded on its sides, not  
2 just the top and the bottom, right?

3 A. The reason I'm hesitating is I'm  
4 trying to think of all of the different  
5 geometries that might fit this circumstance.

6 I know in the context of this  
7 Figure 4A geometry, I agree that the electrode  
8 422 is surrounded by the bezel, even if that  
9 underlying curved layer is removed.

10 I, honestly, I would want to think a  
11 little bit about the much more general  
12 hypothetical because we have explored quite a bit  
13 of the world of geograph -- or geometry and  
14 topology today.

15 And just sitting here today, I can't  
16 say that one couldn't come up with something that  
17 sounded like what you said, but might not seem  
18 like it is partially set in or partly surrounded.

19 But, I think if the question is in  
20 the context of Figure 4A, you know, I could give  
21 you the clean answer. The much more general  
22 question you asked, I just --

1 I want to think about that some  
2 more. It is way outside of anything I have  
3 considered prior to today.

4 And, ultimately, it could be pretty  
5 vague. I am just, I am just uncomfortable saying  
6 yes.

7 For this case, for your 4A, yes.

8 Q. Uh-huh. So, what if we altered  
9 Figure 4A so that the, that whole bezel part 410  
10 and the lead 422, those are all flat.

11 And then you take away the layer of  
12 the bezel beneath 422, but you still have the  
13 bezel 410 on both sides of the lead 422.

14 Would that lead 422 still be  
15 embedded in the bezel 410?

16 A. Yeah, I think that is similar to the  
17 example that you described with the hole in the  
18 table.

19 Q. Uh-huh.

20 A. That, you know, the object that is  
21 positioned in that hole and surrounded by, you  
22 know, the table in the XY plane around the hole.

1 I think one of ordinary skill would  
2 agree that that, that object could be partly set  
3 in or partly surrounded by the material of the  
4 table.

5 The only reason I'm hesitating is  
6 this is a simple curved object. We are talking  
7 about a flat example. The universe could include  
8 all kinds of weird crazy shapes, and I might end  
9 up in a place where I am not so sure.

10 But, in this case, the simple curved  
11 shape of Figure 4A of the example that you have  
12 given with a flat table with a hole in the middle  
13 and an object sort of positioned in that hole, I  
14 think one of ordinary skill in both cases would  
15 say that the object is at least partially set in  
16 or partly surrounded by the material of the bezel  
17 or the table.

18 Q. If we turn to Paragraph 37 of your  
19 declaration. You mention a phrase "embedded  
20 directly in" from the 2007 --

21 A. That is quoting from the patent,  
22 yes.

1           Q.     So, you say, "Leads 322 and 324 are  
2     embedded directly in bezel 310."

3                     What does that mean, embedded  
4     directly in?

5           A.     So, the last sentence or the last --  
6     you know, the last sentence of that paragraph,  
7     beginning at the bottom Column 8 in the patent,  
8     says, "This may allow leads 322 and 324 to be  
9     embedded directly in bezel 310 without the need  
10    for additional isolating material which can add  
11    cost and complexity to the manufacturing  
12    process."

13                    So here the notion of being directly  
14    embedded in is saying that this is done without  
15    any additional material between the lead and the  
16    bezel.

17           Q.     Okay. So, the difference between  
18    embedded in and embedded directly in, is that  
19    embedded directly in requires that there is  
20    nothing between the lead and what it is being  
21    embedded in.

22                    Is that what you are saying?



1           A.     So, embedded in -- embedded directly  
2     in means that there is, at least interpreting  
3     this one sentence in the spec, that the leads may  
4     be embedded directly in the bezel without the  
5     need for additional isolating material.

6                     So, one can be embedded in the  
7     bezel. And these leads are embedded in the  
8     bezel.

9                     But they also have this additional  
10    feature that they are embedded without any  
11    intervening material. And therefore one could  
12    call them embedded directly in.

13                    But, they are still embedded in.

14           Q.     Okay. So, maybe this goes back to  
15    our discussion earlier of how embedded in  
16    includes leads that do not contact the enclosure?

17           A.     Yeah, it includes both categories,  
18    leads that have additional isolated material and  
19    leads that do not.

20                    Embedded in includes both.

21           Q.     If an adhesive layer is applied on a  
22    surface, is that adhesive layer embedded in that

1 surface?

2 A. The adhesive layer is embedded; is  
3 that the question?

4 Q. Yes, is it embedded in the material  
5 of that surface it is applied to it?

6 A. So, if -- perhaps Figure 3, if the  
7 leads 322 and 324 are not present.

8 So, there is chambers in the bezel,  
9 some openings part way through or maybe all of  
10 the way through.

11 If I put adhesive in there, you are  
12 asking me is that adhesive embedded in the bezel?

13 Q. Sure.

14 A. I think one of ordinary skill would  
15 say that adhesive is at least partially set in or  
16 partially surrounded by the bezel.

17 So, it would be embedded in the  
18 bezel.

19 Q. So, how about a flat surface, if you  
20 just have a flat surface and you applied adhesive  
21 to it.

22 Would the adhesive be embedded in

1     that material of that flat surface?

2             A.     I think we are back to a case like  
3     the book on the table.   If you have two flat  
4     parallel surfaces of two objects and that they  
5     are not embedded in each other in that  
6     circumstance.

7             So, if I poured glue on the table,  
8     glue is not embedded in the table.

9             MR. BISENIUS:   Counsel, we have been  
10     going for over an hour again.   Would now be a  
11     good time for a break?

12            MR. EVERTON:   Yeah, I will finish up  
13     with a couple of questions, and then we can  
14     take a break.

15   BY MR. EVERTON:

16            Q.     So, what if the surface is a curved  
17     surface and you applied the adhesive to it.

18            Is the adhesive now embedded in the  
19     curved surface?

20            A.     I think if it is -- the surface has  
21     the kind of curvature that any one of ordinary  
22     skill in the art would agree is present, then

1     that adhesive on that surface would be embedded  
2     in that surface just as any other object on that  
3     surface.

4           Q.     If some of the adhesive is absorbed  
5     into the material of the flat surface, is that  
6     adhesive embedded in the material of that flat  
7     surface?

8           A.     I think that is going to be a  
9     complicated case because that diffusion or, you  
10    know, intrusion of the adhesive into the surface  
11    might be seen as redefining the interface between  
12    the adhesive and the table.

13                You have some region that is both, I  
14    guess.

15                So, you know, we are talking about  
16    an object and another object. And now you've  
17    made a -- some portion of material that is a  
18    brand new object on that surface, somehow in that  
19    layer.

20                You know, I think one of ordinary  
21    skill is going to look at it and, assuming the  
22    amount of that penetration is small-ish compared

1 to the curvatures that we are talking about, it  
2 would still be embedded within -- embedded in I  
3 should say.

4 If I poured the glue on the table  
5 and the glue melts entirely into the table and it  
6 is just no longer obvious what is what anymore,  
7 then I don't know that there is an obvious  
8 statement that can be made about whether  
9 something is surrounded by something or not.

10 I mean, if the glue dissolves into  
11 the table, there is no longer a piece of glue for  
12 me to talk about, whether or not it is embedded  
13 or not.

14 It is gone. It has been replaced by  
15 other stuff.

16 Q. But, if only portions of the two  
17 parts intermix, would that make it so that it is  
18 embedded in?

19 A. So, I have a table and I have glue.  
20 And you are asking me is the glue embedded in the  
21 table.

22 And there is this other layer of

1 stuff that has now appeared because of the  
2 chemistry of interaction between the glue and the  
3 table.

4 Q. Yes.

5 A. I think I would ignore that stuff  
6 and look at, you know, what is the structure of  
7 the glue, what is that object, and what is the  
8 table, and apply the same tests we have been  
9 applying all along.

10 Is the glue as it is positioned on  
11 that surface partially set in or partly  
12 surrounded by a material.

13 And I would distinguish the glue  
14 from this new stuff that is now some sort of  
15 table and glue hybrid.

16 And I will answer the question about  
17 whether the glue is embedded and it will depend  
18 on whether it is set in or whether it is  
19 partially surrounded.

20 Q. But, if it is not a new material  
21 that is formed between the two and really it is  
22 just part of the glue is absorbed into the

1 surface, would that still be embedded in because  
2 it is now set into the flat surface?

3 A. I just, I want to understand what  
4 you meant, what is that region where somehow glue  
5 is absorbed into the table.

6 Is that still table or is it glue or  
7 is it some other mushy intermediate.

8 I think I would want to know where  
9 to draw the boundaries between the two objects  
10 before I say what is the relationship of one to  
11 the other.

12 Q. And let's say it is glue that has  
13 been absorbed into the pores of the material of  
14 the table.

15 It hasn't changed form, it has just  
16 been absorbed.

17 A. I think like a lot of these kind of  
18 gray zone questions that we have been talking  
19 about, you know, to me it is going to depend a  
20 little bit on the size of those pores and, you  
21 know, are we talking about something meaningful  
22 or not.

1                   This table looks like it is some  
2   kind of polished granite or marble.

3                   It probably has some very tiny pores  
4   in it, it is hard to see, but it looks like there  
5   might be some.

6                   I think a person of ordinary skill,  
7   if you poured glue on this table and the glue,  
8   you know, invaded or somehow conformed to the  
9   micro texture of this table, I don't think they  
10   would see that as partly set in or partly  
11   surrounded by.

12                  If the pores or the features on the  
13   surface were, you know, sort of big enough to  
14   matter structurally or if they were intentional,  
15   like a washboard, for example, or something of  
16   some of the other examples that we talked about,  
17   I think probably a person of ordinary skill would  
18   say that that was partially set in or partially  
19   surrounding.

20                  And again, we are, sort of the  
21   nature of this question has to do with, you know,  
22   possibly microscopic structural details on the



1 surface which, you know, I don't think that is  
2 the kind of issue anyone is thinking about with  
3 respect to the figures of the patent.

4 We are talking about things that are  
5 macroscopic, not on the micron scale or things  
6 that I can't hardly even see with my eye.

7 I know it is long-winded. I think a  
8 person of ordinary skill would look at this table  
9 and say it is a flat table.

10 If I poured glue on it, the glue is  
11 another flat object. Neither is embedded in the  
12 other.

13 If this table was all scratched up  
14 and there were big gouges and other kinds of  
15 scars that were sort of noticeably macroscopic,  
16 and you poured glue on the table and it filled in  
17 those gouges and scratches, then I think they  
18 might say that is partly set in.

19 But, neither of these examples  
20 relate to any of the prior art or illustrations  
21 of the patent or as I understand what anyone of  
22 ordinary skill would think about the details in

1     these patents.

2                   MR. EVERTON:   Okay.   I think we can  
3           take a break.   Do you want to do five or  
4           10 minutes?

5                   THE WITNESS:   I would say five.

6                   MR. EVERTON:   Okay.

7                   MR. BISENIUS:   Sounds good.

8                   (Recess taken -- 2:51 p.m.)

9                   (After recess -- 2:58 p.m.)

10    BY MR. EVERTON:

11           Q.     So, I'm thinking of another example  
12    of something that is molded into something else.

13                   So, for example, if we take a  
14    toothbrush and, you know the toothbrushes how  
15    they have the grip on them?

16           A.     Uh-huh.

17           Q.     That material?

18           A.     Okay.

19           Q.     So, if the grip is molded into the  
20    toothbrush, is that grip embedded in that  
21    toothbrush?

22           A.     I would love to see a cross-section

1 just to get a sense of, you know, where is the  
2 boundary between the brush and the grip in this  
3 process.

4 If -- you know, at least the  
5 toothbrush I used this morning, I think, the  
6 brush handle has kind of a, you know, sort of a  
7 chamber removed. And the molding fills that up  
8 and extends outward with the rough surface.

9 I think the part of that is kind of  
10 within the chamber of the handle of the  
11 toothbrush. I think anyone would agree that it  
12 is consistent with this definition of embedded  
13 in.

14 Which is to say that it is -- hold  
15 on, I want to get it exactly right here.  
16 Partially set in or partially surrounded by the  
17 handle of the brush.

18 Q. Can you think of any --

19 A. But if it opened up this flat on the  
20 table and I filled that pocket up with glue or  
21 some other material, then I think the glue would  
22 be seen as partially set in or partly surrounded

1 by the table as is filling up this pocket in the  
2 table.

3 MR. EVERTON: Uh-huh. Let's look at  
4 Exhibit 2006.

5 (Whereupon, previously marked  
6 Exhibit 2006,  
7 first referral.)

8 MR. EVERTON: If we can pull that  
9 up. If we can go to the next page. Keep  
10 going. There we go.

11 We are going to go to the  
12 definition.

13 THE WITNESS: 2016?

14 BY MR. EVERTON:

15 Q. 2006. The definition of embedded or  
16 embed. There on the left-hand side.

17 So, do you have that in front of  
18 you, Exhibit 2006?

19 A. I do. Actually, it is easier for me  
20 to read on the screen than what I have in my  
21 hand.

22 Q. Yeah, it is nice when he zooms in

1     like that.

2                     Okay. Can you read Definition B for  
3     embed or embedded?

4             A.     "To make something an integral part  
5     of."

6             Q.     Is this definition B consistent with  
7     the ordinary meaning of embedded in?

8             A.     I think it is vague.

9             Q.     What do you mean by that?

10            A.     You know, an object can be an  
11     integral part of another object in many ways that  
12     are not related to geometries.

13                    You know, this integral part -- the  
14     CEO of our company is an integral part of our  
15     team.

16                    You know, integral language is, I  
17     think quite broad, almost to the point where it  
18     doesn't particularly help here.

19                    I mean, I understand when something  
20     is partially set in or partly surrounded by.

21                    But an integral part of, it gets,  
22     you know -- you are talking about, you know,

1 relationships and importance of things and not so  
2 much geometry that one of ordinary skill would  
3 understand how to interpret.

4 MR. EVERTON: Now if we look to  
5 Exhibit 2005, and if we go to the definition  
6 of embedded.

7 (Whereupon, previously marked  
8 Exhibit 2005,  
9 first referral.)

10 BY MR. EVERTON:

11 Q. So, it says for the definition of  
12 embedded, "That which has been incorporated into  
13 a surrounding mass or enclosure. For example, an  
14 embedded electronic component or device. Also  
15 that which has been included within a larger  
16 entity."

17 Is this consistent with the plain  
18 and ordinary meaning of embedded in?

19 A. I think being incorporated into a  
20 surrounding mass or enclosure is the same as or  
21 understandably the same as at least partially set  
22 in or partly surrounded by an enclosure.

1           Q.     Okay.  So, this definition you think  
2     is a reasonable definition for embedded in this  
3     context; is that right?

4           A.     I think the more elegant and compact  
5     definition is that at least partially set in or  
6     partly surrounded by a material.

7                     That particular structure has  
8     allowed you and I to have a lengthy conversation  
9     about many geometric situations, you know, where  
10    we have talked about curved and flat surfaces and  
11    all of the rest.

12                    I think this language incorporated  
13    into a surrounding mass or structure is a little  
14    less particular or precise.

15                    That leaves open some places where a  
16    person of ordinary skill might be uncomfortable  
17    making decisions.

18                    Like to me, a person of ordinary  
19    skill can think of every single example we have  
20    discussed over the last several hours and make a  
21    pretty reasonable judgment about whether it is at  
22    least partly set in or partly surrounded by.

1           Q.     But this definition of embedded here  
2     at least is not inconsistent with what you think  
3     is the plain and ordinary meaning of embedded in?

4           A.     I would say it is a little less  
5     clear.

6                     One being incorporated into a  
7     surrounding mass or enclosure, I think, the  
8     question I ask is, give me an example. Is it  
9     partially set in or partially surrounded by.

10                    And I think I will know, for  
11     example, how to interpret that in many contexts,  
12     such as the thing we have covered in the last  
13     four hours.

14                    Incorporated into a surrounding mass  
15     or enclosure.

16                    I mean, I think these mostly  
17     overlap. I like the one that we have been  
18     talking about. I think it makes it, you know,  
19     geometrically very clear. Partly set in, partly  
20     surrounding.

21                    I think those are precise words that  
22     are incorporated into overlap with, but I have to



1 think about lots of hypotheticals and geometries  
2 to get comfortable with the incorporated into  
3 phrase here.

4 MR. EVERTON: So, let's turn to  
5 Exhibit 1006.

6 (Whereupon, previously marked  
7 Exhibit 1006,  
8 first referral.)

9 BY MR. EVERTON:

10 Q. This is the Mills reference.

11 A. Okay.

12 Q. We can look at Figure 1 of Mills.

13 A. Figure 1 of Mills.

14 Q. Are you familiar with this Figure 1  
15 of Mills?

16 A. Yes.

17 Q. And is item 18 in Figure 1 of Mills  
18 described as a bezel and a gasket 18a for the  
19 bezel?

20 A. All right. Yes. So, let's see.  
21 Item 18, is described as a bezel with associating  
22 gasket 18a.

1                   And Column 3. That is right around  
2    item 12.

3           Q.     Okay. And then item 12 in Figure 1  
4    is described as a housing. Correct?

5           A.     That's correct.

6           Q.     As shown in Figure 1, do the bezel  
7    and its gasket fit into a portion of the housing  
8    12?

9           A.     All right. I am caught up here.  
10   Could you ask that question again?

11          Q.     Sure. And it may be helpful to look  
12   at Figure 2 as well of Mills.

13                  Do the bezel 18 and its gasket fit  
14   into a portion of the housing 12?

15          A.     I think that is how I would  
16   interpret Figure 2.

17          Q.     So, how does the bezel 18 connect to  
18   the housing 12?

19                  Can you tell from Figure 2?

20          A.     I know the gasket plays some role in  
21   forming that connection.

22                  This spec doesn't really describe

1 the role of the gasket and the bezel.

2 But I suspect that together they are  
3 attempting to form a waterproof seal around the  
4 bezel as it goes into the housing.

5 I would interpret that there might  
6 be a ledge that the gasket and the bezel drop  
7 onto and then are kind of flush to the outer  
8 surface of the housing when it is finished.

9 It looks like that is what is shown  
10 in Figure 1.

11 Q. So, does the bezel 18 drop down into  
12 that portion of the housing 12?

13 A. I believe so.

14 Q. So, when assembled, the bezel 18  
15 fits within that opening in the housing, right?

16 A. I believe so.

17 Q. And does the housing 12 surround the  
18 outer edge of the bezel 18 and its gasket?

19 A. I think that is a reasonable  
20 interpretation of these two illustrations and the  
21 description.

22 Q. At least around the sides of the

1 bezel it is surrounded by the housing 12. Right?

2 A. I am -- you know, it would be nice  
3 to have a cross-section of Figure 1.

4 But, I am, I am going to agree that  
5 I think a person of ordinary skill in the art  
6 looking at these three-dimensional renderings  
7 would say that the bezel and the gasket are  
8 fitting into that portion of the housing.

9 Q. And the bezel 18 is set in that  
10 portion of the housing. Correct?

11 A. I believe that is fair.

12 Q. And the bezel 18 is at least  
13 partially surrounded by the housing 12, correct?

14 A. When the assembly is complete, yes,  
15 as shown in Figure 1. I think so, yes.

16 Again that cross-section would make  
17 that clear. But, I think that is a reasonable  
18 interpretation of the illustrations.

19 Q. So, bezel 18 is embedded in the  
20 housing 12 when assembled, correct?

21 A. I think that is fair, yes.

22 Q. Now, housing 12, is that part of an

1 enclosure?

2 A. I think that is fair.

3 Q. And can you explain to me what parts  
4 of this embodiment in Figures 1 and 2 of Mills  
5 are a part of the enclosure?

6 A. So, we are talking about how the  
7 elements of Figures 1 and 2 map to the terms in  
8 the Claim 1 of the '257.

9 Q. Well, the term "enclosure".

10 A. Uh-huh.

11 Q. And what an enclosure is and what  
12 parts of Mills Figure 1 and Figure 2, what parts  
13 of that device are a part of the enclosure?

14 A. So, you are asking me to map the  
15 terms of Claim 1 on to this piece of prior art  
16 and render my opinions about which elements line  
17 up with which terms?

18 Q. I am just asking about the  
19 enclosure.

20 A. I think on my side, Mr. Oslan and  
21 also Masimo have provided a couple of documents  
22 that talk through possible mappings of the

1 elements of Figures 1 and 2, onto the terms of  
2 Claim 1.

3 I am happy to share my opinions  
4 about those choices. I don't think it is -- I  
5 don't think I have been asked to do the work of  
6 that mapping myself.

7 I have been asked to render opinions  
8 on the mappings proposed by Masimo and by  
9 Mr. Oslan. I didn't, I didn't build my own claim  
10 chart.

11 Q. So, you confirmed that the housing  
12 12 is part of the enclosure.

13 Is the bezel 18 part of the  
14 enclosure?

15 A. I think it could be. I think if we  
16 are talking about the terms of Claim 1, one might  
17 decide to map 18 to other elements.

18 Q. How about electrode 16 there at the  
19 bottom of the device, could that be part of the  
20 enclosure?

21 A. So, Claim 1 requires an enclosure  
22 and a heart sensor and then defines elements of

1 the heart sensor that might include items 16 or  
2 14 or 18.

3 I, again, I don't think -- maybe I  
4 am misunderstanding my job here today.

5 But, I don't think it is my job to  
6 present a mapping of this reference onto the  
7 claim. I think I am happy to discuss the  
8 mappings proposed by Masimo and Mr. Oslan.

9 But, I don't think it is my job to  
10 propose my own mapping front to back.

11 Q. Do you have an understanding of what  
12 enclosure means in the context of the '257  
13 patent?

14 A. I do.

15 Q. And could item 16, the electrode  
16 there, be part of an enclosure?

17 MR. BISENIUS: Objection, asked and  
18 answered.

19 THE WITNESS: I -- you know, if  
20 counsel wants to jump in.

21 I think my job is to answer  
22 questions about these terms in the context of

1           these assignments that have been made by  
2           Masimo and Mr. Oslan and not to propose my  
3           own set.

4                   I wasn't asked to do that work. I  
5           don't have -- there is no place in my report  
6           where I go through and say what I think the  
7           appropriate mapping from one to the other  
8           might be.

9                   Frankly, I don't think there is a  
10          complete mapping that makes sense which is  
11          part of why I don't think Mills anticipates  
12          the '257 patent.

13                  I am happy to look at proposals by  
14          Masimo and by Mr. Oslan and explain why I  
15          think the mappings don't add up.

16                  But, I don't want to be stubborn or  
17          obnoxious here. I just don't think that I  
18          have been asked to build my own mapping and  
19          defend it.

20                  Frankly, I don't think such a  
21          mapping exists. And the proposed mappings  
22          that I have seen don't do the job.



1 BY MR. EVERTON:

2 Q. Right. And I'm not asking you to do  
3 a mapping.

4 I'm simply asking if a part shown in  
5 Mills could be characterized as a part of the  
6 enclosure of this device in Mills?

7 A. I think the answer to that depends  
8 on whether that part is also going to be used to  
9 be part of a lead or a pad or other elements of  
10 the rest of the claim.

11 I don't think a part can be two  
12 things at the same time. So, the answer to  
13 whether item 14 can be part of the enclosure, I  
14 think depends on whether item 14 is also  
15 responsible for other roles.

16 And then I would say the answer to  
17 your question depends upon whether you are going  
18 to be assigning other roles to that same part or  
19 not.

20 And I don't know yet, because I  
21 wasn't asked to do that mapping.

22 Q. So, let's just say that item 16 is

1 not an electrode and has no other function.

2 Could it be part of the enclosure?

3 MR. BISENIUS: Objection, relevance.

4 THE WITNESS: Are we talking about  
5 an enclosure outside of the context of  
6 Claim 1, just the general meaning of a word,  
7 or are we talking about the enclosure that is  
8 a required element of Claim 1?

9 BY MR. EVERTON:

10 Q. We are talking about an enclosure in  
11 the context of the '257 patent. And we are not  
12 assigning any other function to item 16.

13 If there is no other assigned  
14 function or mapping, as you put it, could item 16  
15 be part of an enclosure of this device in Mills?

16 MR. BISENIUS: Objection, relevance.

17 THE WITNESS: So, the question is,  
18 Figure 2, can the structure number 16 on the  
19 bottom be considered to be part of the  
20 enclosure.

21 I think it could be.

22 BY MR. EVERTON:

1           Q.     Would it be the bottom part of the  
2 enclosure that encloses the device from the -- I  
3 guess it would be the bottom of the device.

4           A.     It would be the bottom as I already  
5 said of Figure 2. It is the top in Figure 3.

6                     But, I think we are saying the same  
7 thing.

8           Q.     How about electrode 14.

9                     If we were not assigned to any other  
10 mapping, as you put it, could electrode 14 be  
11 part of the housing -- or part of the enclosure?  
12 Excuse me.

13                    It has been a couple of minutes. Do  
14 you need me to --

15           A.     Sorry. I just, you know, in this  
16 context here. So, what was the question again?

17           Q.     If it were not assigned -- so, we  
18 are talking about electrode 14.

19                    So, if electrode 14 were not  
20 assigned to any other mapping, as you put it,  
21 could electrode 14 be part of the enclosure of  
22 this Mills device?

1 MR. BISENIUS: Same objection.  
2 Relevance.

3 THE WITNESS: So, if we could go to  
4 the portion of my report that talks about one  
5 of the mappings in which this electrode is  
6 the first portion of the enclosure and my  
7 explanation for why that doesn't make any  
8 sense.

9 BY MR. EVERTON:

10 Q. And if electrode 14 weren't being  
11 mapped to an electrode or any other claim  
12 limitation other than the enclosure, could it be  
13 part of the enclosure?

14 A. And we are not talking about the  
15 first portion but just some other part?

16 Q. Correct. Could electrode 14 be part  
17 of the enclosure?

18 A. So, in my report I explain that I  
19 don't think it can be the first portion of the  
20 enclosure as described in the claim. Or the  
21 second portion, I think for all the same reasons.

22 You are asking could it be some

1 other portion, I think.

2 Q. I'm just asking if electrode 14  
3 could be a portion -- considered a portion of the  
4 enclosure, along with the housing.

5 A. And my answer is, it couldn't be the  
6 first or second portions described in the claim.

7 It could be some other portion, I  
8 suppose, but it doesn't line up with the first or  
9 second portion recited in the claim.

10 Q. So, the electrode 14 could be  
11 considered a part of the enclosure because it  
12 encloses parts of the device; is that correct?

13 A. I think as long as we are in  
14 agreement that it doesn't play the role of any  
15 other elements of the claim, it is just part of  
16 the housing, I could agree with that.

17 I think if it begins to be assigned  
18 any other roles associated with any of the other  
19 claim terms such as lead, add, first portion of  
20 enclosure, et cetera. Then we have problems.

21 But, just as a generic ancillary  
22 portion of the enclosure, with no other role or

1 no relationship to the claim outside of the  
2 enclosure term, okay.

3 Q. Are you aware of anywhere in the  
4 '257 patent that requires the enclosure to have a  
5 certain thickness?

6 A. I don't believe there is any  
7 specified dimensions. I might be wrong but I  
8 don't remember them. I am not finding them.

9 Q. Can the enclosure have a different  
10 thickness for different parts of the enclosure?

11 A. I think it could. There is nothing  
12 in here that specifically describes the thickness  
13 of parts relative to each other.

14 But, I think one of ordinary skill  
15 would understand that there could be some thin  
16 and thick parts.

17 It cannot seem that explicit, but  
18 the illustrations don't show any particular  
19 examples of things being thick or thin.

20 But, these are not -- they are not  
21 engineering drawings so parts could be relatively  
22 thin or thick.

1                   The thickness, I think it would be  
2   impractical for the thickness to be more than  
3   millimeters in order to keep this whole product  
4   of a reasonable size.

5                   And I think for things to be  
6   structural, part of an enclosure, and withstand  
7   handling from the outside and other forms of  
8   forces and pressures applied.

9                   So, there would be a minimum  
10   thickness that I think would be, you know,  
11   a millimeter, 2 or 3.

12                Q.     But that thickness that you are  
13   talking about, that minimal thickness, that  
14   wouldn't necessarily have to apply to every part  
15   of the enclosure, would it?

16                A.     I think if these are parts that are,  
17   you know, sort of have outside surfaces that are  
18   subject to the kinds of things that happen on the  
19   outside of a product like this, you would want  
20   them to be thick enough to withstand the everyday  
21   use of the product, which includes touching,  
22   rubbing, putting it in your pocket, taking it

1 back out, dropping it, picking it up, et cetera.

2 You would want those structures to  
3 be thick enough relative to their length and  
4 width to be stiff and therefore not fracture or  
5 fragment during normal handling.

6 And even in the Mills patent, again  
7 there is no scale bar, no engineering dimensions.

8 But I think one of ordinary skill  
9 would understand that these structures that form  
10 the enclosure of the product have to be thick  
11 enough to survive the use of the product.

12 Q. Going back to the claims of the '257  
13 patent.

14 You are not aware of anywhere in the  
15 claims of the '257 patent that requires a certain  
16 thickness for the enclosure, correct?

17 A. Yeah, there is no explicit  
18 dimensions in the claim.

19 I think one of ordinary skill would  
20 understand that the structures that played these  
21 roles in the product can't be so thin that they  
22 would fall apart immediately.



1           Q.     What is the function of the  
2     enclosure in this type of a device?

3           A.     I suspect there is many functions.  
4     But, the one that I think you are probably  
5     interested in is to provide a container or a  
6     package for the interior that protect all of that  
7     from moisture, dust, other things that might  
8     otherwise get in and cause problems.

9           Q.     Right. So, it is basically to  
10    enclose the parts -- other parts of the device;  
11    is that right?

12          A.     Well, to enclose them and provide  
13    some protection, I think, in the context of these  
14    wearable products or the handheld product of the  
15    '257.

16          Q.     Is item 14 an electrode in this  
17    Mills embodiment?

18          A.     You are asking me if Mills calls it  
19    an electrode?

20          Q.     Yes.

21          A.     I believe Mills calls it an  
22    electrode, item 14.

1 Q. And what is the part of the device  
2 that is positioned around that electrode 14?

3 Is that the housing 12?

4 A. Yes. My understanding of Figures 1,  
5 2, and 3, is that 14 is placed flush with that  
6 surface of the housing.

7 Q. So, the electrode 14 is positioned  
8 within that opening in the housing 12, right?

9 A. I think so.

10 Q. And housing 12 surrounds those outer  
11 edges of electrode 14, right?

12 A. That is my understanding of these  
13 drawings.

14 Again, as with 18 that we discussed  
15 previously, I would love a cross-section.

16 But, I think that is a reasonable  
17 interpretation of Figures 1, 2, and 3.

18 Q. So, electrode 14 is at least  
19 partially surrounded by the housing 12, correct?

20 A. I think so, yes.

21 Q. And the electrode 14 is set in that  
22 portion of the housing 12 as well. Right?

1           A.     I -- yeah, I suppose. This is  
2     definitely surrounded by the housing 12.

3           Q.     So, electrode 14 is embedded in the  
4     housing 12 as shown in Figure 1 and Figure 2,  
5     correct?

6           A.     That is correct.

7           Q.     Looking at Figure 3A, if we can turn  
8     to the next figure of Mills Exhibit 1006.

9                     Is item 16 an electrode in Mills?

10          A.     Mills calls item 16 an electrode, I  
11     believe, yes.

12          Q.     How does that electrode 16 attach to  
13     the housing 12 as shown in this Figure 3A?

14          A.     I see the four screws that attach  
15     item 16 to the housing 12 on the bottom of  
16     Figure 3A.

17          Q.     Does the electrode 16 fit within a  
18     groove in the housing 12 when it is assembled?

19          A.     It is a little hard to say from the  
20     illustrations provided. It is really only this  
21     figure that gives any depiction of what that  
22     looks like.

1           Q.     But, there is a recess in the  
2     housing part 12 that receives the electrode 16,  
3     correct?

4           A.     All I'm going on is this drawing.  
5     There is no written description of the recess  
6     that we are talking about here. So, I understand  
7     it in the patent.

8           Q.     So, based on the drawing you can see  
9     that there is a recessed area there that the  
10    electrode 16 corresponds to and fits in when it  
11    is assembled to the housing 12. Correct?

12          A.     It is not absolutely clear. I think  
13    most persons of ordinary skill looking at this  
14    would probably arrive at that conclusion.

15                 But, there is no cross-section to  
16    verify and there is no written description of the  
17    thing you are calling a groove.

18                 It is -- this is an artist's  
19    rendering of the structure. If that is a  
20    reasonable interpretation, I can't say for sure.

21                 But, I can't say that that is the  
22    wrong interpretation. I just don't know for

1     sure. It is more likely than not, I would say.

2                   I don't know if that is a good  
3     enough answer for you or not. But, that is, I  
4     think that is the best I can do here.

5           Q.     So, when the electrode 16 is  
6     attached and this assembly is assembled, the  
7     electrode 16 becomes recessed down into a portion  
8     of the housing 12 inside that groove that we were  
9     discussing, correct?

10          A.     Maybe. Since I can't say yes or no.  
11     More likely than not would be my answer.

12          Q.     Okay. And so, if you are looking at  
13     this Figure 3A of Mills, you will see in the  
14     corners, right, that there are these screw holes.  
15     And then there is a shape around the screw holes  
16     in the housing that is recessed and that  
17     corresponds to the shape of the corner portions  
18     of the electrode 16, right?

19          A.     That is an interpretation of all of  
20     this. You know, it is, again, I think more  
21     likely than not, but I can't say with 100 percent  
22     certainty if -- and I don't think this was the

1 focus of the patent, either, the Mills patent.

2 Or they might have included either a  
3 written description or a cross-section to  
4 illustrate the relationship of all of these  
5 parts.

6 I think the intent is for item 16 to  
7 be attached to item 12 and to, you know, form an  
8 enclosure to protect the part.

9 So, is it recessed or not? I can't  
10 say for sure, but I would say it is more likely  
11 than not.

12 Q. Okay. So, let's go with that more  
13 likely than not interpretation of the groove and  
14 that it would be recessed.

15 And so, the -- when item 16, the  
16 electrode is attached to the housing and  
17 recessed. Housing 12, the outer portion of  
18 housing 12 would surround the electrode 16 when  
19 they are assembled, correct?

20 A. If -- yes. If 16 and the perimeter  
21 of it ends up inside of a groove, you know, so  
22 that there is a lip of the housing that extends

1 up over the edges of electrodes 16 at the end,  
2 then I think one of ordinary skill would say that  
3 item 16 is surrounded by, or at least partially  
4 surrounded by a portion of the housing.

5 Q. And the electrode 16 when assembled  
6 would be set in the material of the housing 12,  
7 correct?

8 A. Again, with all of the caveats and  
9 the more likely than nots of prior answers, I  
10 think so, yes.

11 Q. And so electrode 16 would be  
12 embedded in the housing 12, correct?

13 A. I again think that is more likely  
14 than not.

15 Q. Let's go to Paragraph 156 of your  
16 declaration.

17 A. Okay.

18 Q. In this Paragraph 156, you discuss a  
19 leaf spring 62 in Figure 2 of the Mills  
20 reference. Is that correct?

21 A. That's correct.

22 Q. What is the purpose of the leaf

1 spring 62 in Mills' device?

2 A. In Mills, in the bottom of Column 4,  
3 it says, "Upper electrode 14 is connected to the  
4 other signal input terminal of the ECG amplifier  
5 32 via a generally trapezoid-shape, split and  
6 thus slidably yielding, leaf spring connected to  
7 a circuit pad formed on the top side of PCB 50."

8 Q. And why would a person of skill use  
9 a leaf spring like this in this situation?

10 A. We address that in my report. Take  
11 me a moment to find that.

12 So, Paragraph 209 on Page 118,  
13 describing the Markel Mills combination which  
14 Mr. Mills asserts would utilize leaf springs for  
15 the internal connections in the structure of  
16 Markel.

17 And, my opinion, and I think one of  
18 ordinary skill in the art at the time of this  
19 patent would understand, the leaf springs can  
20 provide that kind of electrical contact but that  
21 flexible cables -- fairly thin-diameter flexible  
22 diameter cables with compact pins and receptacles



1       were the state of the art at that time.

2       Inexpensive, reliable, easily arranged within a  
3       structure like that. Don't require sort of a top  
4       to bottom linear arrangement of the components of  
5       the electrical path.

6                       So, a lot more flexibility in  
7       design.

8                       I think a person of ordinary skill  
9       in the art would consider a leaf spring and then  
10      use the flexible cable instead.

11              Q.     Are there any things that the leaf  
12      spring would provide that a flexible cable would  
13      not?

14              A.     There would be a different assembly  
15      process, different steps, perhaps in a different  
16      order.

17                      But, I think in general if you take  
18      any of these products apart at that time and you  
19      looked inside, you would find a lot of flexible  
20      cables and maybe rarely a leaf spring someplace.

21                      But, mostly only in places where you  
22      might be, for example, replacing a battery, like

1 a coin cell such as shown in part of Mills.

2 Just that the springs are useful for  
3 those kinds of removable reassembleable parts by  
4 the user.

5 But for anything that is intended to  
6 stay on electrical contact over the life history  
7 of the product, I think one of ordinary skill in  
8 the art would have used flexible cables.

9 Q. You mentioned that the leaf spring  
10 can provide like a springing contact -- yeah, I  
11 think you mentioned batteries or something.

12 So, what is it that the spring part  
13 of a leaf spring provides to a design?

14 A. It exerts a force along the axis of  
15 the contact.

16 So, for example, in Mills, the coin  
17 battery shown on the inside, you will find it is  
18 item B in Figure 3A. That is possibly something  
19 that the user would need to remove and replace  
20 periodically.

21 And so, this would allow the user to  
22 go in perhaps remove those four screws, pop out

1 the battery, drop in a new battery.

2 Put 16 back on top and attach the  
3 screws again and be reasonably confident that the  
4 electrical contacts that are necessary between  
5 the battery and all of the other structures would  
6 be in place without the user having to go in and  
7 think about electrical contacts.

8 Q. So, is it your opinion that leaf  
9 springs and spring contacts are generally  
10 interchangeable?

11 A. I am thinking about why they  
12 wouldn't be. So give me a moment.

13 I can imagine mechanically designing  
14 a leaf spring so that you get this slidably  
15 yielding electrical contact, described right at  
16 the top of Column 5 of Mills.

17 That having such a thing might  
18 occasionally help restore the electrical contact  
19 to its best electrical properties by sliding and  
20 therefore maybe breaking off or rupturing through  
21 any oxide layers that might have formed on those  
22 surfaces.

1 I am extrapolating from the phrase  
2 "slidably yielding" in Mills to think of why that  
3 might be useful.

4 Mills doesn't explain any further.  
5 But, nowadays it is easy to build electrical  
6 contacts in products like this that have some  
7 kind of noble metal or other metal on the surface  
8 that don't form oxides the way a copper contact  
9 might.

10 And therefore, the need for a  
11 slidable yielding leaf spring might have gone  
12 away.

13 Q. And could that slidable leaf spring  
14 be beneficial in wearable devices where there is  
15 a lot of movement of the device?

16 A. I think in general you don't really  
17 want the interior of a product like this moving  
18 around. That leads to wear and failure.

19 I think one of ordinary skill would  
20 much prefer a flexible cable with these kind of  
21 male/female pin connectors and have the surfaces  
22 of the electrodes made of materials that don't

1 form oxide barriers so that the contacts are well  
2 maintained through the life of the product.

3 The idea of moving parts on the  
4 inside of a structure to help overcome various  
5 kinds of failure strikes me as doing more harm  
6 than good in general.

7 Q. And you can't think of any other  
8 reasons why they would have included this  
9 moveable leaf spring in the Mills design?

10 A. At the time of the invention, I  
11 think one of ordinary skill would have considered  
12 flexible cables.

13 But, my sense of the drawings in  
14 Mills is that this provides a way to make an  
15 electrical connection from the electrode on the  
16 outside of the package to the circuit board on  
17 the inside that is different than doing it with a  
18 cable.

19 Q. Okay. So, it is your opinion that  
20 the moveable leaf spring would have been  
21 interchangeable with the cable connections that  
22 you have described?

1           A.     I mean, they perform some of the  
2     same functions. But, I think by the time of the  
3     '257 patent, which dates back to 2008, I think as  
4     far as its history of provisionals, et cetera --  
5     you know, that is 14 years after the Mills  
6     patent.

7                     Over that 14 years, the  
8     manufacturing of thin flexible cables became the  
9     way to go. I think by the time of the, of the  
10    '257 patent, anyone at that time might look at  
11    Mills and say okay, huh, that is interesting. I  
12    would rather use a flex cable.

13                    That is how I think a person of  
14    ordinary skill would respond at the time of the  
15    '257 patent.

16                    Back in 1994, 14 years earlier,  
17    maybe -- sorry. I am doing the math wrong.

18                    2008 to 1994, yeah, that is  
19    14 years, sorry. Pardon. My math skills are  
20    failing me.

21                    But yeah, I think in 1994, someone  
22    trying to build something like Mills without the

1 benefit of 14 years of improvements in flexible  
2 cables and timing connectors, at that time maybe  
3 a leaf spring was a reasonable choice.

4 Q. Looking at the leaf spring in Mills,  
5 in Figure 2 of Mills, Exhibit 1006, you will see  
6 that it has a top portion, a bottom portion, and  
7 then angled side portions.

8 Do you see that?

9 A. I do.

10 Q. And in the context of the '257  
11 patent, could the top portion of the leaf spring  
12 be considered a pad?

13 A. In the '257 patent, there are, there  
14 are pads as described in the claims, a first pad  
15 and a second pad, associated with the first lead  
16 and the second lead, with quite a number of other  
17 requirements associated with the surrounding  
18 structures.

19 And to answer your question, I need  
20 to know are other parts of this limitation in  
21 place or not.

22 Do we have the necessary portions of

1 the enclosure and the connectors and all of the  
2 rest all arranged as prescribed by Claim 1?

3 And I think you need to answer all  
4 of that in order to decide if that portion of the  
5 leaf spring can be a first pad.

6 Q. So, let's start with just looking at  
7 the context of the '257 patent, so not even the  
8 claims. Just the description of pads and devices  
9 in the '257 patent.

10 In that context of what a pad is,  
11 could the top portion of the leaf spring in the  
12 Mills 62 be a pad?

13 A. Not a first pad or a second pad.  
14 But, just an ordinary everyday pad?

15 Q. Correct. A pad of a lead.

16 A. You could call it a pad, I suppose.  
17 I think you've got -- making it a first pad or a  
18 second pad is problematic. But, you know, on its  
19 own in the universe of absent everything else,  
20 ignoring the claim, just as a part of that leaf  
21 spring something that one might call a pad, I  
22 suppose.



1           Q.     How about the bottom portion of that  
2     leaf spring 62 that is attached to the circuit  
3     board, would the bottom portion be considered a  
4     pad?

5           A.     So, the Mills patent says that the  
6     leaf spring is connected to a circuit pad formed  
7     on the top side of PCB 50.

8                     It doesn't say anything about what  
9     that bottom portion of the spring is or what it  
10    is called.

11                    And really the patent only really  
12    describes the entire thing as a leaf spring. It  
13    doesn't describe that top portion on its own in  
14    any way.

15           Q.     So, you don't know whether or not  
16    the bottom portion of the leaf spring 62 could be  
17    a pad?

18           A.     It looks like it is connected to a  
19    circuit pad.

20           Q.     How about in the context of Claim 1  
21    of the '257 patent?

22           A.     We are talking about a first pad?

1 Q. Yes. Could the bottom portion of  
2 the leaf spring 62 be a first or second pad?

3 MR. BISENIUS: Objection, relevance.

4 THE WITNESS: I mean, to my  
5 knowledge nowhere has Masimo or Mr. Oslan  
6 made that assertion.

7 There are assertions about the top  
8 portion of the leaf spring being a first pad  
9 in my report, has a lot to say about why that  
10 is a bad idea. It doesn't work in the first  
11 claim.

12 I would assume everything that  
13 doesn't work for the top portion would also  
14 be reasons why the bottom portion couldn't be  
15 a first pad or a second pad.

16 BY MR. EVERTON:

17 Q. So, it is your opinion that the  
18 bottom portion of that leaf spring 62 is not --  
19 cannot be a first or second pad as claimed in  
20 Claim 1?

21 A. I think that is right.

22 Q. Have you ever designed contacts for

1 a printed circuit board?

2 A. I have, working with my students.

3 We use printed circuit boards all the time in our  
4 research.

5 Q. Do you recall if any of those  
6 circuit boards ever used a leaf spring?

7 A. You are saying what? Sorry.

8 Q. If any of those used a leaf spring.

9 A. Certainly nothing recently would  
10 have used a leaf spring. You are asking me to go  
11 back 30 years.

12 You know, all of the way back then,  
13 there can be contacts on the edge of a printed  
14 circuit board where the connector that goes on to  
15 those contacts includes sort of spring-like  
16 features that make that contact onto the  
17 electrodes of the printed circuit board.

18 I am, I would suspect -- in fact I  
19 am pretty sure that some of the work of students  
20 in my group, such as Aaron Barsalack, would have  
21 used a printed circuit board with an edge  
22 connector that if you looked inside the connector

1     you would find things that looked like springs to  
2     make those contacts.

3             Q.     What was the purpose of using those  
4     spring type contacts?

5             A.     In that case it would be so that he  
6     could disconnect the connector from one printed  
7     circuit board and make a connection to another  
8     circuit board with the same design.

9                     We have done research for that  
10    student. He was building devices. Helping him  
11    on circuit boards and then testing them. And  
12    along the way destroying them one after another.

13                    So, it was convenient to have the  
14    detachable connection between the test item and  
15    the rest of the system.

16             Q.     Let's look at the Markel reference.  
17    So, Markel is Exhibit 1005.

18                    (Whereupon, previously marked  
19                             Exhibit 1005.)  
20                             first referral.)

21                    THE WITNESS: I will put this all  
22                             back together. Okay.

1 BY MR. EVERTON:

2 Q. And if the we look at Figure 5 in  
3 this Markel reference.

4 A. Okay.

5 Q. Does this Figure 5 of Markel show  
6 electrodes in parallel planes?

7 MR. BISENIUS: Objection, relevance.

8 THE WITNESS: Sorry. Say that  
9 again, parallel planes?

10 BY MR. EVERTON:

11 Q. Right. Parallel planes. In  
12 Paragraphs 213 and 214 of your declaration, you  
13 talk about parallel planes.

14 So I'm just wondering if Figure 5 of  
15 Markel shows electrodes in parallel planes.

16 A. Figure 5 shows electrode 520 and the  
17 description of that.

18 There is a first electrode 510, the  
19 position on the send button, and second electrode  
20 520 disposed on the back of the mobile  
21 communication device 500.

22 And the question is, are these on

1 separate planes?

2 Q. The question is, are those two  
3 electrodes in parallel planes?

4 A. I think the electrode on the back,  
5 520 is probably kind of large and flat.

6 So, I understand the plane one might  
7 ascribe to it.

8 The button on the front, the 510  
9 send button is not on the same plane as 520 on  
10 the back. But I, you know, the button doesn't  
11 necessarily define a plane by itself. You know,  
12 generally you need like three points in space to  
13 define a plane.

14 I think the electrode 520, I could  
15 take three of the four corners of that, and I  
16 understand the plane of that is kind of in the  
17 paper.

18 The button on the front, I don't  
19 really know anything about its shape. And I  
20 don't know where I would pick the three points  
21 that would define the plane of that button.

22 So, I can't say whether the plane of

1 510 and the plane of 520 are parallel or not.

2 I have a fairly good idea of the  
3 plane of 520. The plane of 510, it is hard to  
4 say.

5 Q. Are those electrodes, 510 and 520,  
6 on opposite sides of the device?

7 A. I think so. That is the sense of  
8 Figure 5.

9 Q. Now, if we turn to Paragraph 66 of  
10 your declaration.

11 A. Okay.

12 Q. And, let's see.

13 You say here in the second sentence,  
14 "Further, a POSITA would understand that this  
15 very thin film can only be formed or further  
16 exist as a layer associated with the electrode  
17 14a, which precludes any possibility that the  
18 electrode could be positioned relative to the  
19 film 14b, or any possibility that this film could  
20 be a portion of the housing."

21 Do you see that?

22 A. Yes.

1           Q.     Are 14a and 14b two different  
2 things?

3           A.     So, in Mills, starting the bottom of  
4 Column 3, referring to Figure 3B, "An electrode  
5 such as electrode 14 preferably comprises of  
6 expanse 14a formed of a base metal such as  
7 stainless steel, with 14a being electrically  
8 connectable with -- with such monitoring  
9 equipment, as illustrated in Figures 1 and 2.

10                "Plating an outer, skin-contactable  
11 region or surface 14a of expanse 14a is a  
12 composition 14b which is shown in greatly  
13 enlarged thickness in Figure 3B relative to that  
14 of expanse 14a including a first component or  
15 preferably biocompatible conductive (metallic)  
16 element such as titanium and a second element  
17 chosen from a group called, or including nitrogen  
18 and a carbon."

19                That would describe 14 as having two  
20 layers, 14a and 14b. 14a being the stainless  
21 steel structure and 14b being the very thin  
22 coating of titanium, probably titanium carbide or



1 titanium nitride.

2 Q. So, 14a and 14b are two layers of  
3 different materials, correct?

4 A. Yes.

5 Q. And Figure 3B there, of Mills, shows  
6 that, at least in that figure, 14a is on top of  
7 14b. Is that correct?

8 A. Sure. In that figure, 14a is on top  
9 of 14b.

10 Q. So, 14a's position is above the  
11 position of 14b in that Figure 3B. Correct?

12 A. So, that is the final position  
13 because one forms 14b by depositing it on 14a. I  
14 don't believe there is any option for positioning  
15 other than that 14b is a film grown on 14a.

16 It is never a separate item that is  
17 positioned. It has a position. But to be  
18 positioned to me involves a verb, where the two  
19 things could be moved around relative to one  
20 another.

21 And, 14b never exists until it is  
22 formed on 14a.

1                   And then there is -- they have a  
2   relative position. The claim requires that the  
3   items can be positioned. That is a verb to me,  
4   which means they exist separately and can be  
5   moved around.

6           Q.     So, is it your opinion that when 14b  
7   was formed on 14a, it was not positioned on 14a?

8           A.     I think it is formed on 14a. Once  
9   it is formed it has a position.

10                  But, if I am talking about the  
11   active positioning of an object relative to  
12   another object, the active involves relative  
13   movement of one with respect to the other.

14                  And in this part of my opinion, I am  
15   asserting that the film B never exists except in  
16   this final position.

17                  And that, therefore, it is not ever  
18   being positioned. It just is there.

19           Q.     And when it is initially formed and  
20   put there, that is not being positioned 14b  
21   relative to 14a?

22                  That is something different?

1           A.     I think when it is formed, then it  
2     has a position.

3                     But if I am talking about  
4     positioning one item relative to another, I  
5     think, the way I read this claim -- we haven't  
6     had a big construction argument here.

7                     But, I think where the first patent  
8     is positioned under the exterior surface of the  
9     first portion, I think that process of a thing  
10    being positioned is, there is a verb there.

11                    There is two things, one is  
12    positioned under the other.

13           Q.     So, is it your opinion that the  
14    claim --

15           A.     Not formed there. It exists, and  
16    then it is positioned. But, that is my, that is  
17    my read on this part of the claim.

18           Q.     So, is it your opinion that the  
19    claim, Claim 1, requires the act of positioning  
20    one part relative to another part?

21                    It has been a couple of minutes. Do  
22    you need me to re-ask --

1           A.     Yeah, I guess I'm kind of pondering  
2     the sort of intersection between what I  
3     understand from a person of ordinary skill  
4     position versus the grammar.

5                 So, I am firmly behind the idea that  
6     this thin film cannot exist as a freestanding  
7     structure.

8                 And, therefore, it can't be a  
9     portion of the housing on its own. As an  
10    unsupported freestanding film, it would fail  
11    immediately.

12                This notion that the two objects  
13    must be moveable relative to each other, I am  
14    reading the claim right now as I am sitting and  
15    reading it today with the benefit of your  
16    focusing my attention here.

17                I can't say for sure that the claim  
18    absolutely requires that these two elements are  
19    moveable relative to each other.

20                I do stand behind the other part of  
21    the statement that this very thin film can't be a  
22    portion of the housing on its own.

1                   It is insufficient to withstand any  
2   of the things that a housing would have to  
3   withstand as a freestanding element.

4           Q.     Right. And the claim itself,  
5   Claim 1, doesn't require any act of positioning  
6   one part relative to another part.

7                   Is that correct?

8           A.     I think it is hard to say for sure  
9   from this grammar whether the two items must be.  
10   And I will admit that five minutes ago that is  
11   not what I said. You forced me to think about it  
12   and I have thought about it. I have read the  
13   claim carefully.

14                   First pad is positioned underneath  
15   the exterior surface of the first portion.

16                   Yeah, I think it is possible to have  
17   an arrangement where you don't actually  
18   physically move them around relative to each  
19   other and meet the claim.

20           Q.     Right. They don't need to move  
21   relative to each other. The claim requires that  
22   they have a position, right, are positioned?

1           A.     Yes, this single element wherein the  
2     first pad is positioned underneath the exterior  
3     surface of the first portion. Reading it now, I  
4     don't think that absolutely requires that those  
5     be separate elements that can be moved around.

6                     I still think the rest of  
7     Paragraph 66 stands as far as explaining why the  
8     item 14b can't be a portion of the housing on its  
9     own.

10           Q.     Right. Because it -- that is your  
11     opinion that the layer itself, the plating is too  
12     thin to be part of the housing?

13           A.     It wouldn't be able to perform any  
14     of the functions that a person of ordinary skill  
15     would expect to be associated with the housing.

16                     You couldn't touch it. You couldn't  
17     blow on it. You couldn't do anything without  
18     destroying it.

19                     In fact, it will destroy itself  
20     pretty quickly, just due to the stress and other  
21     characteristics of such films, if you ever  
22     attempted to have them be freestanding.

1           Q.     Do you see anywhere in Claim 1 that  
2     requires that the enclosure be a freestanding  
3     structure, separate from moveable relative to the  
4     other parts of the device?

5           A.     I think for something to be a  
6     portion of the enclosure, it has to be able to  
7     provide that function on its own.

8                     This can't provide that. Other  
9     portions of the enclosure I think clearly, given  
10    the illustrations, are structures that have  
11    enough length and thickness and other properties  
12    that they exist as elements that can be  
13    assembled.

14                    But, this element can't survive  
15    without it being supported by the rest of  
16    item 14.

17           Q.     Right. And I am just asking  
18    generally, with respect to Claim 1.

19                    Is there anything in Claim 1 that  
20    requires that the enclosure be a freestanding and  
21    separate structure from the other parts of the  
22    device?

1           A.     I think it is just the word  
2     "enclosure" and what it means. I don't think  
3     anyone of skill in the art would look at this  
4     system and say you have 12, item 12 is an  
5     enclosure.

6                     And that oh, yeah, that super thin  
7     film that you can't even really see, that is the  
8     part of the enclosure that covers over the giant  
9     opening and the rest of it.

10                    I don't think anyone of ordinary  
11     skill would make that association with their  
12     understanding of the word "enclosure".

13           Q.     But there are other parts of the  
14     device that could be separate parts that are also  
15     part of the enclosure, other than the housing  
16     piece there could be, you know, a back side  
17     housing, other separate parts that could inform  
18     the enclosure. And they don't -- it doesn't need  
19     to be one unitary housing that forms the entire  
20     enclosure, correct?

21           A.     I agree.

22           Q.     And it doesn't -- the claims also



1 don't require -- Claim 1 doesn't require that the  
2 enclosure be removable from the electrodes, for  
3 example? Correct?

4 A. You know, I think earlier today we  
5 talked about an enclosure as being a structure,  
6 perhaps in pieces, that enclose and protect the  
7 interior elements from the use of the product,  
8 the external forces, once you are handling all of  
9 that.

10 This thin film doesn't provide any  
11 such function.

12 Q. Did the claim, either Claim 1 or any  
13 of the claims that you have analyzed, do they  
14 require that the enclosure have any particular  
15 structural rigidity?

16 A. No. There are no technical  
17 parameters like one might find on a data sheet.

18 I think one would understand that  
19 the enclosure is the structure that surrounds the  
20 elements and has to be functional in ordinary  
21 use.

22 This is a handheld device. I

1     guarantee you if I handed you a 3-micron thick  
2     film of titanium nitride and asked you to touch  
3     it, it would be gone. You know, it would  
4     disintegrate instantly upon contact.

5                     That doesn't sound like a useful  
6     feature for an enclosure in a handheld device.

7             Q.     Does every portion of the enclosure  
8     in the '257 claims need to provide this same type  
9     of structural integrity?

10            A.     I think an enclosure has to be a  
11     useful enclosure for this handheld electronic  
12     device.

13                     I think one of ordinary skill in the  
14     art would expect that.

15            Q.     Let's look at the '257 patent, at  
16     Figure 4A again. And we talked about this lead  
17     422.

18                     Is that lead 422 part of the  
19     enclosure of the device shown in 4A?

20            A.     So, lead 422 is embedded in the  
21     bezel structure 410.

22            Q.     Correct. And is 422 the lead part

1 of the enclosure of that device?

2 A. I think in this case, one of  
3 ordinary skill would consider the bezel 410 to be  
4 the enclosure.

5 And the lead is embedded in the  
6 bezel. But, it is the bezel that is the  
7 enclosure.

8 Q. So, the layer underneath lead 422,  
9 that -- would that be the enclosure for that  
10 part?

11 A. I think so, yes. Yes. It is part  
12 of item 410, the bezel, which makes up part of  
13 the enclosure.

14 Q. And would the lead 422 be part of  
15 the enclosure because it is embedded in the  
16 bezel?

17 A. You know, it is definitely embedded  
18 in the bezel.

19 Is it -- I don't know that it  
20 obviously is part of the enclosure. I think the  
21 bezel 410 is providing that function. 422, if  
22 you take it away and put it back, you have an

1 enclosure whether it is there or not.

2 So, I think the enclosure is  
3 associated with item 410.

4 Q. And 422 is not part of the enclosure  
5 in Figure 4A. Correct?

6 A. So, it is embedded in the  
7 enclosure -- or it is embedded in a portion of  
8 the enclosure.

9 You know, I don't know if there is a  
10 clean yes or no. I can think of examples of  
11 items embedded in other items where, you know, my  
12 book in the desk drawer. That doesn't mean the  
13 book is part of the desk, necessarily.

14 Some of the other examples -- I  
15 think you could go back and forth. But there  
16 isn't necessarily a case that an item embedded in  
17 another item is now part of that other item.

18 Q. How about Figure 4B. The electrode  
19 472 is embedded in the bezel 460, correct?

20 A. That is correct. We have said that  
21 a few times.

22 Q. Is the, is that electrode -- well,

1 is the bezel 460 part of the enclosure?

2 A. I think a person of ordinary skill  
3 would say that.

4 Q. And is the electrode 472 part of the  
5 enclosure?

6 A. I don't think that is a yes or no,  
7 necessarily.

8 Again, the example of the book in  
9 the desk drawer is -- you know, gives me the same  
10 understanding. The book in the desk drawer is  
11 embedded in that desk drawer, but it is not part  
12 of the desk drawer, not necessarily.

13 Q. We have been talking about these  
14 bezels in the different patents here.

15 What is a bezel -- to give us some  
16 background, what is a bezel in the context of the  
17 '257 patent?

18 A. So, Figure 3, and the description on  
19 the top part of Column 8, described 310 as the  
20 bezel. And, 312 and 314 are the sides of the  
21 bezel.

22 Q. So, is the bezel kind of that front

1 surface that extends around the screen?

2 Sorry, did you hear my question?

3 A. I'm just looking at the different  
4 ways that the '257 describes the bezel.

5 So, looking at Figure 3. My  
6 understanding of the language and the claim, that  
7 the bezel is item 310 including the sides 312 and  
8 314. And then you also have a display, which on  
9 Figure 5 is 502. Those are distinct items.

10 Q. And the bezel surrounds the display,  
11 correct?

12 A. Again, I don't have a cross-section  
13 but it looks -- it is the bezel. I'm looking at  
14 Figures 4. These are side view cross-sections  
15 that are helpful.

16 I just want to be sure that I've got  
17 the right reference numbers. Yes, so, Figure 4A  
18 shows the display 402 and bezel 410.

19 If I assume this represents the  
20 structure all of the way around, then I think the  
21 display is surrounded by the bezel.

22 Q. If we go to the Mills reference,

1 Exhibit 1006. And look at Figure 1.

2 A. One, okay.

3 Q. So, does this device shown in  
4 Figure 1 of Mills include a bezel, as the bezel  
5 is described in the '257 patent?

6 A. It is hard to say.

7 I think one of ordinary skill  
8 reading the '257 would see the enclosure, which  
9 is labeled 12. I don't really see any obvious  
10 pieces that I would label as a bezel. It is just  
11 a little hard to say.

12 Q. So, there is not a bezel that  
13 extends around item 18 as part of the housing?

14 A. I think the housing extends around  
15 18. Yeah, I don't see anything necessarily to  
16 point to it and say that is a bezel.

17 Q. So, it is your opinion that looking  
18 at Figure 1 of Mills, you don't see anything that  
19 could be a bezel as a bezel is described in the  
20 '257 patent?

21 A. I think there is elements in Mills  
22 that I would describe as a housing. Mills

1 describes it as an enclosure -- sorry, as a  
2 housing.

3 I think I might describe some of  
4 those elements as part of an enclosure. I don't  
5 see that anyone would look at Mills and say there  
6 is the bezel.

7 Just, bezels came into play later on  
8 as part of these structures for wearable devices.

9 Q. Let's turn to Exhibit 1005, the  
10 Markel reference. We could look at Figure 15.

11 THE WITNESS: Actually, may I ask a  
12 question first? Are we in the home stretch  
13 or should we take a break some time soon?

14 What do you think?

15 MR. EVERTON: We are definitely in  
16 the home stretch but we could take a break.  
17 I would take a break anyway before I finish.  
18 So, if you want to take a break now, that is  
19 fine.

20 THE WITNESS: Seems like it might be  
21 a good moment.

22 MR. EVERTON: Okay.



1 (Recess taken -- 4:59 p.m.)

2 (After recess -- 5:07 p.m.)

3 BY MR. EVERTON:

4 Q. So, now we are looking at Markel  
5 Exhibit 1005, Figure 15.

6 Does this Markel device have a bezel  
7 as shown in Figure 15?

8 A. Not a very good drawing in terms  
9 of -- really not intended to show any particular  
10 shapes.

11 You know, I can imagine a desktop  
12 display where the perimeter might be called a  
13 bezel.

14 I can imagine others where it might  
15 be called a frame. And this figure isn't  
16 interested in or really attempting to distinguish  
17 the details of that shape. It is just, you know,  
18 one, two, three rectangles and two ellipses and  
19 one circle, I think.

20 There wasn't any attempt to convey a  
21 particular design details of the shape around the  
22 display.

1 Q. But you would agree that the frame  
2 around the display could be considered a bezel?

3 A. Possibly.

4 Q. And if we look now at, back to  
5 Exhibit 1001, the '257 patent.

6 And look at Figure 3 of the '257.

7 A. Okay.

8 Q. We already talked about this figure  
9 and looked at it, and we identified the leads,  
10 right? So, you have 322, 324, 326 as the leads  
11 we have discussed. Correct?

12 A. Yes. The patent describes 324 and  
13 326 and as leads and that -- sorry, 322 and 324  
14 are leads.

15 And the 326 is a lead embedded in or  
16 behind display 302.

17 Q. Would you describe any of these  
18 leads as being adjacent leads?

19 A. I think I would want to know  
20 adjacent to what? Adjacent applies a  
21 relationship to a second object.

22 Q. Yes, so, to each other.

1                   Would you say that any of these  
2    leads are adjacent to each other?

3           A.     Yeah, I don't think anyone would  
4    describe 322 through 324, or 326 as adjacent to  
5    one another.

6           Q.     Then how close, how close would the  
7    electrodes have to be to one another to be  
8    adjacent to one another?

9           A.     Physics, in 30 years of teaching.  
10           You know, I think for two things to  
11   be adjacent to one another they need to be, you  
12   know, relatively close.

13           You know, I think relative to any  
14   other dimensions that are, you know, available  
15   for comparison.

16           So, 322 and 324 are much further  
17   apart than any of the dimensions of either of  
18   those elements. So, they are not adjacent.

19           And I think 322 and 324 are, you  
20   know, much closer, maybe. It is a relative term,  
21   kind of not strictly defined.

22           Q.     At the time of the '257 patents that

1 we are talking, around November of 2008, was it  
2 common for ECG measurements to be taken with more  
3 than two electrodes?

4 A. I think there are examples of more  
5 than two, but I think two are sufficient.

6 Q. Can you think of any examples when  
7 there were three electrodes used?

8 A. I think all of the way back to my  
9 trip to the hospital that we talked about  
10 earlier, I think there were three electrodes, two  
11 on the front and one on the side, maybe. This is  
12 20 years ago, which means I am probably overdue  
13 for a return trip.

14 But, it seems like there were more  
15 than two.

16 Q. Would there be any advantages to  
17 taking an ECG or cardiac signals with more than  
18 two electrodes?

19 A. I think there could be.

20 Q. What would those be?

21 A. If I had just two, then I can  
22 measure the potential only between those two

1 electrodes.

2 If I have a third electrode, now I  
3 have maybe three different pairs I can look at  
4 and perhaps one of those three pairs has a better  
5 signal to noise ratio or signal cleanliness than  
6 one of the other pairs of electrodes.

7 So, it gives me some more options  
8 for extracting a clean signal.

9 Q. So, being able to give a cleaner  
10 signal, cleaner signal the more electrodes you  
11 have, is that kind of how it works?

12 A. I think you have a possibility of a  
13 cleaner signal with more electrodes.

14 Q. And that general idea of having more  
15 electrodes for a cleaner signal, would have been  
16 known by a person of skill in the art around that  
17 time frame of November 2008?

18 A. I think so, just based on my  
19 experiences and what a person of ordinary skill  
20 would understand about these signals and how to  
21 measure them.

22 It is not to say you are required to

1 have a particular number of electrodes.

2 It is just that if you can have a  
3 third electrode, you have an opportunity to  
4 capture a cleaner signal.

5 Not a guarantee. But, a  
6 possibility.

7 Q. And why would a person of skill in  
8 the art in that time frame, November 2008, place  
9 insulating components between two ECG electrodes  
10 in a cardiac measurement device?

11 A. So, the measurement device is  
12 measuring the potential differences that arise on  
13 those two electrodes.

14 If those electrodes are electrically  
15 connected, then that potential difference is  
16 going to be suppressed or completely eliminated.  
17 It would be shorted out, I think would be the  
18 term of jargon. And you don't want that.

19 Q. And so, what types of insulating  
20 components were placed between the ECG electrodes  
21 in that time?

22 A. If we are talking about electrodes

1 on a handheld device like the example that we are  
2 looking at on the screen?

3 Q. Yes.

4 A. I think you would want insulating  
5 materials.

6 Q. What type of insulating materials  
7 were typically used between electrodes?

8 A. Plastics, perhaps rubber gaskets  
9 might be able for consideration.

10 Q. Other than protecting against  
11 shorting and problems, those types of problems,  
12 are there any other reasons for including an  
13 insulating component between the two electrodes?

14 A. There could be other reasons. I  
15 think the main reason is you want to measure the  
16 potential difference between those two electrodes  
17 so you would like them to be electrically  
18 isolated from one another.

19 MR. EVERTON: Uh-huh. Okay, that is  
20 all of the questions I have for now.

21 THE WITNESS: That is the best news  
22 all day.

1 MR. BISENIUS: Could we have five  
2 minutes? I want to talk with co-counsel and  
3 see if we have any more questions.

4 MR. EVERTON: Sounds good.  
5 Five-minute break?

6 MR. BISENIUS: Yes.

7 (Recess taken -- 5:20 p.m.)

8 (After recess -- 5:25 p.m.)

9 MR. BISENIUS: No questions for  
10 patent owner.

11 MR. EVERTON: All right.

12 (Whereupon, signature not having been waived,  
13 the deposition suspended at 5:25 p.m.)

14 \* \* \*

15

16

17

18

19

20

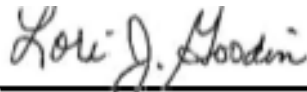
21

22



## 1 CERTIFICATE OF NOTARY

2 I, LORI J. GOODIN, RPR, CLR, CRR,  
3 CA CSR # 13959 the Notary for this deposition, do  
4 hereby certify that the witness whose testimony  
5 appears in the foregoing deposition was sworn by  
6 me; that I am neither counsel for, related to,  
7 nor employed by any of the parties to the action  
8 in which this deposition was taken; and, further, that I am  
9 not a relative or employee of any attorney or  
10 counsel employed by the parties hereto, or  
11 financially or otherwise interested in the  
12 outcome of this action.

13 

14 LORI J. GOODIN, RPR, CLR, CRR  
15 Notary Public in and for:

16 STATE OF FLORIDA, COUNTY OF SARASOTA

17 Notary Commission Number: GG987804

18 My Commission expires: May 12, 2028

19 STATE OF CALIFORNIA, CA CSR# 13959

20 My Commission expires: February 22, 2025

21 STATE OF MARYLAND, COUNTY OF ANNE ARUNDEL

22 My Commission expires: August 2, 2025

DISTRICT OF COLUMBIA, WASHINGTON DC

My Commission expires: June 1, 2026

STATE OF DELAWARE: COUNTY OF KENT

My Commission expires: September 9, 2025

STATE OF PENNSYLVANIA, COUNTY OF LEHIGH

My Commission expires: April 5, 2025

1 Thomas Kenny, Ph.D., c/o  
FISH & RICHARDSON P.C.

2 60 South Sixth Street, Suite 3200  
Minneapolis, Minnesota 55402

3  
Case: Masimo Corporation v. Apple Inc.

4 Date of deposition: March 26, 2024  
Deponent: Thomas Kenny, Ph.D.

5

6 Please be advised that the transcript in the above  
referenced matter is now complete and ready for signature.

7 The deponent may come to this office to sign the transcript,  
8 a copy may be purchased for the witness to review and sign,  
9 or the deponent and/or counsel may waive the option of  
10 signing. Please advise us of the option selected.

11 Please forward the errata sheet and the original signed  
12 signature page to counsel noticing the deposition, noting the  
13 applicable time period allowed for such by the governing  
14 Rules of Procedure. If you have any questions, please do  
15 not hesitate to call our office at (202)-232-0646.

16

17

18 Sincerely,

19 Digital Evidence Group

20 Copyright 2024 Digital Evidence Group

21 Copying is forbidden, including electronically, absent  
22 express written consent.

1 Digital Evidence Group, L.L.C.  
1730 M Street, NW, Suite 812  
2 Washington, D.C. 20036  
(202) 232-0646

3  
4 SIGNATURE PAGE  
Case: Masimo Corporation v. Apple Inc.  
5 Witness Name: Thomas Kenny, Ph.D.  
Deposition Date: March 26, 2024

6  
7 I do hereby acknowledge that I have read  
and examined the foregoing pages  
of the transcript of my deposition and that:

8  
9 (Check appropriate box):  
( ) The same is a true, correct and  
10 complete transcription of the answers given by  
me to the questions therein recorded.  
11 ( ) Except for the changes noted in the  
attached Errata Sheet, the same is a true,  
12 correct and complete transcription of the  
13 answers given by me to the questions therein  
14 recorded.

15

16

17

DATE

WITNESS SIGNATURE

18

19

20

21

22

DATE

NOTARY

1 Digital Evidence Group, LLC  
2 1730 M Street, NW, Suite 812  
3 Washington, D.C. 20036  
4 (202) 232-0646

5

6 ERRATA SHEET

7

8 Case: Masimo Corporation v. Apple Inc.

9 Witness Name: Thomas Kenny, Ph.D.

10 Deposition Date: March 26, 2024

11 Page No. Line No. Change

12

13

14

15

16

17

18

19

20

21

22 Signature

Date

<b>A</b>	130:6	75:11 76:8 77:1	<b>angles</b> 98:9 99:9	<b>applying</b> 44:7
<b>a.m</b> 1:16 5:1 61:8	<b>add</b> 25:9 91:21	77:5,9 82:16	<b>ANNE</b> 233:13	158:9
61:9	152:10 176:15	83:3 85:7 87:7	<b>annotations</b> 19:2	<b>appointed</b> 26:8
<b>Aaron</b> 203:20	181:19	89:17 90:8	<b>answer</b> 12:9,21	<b>appreciate</b> 87:1
<b>ability</b> 109:14	<b>added</b> 9:22 25:13	102:13 118:19	16:21 18:7,13	130:18
<b>able</b> 55:6 59:1	<b>addition</b> 69:8	120:12 124:17	22:8 32:22 73:5	<b>appropriate</b>
72:20 76:4	<b>additional</b>	124:17 133:21	90:18 149:21	176:7 235:9
78:12 106:18	152:10,15	134:8 147:12	158:16 175:21	<b>Approximately</b>
107:1 113:17	153:5,9,18	148:18 149:7	177:7,12,16	6:19
113:18 143:3	<b>additions</b> 49:11	151:2 155:22	181:5 189:3,11	<b>April</b> 233:21
214:13 215:6	<b>address</b> 192:10	163:11 172:4	199:19 200:3	<b>arbitrarily</b>
229:9 231:9	<b>adds</b> 48:18	181:16 216:21	<b>answered</b> 76:18	110:15
<b>abrupt</b> 98:8	<b>adhesive</b> 29:16	226:1	127:4 146:4,17	<b>arbitrary</b> 111:8
<b>absence</b> 139:1	30:8 153:21,22	<b>agreed</b> 121:4	175:18	<b>area</b> 5:19 98:17
<b>absent</b> 146:3	154:2,11,12,15	<b>agreement</b>	<b>answers</b> 20:3,4	188:9
200:19 234:21	154:20,22	181:14	191:9 235:10	<b>arguably</b> 80:13
<b>absolute</b> 115:22	155:17,18	<b>ahead</b> 89:21	235:13	<b>argument</b> 211:6
117:20 119:14	156:1,4,6,10,12	99:15	<b>anticipates</b>	<b>arranged</b> 193:2
123:1	<b>adjacent</b> 48:8,22	<b>alleging</b> 11:9	176:11	200:2
<b>absolutely</b>	49:18 81:1	<b>alligator</b> 30:10	<b>anymore</b> 157:6	<b>arrangement</b>
119:18,19	83:22 84:3,7,17	<b>allow</b> 132:21	<b>anyway</b> 69:22	15:18 86:21
121:6 126:4	85:10,14,21,22	152:8 194:21	107:9 224:17	87:13 102:1,7
142:5 188:12	94:5 226:18,20	<b>allowed</b> 167:8	<b>apart</b> 184:22	102:12 107:4
212:18 214:4	226:20 227:2,4	234:13	193:18 227:17	139:21 148:14
<b>absorbed</b> 156:4	227:8,11,18	<b>allows</b> 77:20	<b>apparent</b> 133:12	193:4 213:17
158:22 159:5	<b>adjustments</b> 15:2	<b>along'</b> 48:9 81:1	<b>APPEAL</b> 1:1	<b>arrangements</b>
159:13,16	<b>admit</b> 134:21	<b>altered</b> 150:8	<b>appear</b> 22:5	39:20,21 72:13
<b>abstract</b> 73:5	213:10	<b>alternate</b> 47:4,8	<b>APPEARANC...</b>	<b>arrive</b> 70:19 79:8
79:4 91:1,11	<b>admittedly</b> 136:9	<b>alternately</b> 97:14	2:1	188:14
<b>accelerometers</b>	<b>admitting</b> 93:13	<b>ambiguous</b>	<b>appeared</b> 158:1	<b>arrived</b> 79:9
15:7,12	118:21	124:20	<b>appears</b> 233:3	<b>art</b> 24:2,5 26:4
<b>accidental</b> 123:4	<b>advantages</b>	<b>amount</b> 60:21	<b>Apple</b> 1:7 2:15	26:16 27:20
<b>accidentally</b>	228:16	61:3 65:4,8,16	4:3 8:13 10:10	38:10 42:15
20:20	<b>adverb</b> 48:18	66:9 99:13	11:8 12:2,6,13	44:18 45:10
<b>accommodations</b>	49:9,10	114:13 156:22	13:11,19 234:3	83:9 84:12,20
42:2	<b>adverbs</b> 49:6	<b>amounts</b> 127:11	235:4 236:8	85:7 91:10
<b>accurate</b> 7:5 28:6	<b>advice</b> 23:13	<b>amplifier</b> 192:4	<b>applicable</b>	112:10 113:4
141:14	<b>advise</b> 234:10	<b>analysis</b> 22:11,18	234:13	118:1,16
<b>acknowledge</b>	<b>advised</b> 234:6	23:5	<b>application</b> 17:14	120:22 121:8
235:6	<b>affect</b> 7:9	<b>analyze</b> 22:3	<b>applied</b> 23:4,7	122:4,6 124:13
<b>act</b> 211:19 213:5	<b>ago</b> 15:8 213:10	<b>analyzed</b> 217:13	29:4,16 42:14	128:13 131:13
<b>action</b> 233:4,6	228:12	<b>analyzing</b> 42:9	44:2 153:21	147:12 155:22
<b>active</b> 16:9	<b>agree</b> 34:9 52:5	<b>anatomy</b> 37:9	154:5,20	161:20 172:5
210:11,12	57:9 62:18,21	<b>ancillary</b> 181:21	155:17 183:8	173:15 192:18
<b>activity</b> 15:2	63:11 64:18	<b>and/or</b> 234:9	<b>applies</b> 226:20	193:1,9 194:8
37:11	65:18,22 67:22	<b>angle</b> 98:18,19	<b>apply</b> 31:6 37:16	216:3 218:14
<b>actual</b> 119:7	69:11 70:20	<b>angled</b> 199:7	158:8 183:14	229:16 230:8

<b>artist</b> 116:2	181:18 199:15	<b>attention</b> 212:16	<b>balls</b> 130:5	<b>beneficial</b> 196:14
<b>artist's</b> 188:18	199:17 207:16	<b>attorney</b> 233:5	<b>bar</b> 184:7	<b>benefit</b> 121:12
<b>ARUNDEL</b>	214:15 220:3	<b>attorneys</b> 8:13	<b>barriers</b> 197:1	199:1 212:15
233:13	<b>associating</b>	<b>August</b> 233:14	<b>bars</b> 115:21	<b>best</b> 12:20 27:21
<b>ascribe</b> 206:7	169:21	<b>available</b> 27:21	<b>Barsalack</b> 203:20	28:2,2,5 189:4
<b>asked</b> 22:3 47:1,7	<b>association</b>	28:1,3,6,21	<b>base</b> 131:13	195:19 231:21
70:7 76:17	216:11	36:5,21 39:1	208:6	<b>better</b> 7:14 229:4
86:10 120:10	<b>assortment</b> 49:6	40:5 227:14	<b>based</b> 15:2 43:4	<b>beyond</b> 97:4
127:3 146:5,16	111:9	<b>Avenue</b> 2:12	78:22 84:10	<b>bezel</b> 81:16,19
149:22 174:5,7	<b>assume</b> 7:17	<b>aware</b> 11:8 17:3	91:12 93:15	82:4,8,13,17,18
175:17 176:4	202:12 222:19	19:21 20:14	114:12 116:1	82:22 83:4,7,11
176:18 177:21	<b>assuming</b> 156:21	29:21 36:3	131:15 188:8	83:13,16,22
218:2	<b>athlete</b> 36:14	38:10,15,21	229:18	84:7 85:5,8,8
<b>asking</b> 22:10	39:9	182:3 184:14	<b>basically</b> 116:14	85:10,12,14
30:4 31:21	<b>athletic</b> 36:9	<b>awkwardness</b>	144:7 185:9	86:5,7,11,14,19
75:15 84:2	37:22 38:11,20	40:20	<b>bathroom</b> 41:2	86:22 87:17,22
86:20 90:2	<b>atomic</b> 106:7,17	<b>axis</b> 194:14	<b>batteries</b> 194:11	88:1,3,10,14,16
136:7 140:13	107:1 110:19		<b>battery</b> 193:22	88:18 89:2,6,11
154:12 157:20	111:13,14,17	<b>B</b>	194:17 195:1,1	89:12,15,19
173:14,18	118:7,9 119:13	<b>B</b> 165:2,6 194:18	195:5	90:1,6,9,12,15
177:2,4 180:22	121:7 125:11	210:15	<b>BEAR</b> 2:5,11	90:17,20,21
181:2 185:18	126:13 132:11	<b>bachelor's</b> 24:12	<b>becoming</b> 40:2	91:6,8,16,18
203:10 215:17	133:8	26:7	41:7	92:5,13,16 93:7
<b>asks</b> 61:2	<b>atomically</b>	<b>back</b> 12:16 16:12	<b>bedside</b> 39:7,14	93:9,11,17,19
<b>aspect</b> 92:9	111:16 117:4	29:8 34:15,20	39:16 40:19	94:2,9,12,22
<b>assembled</b>	117:21 118:3,4	41:4 45:14	<b>beginning</b> 152:7	95:1,3,6,7,10
171:14 172:20	121:10 134:22	50:15 56:18	<b>begins</b> 108:6	95:11,11 96:11
187:18 188:11	<b>atoms</b> 64:16 65:9	61:11 64:1	110:17 181:17	96:13 97:6 98:2
189:6 190:19	108:8 111:9	68:14 87:16,21	<b>believe</b> 6:8 8:12	98:3 100:11,14
191:5 215:13	112:14 124:5	88:13 94:21	13:8,9 22:19	100:16 101:4,5
<b>assembly</b> 33:4	125:1 126:11	100:16 101:22	23:10,21 24:3,4	101:14,15,22
101:1 172:14	<b>attach</b> 39:9	140:21 141:5	35:8 36:11,16	102:9,10,14,15
189:6 193:14	187:12,14	141:10 142:10	37:2,14 38:3	102:20 103:10
<b>asserting</b> 210:15	195:2	153:14 155:2	39:11 42:11	103:11,15,18
<b>assertion</b> 202:6	<b>attached</b> 30:13	175:10 184:1	43:17 44:5	103:19 104:6,9
<b>assertions</b> 202:7	34:12,20 39:19	184:12 195:2	46:22 47:12	104:21,22
<b>asserts</b> 192:14	49:5 74:20	198:3,16	82:15 171:13	105:1,4,5,8,10
<b>assigned</b> 178:13	100:18 109:4	203:11,12	171:16 172:11	105:11,13,18
179:9,17,20	189:6 190:7,16	204:22 205:20	182:6 185:21	106:2,6 107:10
181:17	201:2 235:11	206:4,10	187:11 209:14	107:11,17
<b>assigning</b> 177:18	<b>attaches</b> 32:12	216:16 219:22	<b>believed</b> 78:19	108:3,16,18
178:12	<b>attempt</b> 91:11	220:15 226:4	<b>BEN</b> 2:6	109:20,20,22
<b>assignments</b>	225:20	228:8	<b>ben.everton@k...</b>	112:2,3 114:17
176:1	<b>attempted</b>	<b>background</b> 14:4	2:10	116:10 120:4,9
<b>associated</b> 11:16	214:22	221:16	<b>beneath</b> 137:9	121:2 137:20
37:11 74:4	<b>attempting</b> 171:3	<b>backing</b> 38:14	138:19 148:16	138:19,20
112:19 119:5	225:16	<b>bad</b> 75:2 202:10	150:12	145:9,13,17,18

145:20 146:2,2 146:18 147:4 148:11,13,15 148:20 149:8 150:9,12,13,15 151:16 152:2,9 152:16 153:4,7 153:8 154:8,12 154:16,18 169:18,19,21 170:6,13,17 171:1,4,6,11,14 171:18 172:1,7 172:9,12,19 174:13 218:21 219:3,6,6,12,16 219:18,21 220:19 221:1 221:15,16,20 221:21,22 222:4,7,10,13 222:18,21 223:4,4,10,12 223:16,19,19 224:6 225:6,13 226:2 <b>bezels</b> 125:16 221:14 224:7 <b>big</b> 64:18 124:19 129:7 160:13 161:14 211:6 <b>bigger</b> 119:9 132:10 <b>Billy</b> 2:22 <b>biocompatible</b> 208:15 <b>biomedical</b> 24:13 <b>Bisenius</b> 2:17 9:13 59:9,15 76:17 95:22 96:8 99:18,21 100:3 124:11 127:3 144:15 155:9 162:7 175:17 178:3 178:16 180:1 202:3 205:7	232:1,6,9 <b>bisenius@fr.com</b> 2:20 <b>bit</b> 39:5 67:9 69:17 70:6 80:1 128:6 131:3 139:2 143:17 149:11,12 159:20 <b>black</b> 120:16 <b>blank</b> 50:7 <b>Blood</b> 7:8 <b>blow</b> 214:17 <b>Bluetooth</b> 40:16 <b>blur</b> 72:20 <b>board</b> 1:1 197:16 201:3 203:1,14 203:17,21 204:7,8 <b>boards</b> 203:3,6 204:11 <b>body</b> 39:9 <b>book</b> 51:21 52:6 52:9,9,12 53:8 53:10,11,15,19 54:2,5,6,11,13 54:17,21 55:2,6 55:9,11,16,19 55:21 57:1,2,12 57:15,19,21 58:4,7,13,22 59:1,3,19,20 60:2,3,5,8,11 60:18 62:20,21 63:8,8,10 64:1 64:4,5,7,9,12 64:20,22 65:1 66:1,6,15 67:22 68:1,3,4,7,9,17 68:20 69:5,7,8 69:10,15,19 70:4,9,11,12,13 70:17,20 71:2,3 71:8,10,22 72:2 72:6,14,16 73:18 74:4 75:10,13,16	76:21,22 77:1,5 79:21 80:3,12 91:20 94:6 95:18 96:16,18 97:5,11,15,18 97:19 98:14,15 98:21,21 99:8 101:8 106:17 106:19 110:1,3 110:3,7,7 117:6 118:18,19 123:8 127:19 127:21,22 128:8,10,18 129:2,4,7,16,17 130:10,19 133:18,18,21 134:1 141:2,11 142:11,18,19 142:22 143:21 144:4,19,20 155:3 220:12 220:13 221:8 221:10 <b>books</b> 125:15 <b>bother</b> 121:10 <b>bottom</b> 23:13 54:12 57:19,20 58:5,7,8,10 65:20 66:3 68:15 69:8 80:12 84:9 86:3 95:17 96:19 97:16 144:4,13 144:18 149:2 152:7 174:19 178:19 179:1,3 179:4 187:15 192:2 193:4 199:6 201:1,3,9 201:16 202:1 202:14,18 208:3 <b>boundaries</b> 58:2 159:9 <b>boundary</b> 52:22 72:21 75:19	76:10 111:12 113:1 119:3 120:16 125:19 125:21 163:2 <b>bow</b> 117:9 128:19 <b>bowed</b> 128:5,6,9 128:14 129:11 129:15,16 <b>box</b> 35:8,13 62:8 235:9 <b>brain</b> 63:17 <b>brand</b> 156:18 <b>break</b> 7:22 8:2 59:11 61:5 62:3 96:4 99:15,17 99:17 155:11 155:14 162:3 224:13,16,17 224:18 232:5 <b>breaking</b> 195:20 <b>brief</b> 11:15 <b>broad</b> 165:17 <b>broaden</b> 49:6 <b>broader</b> 47:14 <b>brother</b> 10:9 <b>brush</b> 163:2,6,17 <b>build</b> 174:9 176:18 196:5 198:22 <b>building</b> 71:2 204:10 <b>bunch</b> 41:3 111:9 135:10 <b>busy</b> 8:20 <b>button</b> 205:19 206:8,9,10,18 206:21 <b>buy</b> 39:12	<b>cables</b> 192:21,22 193:20 194:8 197:12 198:8 199:2 <b>California</b> 1:19 2:8 4:6 233:11 <b>call</b> 29:18 33:3 68:22 88:21 105:17 118:1 153:12 200:16 200:21 234:15 <b>called</b> 5:6 37:20 83:4 108:12 201:10 208:17 225:12,15 <b>calling</b> 132:16 188:17 <b>calls</b> 9:21 185:18 185:21 187:10 <b>camera</b> 9:14 143:9 <b>capability</b> 110:17 <b>capable</b> 19:13 111:18 119:12 <b>capacity</b> 126:10 <b>capture</b> 24:19 230:4 <b>captured</b> 29:6 34:16 <b>carbide</b> 208:22 <b>carbon</b> 208:18 <b>cardiac</b> 14:5,10 14:15,19 15:8 15:10,15,19 17:2,5,8 18:10 21:4 26:21 27:2 27:21 28:12,22 29:2 34:2 36:4 36:22 38:22 39:14 41:9 228:17 230:10 <b>care</b> 99:8 115:11 118:11 <b>careful</b> 118:6 <b>carefully</b> 213:13 <b>cares</b> 125:1,4 <b>carries</b> 11:4
--	---	--	---	--

<b>carved</b> 105:14	<b>cetera</b> 181:20	147:3 173:8,15	<b>clinic</b> 27:17	<b>companies</b> 27:18
<b>case</b> 1:5 8:14	184:1 198:4	174:2,9,16,21	<b>clips</b> 30:10	121:9
11:20,22 12:11	<b>chamber</b> 163:7	175:7 177:10	<b>close</b> 122:15	<b>company</b> 165:14
12:11 30:2 55:1	163:10	178:6,8 180:11	227:6,6,12	<b>compared</b> 156:22
55:15 66:16	<b>chambers</b> 154:8	180:20 181:6,9	<b>closed</b> 77:6	<b>comparison</b>
79:4 83:14,17	<b>change</b> 59:2	181:15,19	<b>closely</b> 15:5	227:15
83:19 87:2	101:10 116:16	182:1 184:18	<b>closer</b> 94:7	<b>compensated</b>
92:10 93:3 94:3	236:11	200:2,20	227:20	25:4
94:4 103:3	<b>changed</b> 159:15	201:20 202:11	<b>CLR</b> 1:18 4:5	<b>complete</b> 172:14
110:5 115:3	<b>changes</b> 19:17	202:20 210:2	233:1,8	176:10 234:6
123:19 132:1	98:8 123:5	211:5,14,17,19	<b>co-counsel</b> 232:2	235:10,12
139:20 140:16	235:11	211:19 212:14	<b>coating</b> 208:22	<b>completely</b>
141:7,10	<b>characteristics</b>	212:17 213:4,5	<b>coin</b> 194:1,16	230:16
147:14 150:7	214:21	213:13,19,21	<b>Coke</b> 103:2,6	<b>complexity</b>
151:10 155:2	<b>characterized</b>	215:1,18,19	126:17	152:11
156:9 204:5	177:5	217:1,12,12	<b>collaboration</b>	<b>compliant</b> 134:2
219:2 220:16	<b>chart</b> 174:10	222:6	26:13	<b>complicated</b> 39:6
234:3 235:4	<b>Check</b> 235:9	<b>claimed</b> 202:19	<b>collaborators</b>	156:9
236:8	<b>checkups</b> 29:4	<b>claims</b> 8:18 19:11	26:11	<b>component</b> 43:3
<b>cases</b> 13:6,9,10	<b>chemical</b> 103:17	32:18,21 42:13	<b>collection</b> 28:9	43:4 85:3
13:11,13,15,19	104:2,5,20	56:1 115:13	<b>COLUMBIA</b>	166:14 208:14
14:1 104:15	105:9 106:1,13	123:7 184:12	233:15	231:13
151:14	<b>chemistry</b> 158:2	184:15 199:14	<b>Column</b> 81:9	<b>components</b>
<b>categories</b> 153:17	<b>chest</b> 29:5,17	200:8 216:22	86:13 138:8	193:4 230:9,20
<b>category</b> 94:7	31:8 34:13 37:4	217:13 218:8	152:7 170:1	<b>composition</b>
<b>caught</b> 136:13	<b>choice</b> 199:3	<b>class</b> 14:20 16:16	192:2 195:16	208:12
170:9	<b>choices</b> 174:4	17:12 40:10	208:4 221:19	<b>comprise</b> 39:14
<b>cause</b> 185:8	<b>chop</b> 89:8	<b>classes</b> 25:17	<b>combination</b>	<b>comprises</b> 34:4
<b>caveats</b> 191:8	<b>chosen</b> 208:17	<b>classify</b> 73:11	76:3 192:13	208:5
<b>CDT</b> 5:1	<b>Christmas</b> 54:18	91:12	<b>combined</b> 41:20	<b>comprising</b> 34:2
<b>cell</b> 194:1	73:19 101:9	<b>clean</b> 149:21	<b>come</b> 17:13 69:2	34:3 35:2
<b>centimeters</b>	<b>circle</b> 225:19	220:10 229:8	98:13 149:16	<b>computer</b> 24:14
111:13 114:4	<b>circuit</b> 192:7	<b>cleaner</b> 229:9,10	234:7	<b>computers</b>
<b>Central</b> 1:16	197:16 201:2,6	229:13,15	<b>comes</b> 99:12	143:11
<b>CEO</b> 165:14	201:19 203:1,3	230:4	<b>comfortable</b>	<b>concept</b> 129:2
<b>certain</b> 21:20	203:6,14,17,21	<b>cleanliness</b> 229:5	169:2	<b>concepts</b> 71:20
62:11 108:17	204:7,8,11	<b>clear</b> 47:5 51:8	<b>comment</b> 69:20	<b>concerned</b>
116:7 118:5	<b>circumstance</b>	52:11 75:22	<b>Commission</b>	107:19
182:5 184:15	149:5 155:6	83:12 93:6	233:10,10,11	<b>conclude</b> 78:7
<b>certainly</b> 15:13	<b>Cities</b> 5:19	136:1 147:6	233:14,16,19	93:16
20:8 38:14	<b>civilian</b> 28:16	148:21 168:5	233:21	<b>conclusion</b>
118:12 203:9	<b>claim</b> 11:15	168:19 172:17	<b>common</b> 228:2	188:14
<b>certainty</b> 117:21	33:22 35:18,20	188:12	<b>communication</b>	<b>conductive</b>
189:22	35:20 42:9,12	<b>clearer</b> 14:11	40:17 42:3	208:15
<b>CERTIFICATE</b>	44:1,14 48:2	52:18 57:17	205:21	<b>confident</b> 195:3
233:1	66:20 110:13	<b>clearly</b> 87:4	<b>compact</b> 21:3	<b>configuration</b>
<b>certify</b> 233:2	136:4,17 137:7	215:9	167:4 192:22	136:4



<b>configured</b> 34:1 34:5 35:3	43:18,21 44:11 44:20 45:12	<b>contacting</b> 37:8 52:1 88:18	<b>corner</b> 189:17 <b>corners</b> 189:14	134:5 <b>corresponding</b>
<b>confine</b> 104:16	46:7 73:3 76:5	96:13 99:2	206:15	12:7 81:21
<b>confirmed</b> 174:11	78:2 101:6	<b>contacts</b> 89:11	<b>Corporation</b> 1:3	124:9
<b>conformed</b> 160:8	103:4 129:5	94:15 95:8	2:4 4:3 234:3	<b>corresponds</b>
<b>conforms</b> 43:7	163:12 165:6	96:11 195:4,7,9	235:4 236:8	133:16 137:10
131:20 132:8	166:17	196:6 197:1	<b>correct</b> 5:20 6:7	188:10 189:17
<b>connect</b> 170:17	<b>consistently</b> 6:12	202:22 203:13	12:4,5 20:12,13	<b>corrugated</b> 132:2
<b>connectable</b>	<b>construct</b> 69:12	203:15 204:2,4	21:10 26:18,19	132:17
208:8	70:15	<b>contain</b> 22:16	34:21 35:21,22	<b>cost</b> 121:11
<b>connected</b> 35:8	<b>construction</b>	<b>container</b> 185:5	41:11 42:16	152:11
57:8 192:3,6	11:15 42:10,13	<b>contemplating</b>	44:4,8 46:4,13	<b>counsel</b> 9:19
201:6,18	42:22 43:12,17	74:16	46:14 50:19	23:14 59:9
230:15	44:4,15 45:5,16	<b>context</b> 30:21,22	56:4,10,11	95:22 155:9
<b>connection</b>	45:19 46:3,11	33:7,11 34:8	58:19 60:15	175:20 233:3,5
170:21 197:15	46:15 50:4,14	40:8 47:2,7	61:19,20 65:7	234:9,12
204:7,14	50:18 51:3,16	48:14 49:13	66:11 74:10	<b>counter</b> 133:17
<b>connections</b>	59:18 61:13,16	74:17 109:8	82:19 83:2,22	<b>COUNTY</b> 233:9
143:3 192:15	62:1,10 63:14	110:13 114:1,6	86:18 88:4,5,10	233:13,18,20
197:21	65:7 66:8,20	115:7 126:9,15	88:11 92:5	<b>couple</b> 9:22 13:9
<b>connector</b> 34:5	71:12 73:12	149:6,20 167:3	93:11,21 94:18	155:13 173:21
35:2 203:14,22	75:20 77:19	175:12,22	100:19 105:2	179:13 211:21
203:22 204:6	78:11 79:12	178:5,11	105:12 111:4,5	<b>coupled</b> 34:5
<b>connectors</b> 31:16	90:3 211:6	179:16 185:13	112:5 119:18	35:2 44:17
34:14 196:21	<b>constructions</b>	199:10 200:7	121:16 128:1	<b>course</b> 14:17
199:2 200:1	47:4,8	200:10 201:20	140:12 141:4	37:16 130:1
<b>consent</b> 234:22	<b>construe</b> 46:19	221:16	146:7,15 170:4	<b>Court</b> 12:7 13:6
<b>consider</b> 23:14	<b>construed</b> 11:19	<b>contexts</b> 168:11	170:5 172:10	13:10,12 14:1
26:15 59:22	48:12	<b>contrast</b> 48:7	172:13,20	<b>covered</b> 56:22
74:3 75:4 193:9	<b>contact</b> 18:10	80:5,22	180:16 181:12	57:14 168:12
219:3	37:17 38:1,4	<b>controversy</b>	184:16 186:19	<b>covers</b> 216:8
<b>consideration</b>	52:19 53:3	126:7	187:5,6 188:3	<b>crazy</b> 151:8
110:22 231:9	54:13,14,21	<b>convenient</b> 40:22	188:11 189:9	<b>create</b> 110:20
<b>considered</b> 10:16	56:2,9 57:22	41:6 204:13	190:19 191:7	111:21
10:19 11:3,17	63:2 73:14 74:9	<b>conventional</b>	191:12,20,21	<b>critical</b> 24:9
22:17 23:17	79:14,19 80:7	38:15 57:18	200:15 209:3,7	<b>cross-section</b>
31:4 62:9,19	80:10,13 84:16	<b>conversation</b>	209:11 213:7	138:22 140:19
90:10 109:7	85:19 89:2,6,12	167:8	216:20 217:3	141:17 162:22
116:21 117:2	94:5 109:5	<b>conversations</b>	218:22 220:5	172:3,16
150:3 178:19	141:1 153:16	9:10 40:9,14	220:19,20	186:15 188:15
181:3,11	192:20 194:6	<b>convey</b> 225:20	222:11 226:11	190:3 222:12
197:11 199:12	194:10,15	<b>copper</b> 196:8	235:9,12	<b>cross-sectional</b>
201:3 226:2	195:15,18	<b>copy</b> 18:20 19:1,5	<b>corrections</b> 20:15	82:7
<b>considering</b>	196:8 203:16	234:8	21:16	<b>cross-sections</b>
142:13	218:4	<b>Copying</b> 234:21	<b>correspond</b>	222:14
<b>consistent</b> 43:13	<b>contacted</b> 8:12	<b>Copyright</b>	132:14	<b>CRR</b> 1:18 4:5
	38:21	234:20	<b>corresponded</b>	233:1,8

<b>crystal</b> 118:8	<b>D</b>	166:11 167:1,2	104:2,3 209:13	<b>description</b> 29:20
<b>CSR</b> 1:19 4:6	<b>D.C</b> 1:21 235:2	167:5 168:1	<b>deposition</b> 1:12	44:9 52:6 66:4
233:2,11	236:3	<b>definitions</b> 131:4	6:1,5,14 7:15	72:12 80:2
<b>Currently</b> 31:10	<b>data</b> 21:4 24:19	<b>definitively</b>	8:5,11 9:3,8,12	100:21 109:1
<b>curvature</b> 92:10	217:17	141:19	9:19 10:3,11,14	141:14 171:21
92:18,19,21,22	<b>date</b> 16:12 24:10	<b>degree</b> 24:12	52:5 62:20	188:5,16 190:3
94:11,12,14	25:22 234:4	114:7 115:2	103:18 104:11	200:8 205:17
98:2,7,11 99:1	235:5,17,22	<b>degrees</b> 24:16	104:18 106:14	221:18
99:3 111:17	236:10,22	26:5 92:19,20	232:13 233:2,3	<b>design</b> 18:10,12
112:3,6 113:4	<b>dates</b> 198:3	99:11	233:4 234:4,12	27:1,9,14 40:11
113:11 114:7	<b>Dating</b> 12:16	<b>Delaware</b> 11:10	235:5,7 236:10	109:10 193:7
114:10 115:18	<b>day</b> 231:22	11:14,22 12:8	<b>depositions</b> 7:1	194:13 197:9
117:16,18	<b>Daylight</b> 1:16	12:11 233:18	<b>depth</b> 64:21	204:8 225:21
126:22,22	<b>DC</b> 233:15	<b>delivered</b> 96:2	65:17	<b>designed</b> 14:9
127:12 128:7	<b>decade</b> 12:16	<b>delivering</b> 40:17	<b>describe</b> 16:6	18:5 202:22
128:20 129:3	<b>decide</b> 78:19	<b>demonstrated</b>	21:6 29:12,22	<b>designers</b> 122:18
130:18 133:5	174:17 200:4	48:5 80:17,19	30:19 31:1,19	<b>designing</b> 16:7
155:21	<b>decided</b> 27:9	<b>departing</b> 121:18	31:22 32:1,7,10	26:20 27:2
<b>curvatures</b>	<b>decision</b> 115:2	121:21	34:10 123:22	122:1 195:13
115:16 123:11	<b>decisions</b> 167:17	<b>departure</b> 98:12	170:22 201:13	<b>designs</b> 40:4
157:1	<b>declaration</b> 4:14	112:11	208:19 223:22	<b>desk</b> 53:9,10,20
<b>curved</b> 87:22	10:22 11:6	<b>departures</b> 99:9	224:3 226:17	54:2,4,6,7,10
88:2,14,16,19	18:15 19:6,9	115:6 116:20	227:4	54:14,15,19,21
88:21 89:3,5,6	20:12,16 21:17	116:22	<b>described</b> 25:7	55:3,7,10,11,14
89:9,10 90:13	22:5,13,16,21	<b>depend</b> 114:9	30:15 36:2	55:20 56:19,20
90:14 91:1	23:4,10,20,22	117:17 121:15	39:17 87:14	57:3,5,9 64:2
94:15,22 95:2,5	26:3 42:4 45:1	123:2 142:6	88:11 101:1,21	68:16,17,19
95:8 98:17	61:12 80:16	158:17 159:19	115:15 150:17	69:1,3,14,15
102:1 120:5,9	83:21 87:10	<b>depended</b> 117:18	169:18,21	70:4,5,16,21
120:11,13	135:20 151:19	<b>depending</b> 20:6	170:4 180:20	71:1 75:18
121:2,2 122:3,9	191:16 205:12	116:12 117:9	181:6 195:15	91:20,22 95:16
122:13,19	207:10	<b>depends</b> 75:1	197:22 199:14	95:17,19 96:17
123:16,20,21	<b>defend</b> 176:19	107:8 177:7,14	221:19 223:5	97:10,12,13,14
124:8 125:3	<b>define</b> 43:10	177:17	223:19	97:16 98:7
126:1,6,17	114:12 206:11	<b>depiction</b> 187:21	<b>describes</b> 20:19	101:8 129:7
127:9 128:14	206:13,21	<b>deponent</b> 234:4,7	24:8 33:22	142:10,11,12
130:20 139:8	<b>defined</b> 227:21	234:9	42:18 82:12	142:13,14,15
139:10 149:9	<b>defines</b> 174:22	<b>deposed</b> 6:17,20	87:15 110:14	142:17,19,22
151:6,10	<b>definitely</b> 14:19	<b>deposit</b> 103:6	138:10 182:12	142:22 144:1,2
155:16,19	187:2 219:17	<b>deposited</b> 101:14	201:12 222:4	220:12,13
167:10	224:15	101:16 102:8	224:1 226:12	221:9,10,11,12
<b>curves</b> 96:12	<b>definition</b> 4:16	102:20 103:17	<b>describing</b> 16:15	<b>desktop</b> 68:14
97:7,7,8	4:17 71:20	104:6,21	20:21 23:10	144:9 225:11
<b>customary</b> 42:14	77:20 128:22	105:10,15	32:8,15 38:1,11	<b>destroy</b> 214:19
<b>CVD</b> 104:3	129:5 163:12	106:1 113:16	38:16 72:13	<b>destroying</b>
<b>cycling</b> 76:20	164:12,15	<b>depositing</b>	76:12 106:7	108:10 204:12
	165:2,6 166:5	102:22 103:2	107:20 192:13	214:18

<b>detachable</b> 204:14	230:11 231:1	<b>disagree</b> 126:18	91:11 122:12	94:8 95:16,17
<b>detail</b> 101:2	<b>devices</b> 27:21	<b>disconnect</b> 204:6	134:13 158:13	95:19,20 96:16
<b>detailed</b> 40:13	28:2,9,11 29:1	<b>discontinuities</b> 91:13	225:16	96:19,21,22,22
<b>details</b> 16:2 35:9	29:9,21 32:8	<b>discontinuity</b> 113:22	<b>District</b> 11:10	97:3,3,10,11,13
93:12 141:14	36:4,22 37:12	<b>discuss</b> 16:6	12:7 13:6,9,12	97:15,16,17,20
160:22 161:22	38:22 40:7 41:9	74:14 175:7	14:1 233:15	98:7,8 101:8
225:17,21	196:14 200:8	191:18	<b>doctor</b> 31:18	129:7,8 220:12
<b>detect</b> 17:5 34:1	204:10 224:8	<b>discussed</b> 25:14	<b>doctors</b> 39:13	221:9,10,11,12
36:22 113:19	<b>diameter</b> 29:15	40:9 51:20	<b>document</b> 2:22	<b>drawing</b> 89:13
113:21	192:22	62:19 67:21	11:4	93:13 114:15
<b>detected</b> 17:8	<b>difference</b> 47:9	72:7 78:2 79:11	<b>documents</b> 10:13	120:14 138:21
34:6	47:10,13 59:17	136:10 167:20	10:17,18 11:13	138:21 139:7
<b>detecting</b> 26:21	71:16 152:17	186:14 226:11	11:21 31:4	188:4,8 225:8
27:2,21 28:11	230:15 231:16	<b>discussing</b> 16:14	173:21	<b>drawings</b> 115:21
28:21 29:2 36:4	<b>differences</b> 230:12	50:9 61:13 62:3	<b>doing</b> 5:14 28:10	116:3 182:21
37:10 38:22	<b>different</b> 13:1	71:14 88:7	33:21 36:10	186:13 197:13
41:9 127:11	16:6 34:19	91:19 189:9	130:2 142:9	<b>drawn</b> 92:8
<b>determination</b> 76:5 79:9	41:21 42:1	<b>discussion</b> 14:20	197:5,17	<b>drop</b> 171:6,11
115:22 123:12	44:15 48:22	16:10 40:15	198:17	195:1
131:14	49:6 72:19	119:1 153:15	<b>domain</b> 27:18	<b>dropping</b> 184:1
<b>determinations</b> 124:5	85:13 91:2	<b>disintegrate</b> 109:15 218:4	<b>doubt</b> 127:15	<b>due</b> 214:20
<b>determine</b> 78:12	96:12 115:16	<b>disintegrates</b> 110:21 111:22	<b>doubtful</b> 108:11	<b>duly</b> 5:7
78:16 102:3	122:15 130:16	<b>displacing</b> 74:2	<b>dozen</b> 12:22	<b>dust</b> 185:7
124:7 130:22	134:1 143:17	<b>display</b> 120:8	<b>Dr</b> 100:7	<hr/>
<b>determining</b> 15:1	149:4 182:9,10	121:3 138:6,11	<b>Drafting</b> 9:2	<b>E</b>
<b>developed</b> 16:19	193:14,15,15	138:13,16	<b>draw</b> 75:19 113:1	<b>earlier</b> 13:8,9
<b>developing</b> 15:6	197:17 208:1	139:3,5,6,18,18	119:3 159:9	20:22 36:7 60:7
<b>device</b> 14:9 26:20	209:3 210:22	140:3,4,9,10,14	<b>drawer</b> 54:1,2,6	90:10 91:19
27:2 31:12,15	221:14 222:3	141:4,6 142:2,3	54:9,12,19 55:7	101:7 106:15
34:21 36:1	229:3	222:8,10,18,21	55:10,16 56:20	110:1 153:15
78:12,15 82:8	<b>diffusion</b> 156:9	225:12,22	56:21 57:1,5,10	198:16 217:4
121:16 134:10	<b>Digital</b> 1:20	226:2,16	57:13,16,18,21	228:10
166:14 173:13	234:19,20	<b>disposed</b> 205:20	58:4,6,8,9,9,10	<b>early</b> 16:15 36:17
174:19 177:6	235:1 236:1	<b>disrupt</b> 142:2	58:11,14,15,16	<b>easier</b> 41:21
178:15 179:2,3	<b>dimension</b> 116:1	<b>disruption</b> 52:22	59:1,2,4,5,6,8	145:4 164:19
179:22 181:12	122:20	<b>dissolves</b> 157:10	62:3,6,7,8 64:5	<b>easily</b> 193:2
185:2,10 186:1	<b>dimensions</b> 53:6	<b>distance</b> 114:13	64:5,6,8,10,13	<b>easy</b> 90:7 196:5
192:1 196:15	110:11 116:4	<b>distinct</b> 86:1 94:3	64:21,22 65:3	<b>ECG</b> 192:4 228:2
205:21 207:6	182:7 184:7,18	132:18 222:9	65:18,19,20	228:17 230:9
215:4,22	227:14,17	<b>distinction</b> 47:18	66:1,3,7 67:22	230:20
216:14 217:22	<b>direct</b> 40:6 54:14	51:14 52:8 58:5	68:2,5,8,10	<b>edge</b> 113:18
218:6,12,19	79:19	102:17	69:13,17 70:6	171:18 203:13
219:1 223:3	<b>directly</b> 74:9	<b>distinguish</b> 77:18	70:16 72:6,16	203:21
225:6 230:10	151:20 152:2,4		72:17 75:13,16	<b>edges</b> 144:11
	152:9,13,18,19		75:17 77:6,6,7	186:11 191:1
	153:1,4,12		79:22 80:2,12	<b>education</b> 25:5
			80:13,14,14	25:14 69:21

<b>educational</b> 25:20	37:8,14,15,19 41:3 191:1	49:3,3,4,5,7,8,9 49:12,13,14,17	131:21 132:9 132:21 135:5	<b>employed</b> 233:4 233:5
<b>effort</b> 128:16	196:22 203:17	49:18,18 50:2,3	135:14,18	<b>employee</b> 233:5
<b>efforts</b> 14:21	205:6,15 206:3	50:5,7,13,19,22	136:2,2,15,15	<b>empty</b> 54:6
<b>either</b> 38:17	207:5 217:2	52:7,13 53:5,7	136:18,22	<b>enclose</b> 185:10
77:16,20 93:3	227:7 228:3,7	53:10,15,19	137:3,8,10,11	185:12 217:6
139:9 144:3	228:10,18	54:15 55:11,13	137:15,15,19	<b>encloses</b> 179:2
190:1,2 217:12	229:1,6,10,13	56:3,7,15 57:2	138:6,6,11,12	181:12
227:17	229:15 230:1,9	57:9,10,15 58:4	138:13,15	<b>enclosure</b> 56:3,4
<b>EKG</b> 18:1 29:5	230:13,14,20	58:8,9,15,17	139:2,5,6,15,15	56:7,8,10,15
31:8 33:2 34:9	230:22 231:7	59:1,8 60:14,19	139:17,20	58:18 74:9
37:21	231:13,16	60:22 61:14	140:1,4,7,10,17	78:17 79:15,17
<b>elastic</b> 37:5	<b>electronic</b> 82:8	62:10 63:15	141:4 142:1,22	82:19 83:2,4
<b>electric</b> 34:6 35:3	166:14 218:11	64:9 65:1,2,6	143:14 144:14	100:14 109:11
<b>electrical</b> 24:12	<b>electronically</b>	66:8,21 67:1	145:2,20 146:6	112:7 119:18
37:10 143:2,11	234:21	73:8 77:4,15	146:8,11 147:9	119:22 120:1
192:20 193:5	<b>elegant</b> 167:4	78:7,8,13 79:2	147:15 148:9	121:5 122:18
194:6 195:4,7	<b>element</b> 58:6	79:10,13,16	150:15 151:19	126:22 131:19
195:15,18,19	178:8 208:16	80:9,11,14,21	152:2,3,9,14,18	131:21 132:5
196:5 197:15	208:16 213:3	80:22 81:1,15	152:18,19,21	134:9 136:3,16
<b>electrically</b> 208:7	214:1 215:14	81:18 82:4,8,13	153:1,1,4,6,7	136:18 137:6
230:14 231:17	<b>elements</b> 30:15	82:17 83:1,6,21	153:10,12,13	137:16 146:12
<b>electrode</b> 86:21	31:1,19 48:20	84:3,7,13,21	153:15,20,22	146:13,18
92:21 109:3	109:14 126:3	85:1,5,7,8,10	154:2,4,12,17	147:3,8,9,10,14
138:18,19	130:19 139:9	85:12,13,17,22	154:22 155:5,8	148:6 153:16
141:6,11 149:7	173:7,16 174:1	86:4,6,7,11,13	155:18 156:1,6	166:13,20,22
174:18 175:15	174:17,22	86:18,22 88:1	157:2,2,12,18	168:7,15 173:1
178:1 179:8,10	177:9 181:15	88:10,14 89:22	157:20 158:17	173:5,9,11,13
179:18,19,21	212:18 214:5	91:5 93:4,7,16	159:1 161:11	173:19 174:12
180:5,10,11,16	215:12 217:7	95:1,9,15,18,21	162:20 163:12	174:14,20,21
181:2,10	217:20 223:21	96:14,22 98:22	164:15 165:3,7	175:12,16
185:16,19,22	224:4 227:18	101:5,12,15	166:6,12,14,18	177:6,13 178:2
186:2,7,11,18	<b>eliminated</b>	102:3,15	167:2 168:1,3	178:5,7,10,15
186:21 187:3,9	230:16	103:11,19	172:19 187:3	178:20 179:2
187:10,12,17	<b>elite</b> 36:13,14	105:7 107:10	191:12 218:20	179:11,21
188:2,10 189:5	<b>ellipses</b> 225:18	107:16 108:3	219:5,15,17	180:6,12,13,17
189:7,18	<b>embed</b> 164:16	108:18 109:18	220:6,7,11,16	180:20 181:4
190:16,18	165:3	109:19 110:3	220:19 221:11	181:11,20,22
191:5,11 192:3	<b>embedded</b> 4:16	111:1,3,6,7	226:15	182:2,4,9,10
197:15 205:16	4:17 42:19	112:2,8 114:8	<b>embedded'</b> 43:3	183:6,15
205:18,19	43:12 44:6 45:3	114:17,22	47:22 48:1,3	184:10,16
206:4,14	45:17 46:6,12	115:7,18	<b>embedding</b>	185:2 190:8
207:16,18	46:20,20 47:1	118:19 121:14	141:22	200:1 215:2,6,9
208:4,5 220:18	47:10,11,14,15	122:21 123:9	<b>embodiment</b>	215:20 216:2,5
220:22 221:4	48:2,7,8,9,11	124:9 127:2,22	83:5 173:4	216:8,12,15,18
229:2 230:3	48:12,13,17,18	128:10 129:18	185:17	216:20 217:2,5
<b>electrodes</b> 29:15	48:19,21,22,22	130:10 131:14	<b>emerge</b> 17:19	217:14,19

218:6,7,10,11	34:17 59:12,16	101:21 119:11	<b>exist</b> 207:16	163:8 190:22
218:19 219:1,4	61:4,10 78:9	127:19 129:6	210:4 212:6	222:1 223:13
219:7,9,13,15	96:6,9 99:14,20	132:1,3,15	215:12	223:14
219:20 220:1,2	100:1,6 126:20	133:17 134:4	<b>existing</b> 27:15	<b>exterior</b> 136:19
220:4,7,8 221:1	127:17 145:1	137:14 138:18	<b>exists</b> 176:21	137:1,22 211:8
221:5 223:8	155:12,15	142:10 150:17	209:21 210:15	213:15 214:2
224:1,4	162:2,6,10	151:7,11	211:15	<b>external</b> 217:8
<b>encompasses</b>	164:3,8,14	160:15 162:11	<b>expanse</b> 208:6,11	<b>extracting</b> 229:8
35:18	166:4,10 169:4	162:13 166:13	208:14	<b>extrapolating</b>
<b>encounter</b> 108:19	169:9 177:1	167:19 168:8	<b>expect</b> 106:3	196:1
<b>ended</b> 102:11	178:9,22 180:9	168:11 193:22	214:15 218:14	<b>extreme</b> 64:14
122:19	202:16 205:1	194:16 217:3	<b>expensive</b> 28:5	<b>eye</b> 106:22
<b>ends</b> 190:21	205:10 224:15	221:8 231:1	<b>experience</b> 14:5	108:15 112:12
<b>engineer</b> 116:5	224:22 225:3	<b>examples</b> 15:9	16:3 24:19 25:2	113:19 118:15
<b>engineering</b>	231:19 232:4	27:14 40:9 48:6	25:4,20 26:10	123:3 127:1
24:13,13,14,14	232:11	62:2 63:17	32:15 33:1 35:6	129:13 130:14
93:13 116:3	<b>everyday</b> 183:20	64:15 67:9	38:17,18 40:7	132:19 133:13
182:21 184:7	200:14	71:18 73:2	<b>experiences</b>	161:6
<b>engineers</b> 15:6	<b>Evidence</b> 1:20	75:10 76:20	229:19	<b>eyeball</b> 124:7
<b>enlarged</b> 208:13	234:19,20	79:7,12 80:6,20	<b>expert</b> 12:3	<b>eyes</b> 127:10
<b>entire</b> 24:1 60:3	235:1 236:1	90:9 101:7	<b>expires</b> 233:10	
68:8 73:11	<b>exactly</b> 20:8 52:3	115:4,10 116:2	233:11,14,16	<b>F</b>
92:22 95:11	100:17 128:3	122:5,22	233:19,21	<b>fact</b> 104:13
201:12 216:19	163:15	125:20 135:8	<b>explain</b> 17:11	203:18 214:19
<b>entirely</b> 137:8	<b>examination</b> 3:1	138:20 160:16	47:1 71:15	<b>Fahnert</b> 2:22
157:5	3:4 5:6,10	161:19 182:19	78:14 115:13	<b>fail</b> 212:10
<b>entirety</b> 34:11	<b>examined</b> 5:7	220:10,14	173:3 176:14	<b>failing</b> 198:20
<b>entity</b> 166:16	235:7	228:4,6	180:18 196:4	<b>failure</b> 196:18
<b>environment</b>	<b>example</b> 14:2,8	<b>exclude</b> 80:10	<b>explained</b> 88:12	197:5
56:22	16:11 22:20	<b>excluding</b> 53:2	<b>explaining</b> 214:7	<b>fair</b> 19:15 172:11
<b>environments</b>	23:12 39:6	<b>Excuse</b> 179:12	<b>explanation</b>	172:21 173:2
41:22	41:13 48:21	<b>exercise</b> 17:13	180:7	<b>fairly</b> 118:5
<b>equipment</b> 208:9	51:20 52:18	<b>exercising</b> 39:10	<b>explicit</b> 42:21	192:21 207:2
<b>equivalents</b>	53:2,8,13,17	<b>exerts</b> 194:14	45:5,16,18	<b>fall</b> 5:21 8:20
24:21	54:17,18,20	<b>Exhibit</b> 4:10	110:10 182:17	184:22
<b>errata</b> 234:11	56:18 60:7 62:4	18:15,17 19:5,9	184:17	<b>familiar</b> 104:1
235:11 236:6	62:18 63:21	19:22 20:16	<b>explicitly</b> 20:2	169:14
<b>ESQUIRE</b> 2:6,11	64:2 66:14	33:15,17 42:5	<b>explored</b> 149:12	<b>family</b> 38:18
2:17,17	68:13 72:6	61:12 81:7	<b>exposed</b> 37:15	<b>fancy</b> 76:22
<b>established</b> 40:2	73:15 74:13	87:10 100:10	81:16,20	125:11
<b>estimate</b> 12:18	75:5 76:13	164:4,6,18	<b>express</b> 43:11	<b>far</b> 13:22 18:8
<b>et</b> 181:20 184:1	77:10,10 78:1	166:5,8 169:5,7	46:11 234:22	75:16 198:4
198:4	79:21 82:11,12	187:8 199:5	<b>extended</b> 66:2	214:7
<b>evasive</b> 23:8	82:16 84:2,11	204:17,19	<b>extending</b> 71:7	<b>fault</b> 70:2
<b>event</b> 21:4 36:15	84:18 85:4	223:1 224:9	144:17	<b>feature</b> 153:10
<b>EVERTON</b> 2:6	86:21 96:16	225:5 226:5	<b>extends</b> 64:7 97:4	218:6
3:5 5:11 18:22	97:10 98:7	<b>EXHIBITS</b> 4:1,8	98:3 142:20	<b>features</b> 16:7

41:20 71:6	186:4,17 208:9	201:22 202:2,8	132:5,19,20	171:3 184:9
106:14 107:3	222:14	202:10,15,19	133:8 134:20	190:7 196:8
107:13 110:18	<b>filled</b> 105:15	204:20 205:18	140:20,22	197:1
138:2 160:12	134:3 161:16	208:14 211:7,9	141:4,10,11	<b>formed</b> 107:3
203:16	163:20	213:14,15	142:12,14	158:21 192:7
<b>February</b> 233:11	<b>filling</b> 164:1	214:2,3 224:12	143:9 144:8,8,9	195:21 201:6
<b>field</b> 24:15 27:11	<b>fills</b> 163:7	<b>FISH</b> 2:16 234:1	150:10 151:7	207:15 208:6
<b>figure</b> 81:22 82:2	<b>film</b> 107:4,9	<b>fit</b> 149:5 170:7,13	151:12 154:19	209:22 210:7,8
82:3,6,12,18	207:15,19,19	187:17	154:20 155:1,3	210:9,19 211:1
84:8 85:5 86:3	209:15 210:15	<b>fits</b> 144:11	156:5,6 159:2	211:15
86:11 87:14,21	212:6,10,21	171:15 188:10	161:9,11	<b>forming</b> 42:12
88:6,12 90:5	216:7 217:10	<b>fitting</b> 172:8	163:19 167:10	170:21
92:3,8 94:21	218:2	<b>five</b> 9:20 13:20	206:5	<b>forms</b> 112:14
100:8,21 101:4	<b>films</b> 214:21	61:5,7 62:4	<b>flatness</b> 118:22	183:7 209:13
101:13 107:14	<b>final</b> 102:7	162:3,5 213:10	126:13	216:19
108:22 112:2	209:12 210:16	232:1	<b>flatter</b> 114:19,20	<b>forth</b> 19:10 23:22
114:3,16 120:7	<b>financially</b> 233:6	<b>Five-minute</b>	<b>flex</b> 198:12	42:8 220:15
124:13,14	<b>find</b> 21:22 81:12	232:5	<b>flexibility</b> 193:6	<b>forward</b> 234:11
126:2 131:16	84:1 125:18	<b>flat</b> 51:22 52:2,18	<b>flexible</b> 29:15	<b>four</b> 13:20
138:3,5,11	192:11 193:19	52:19 53:3 58:7	192:21,21	168:13 187:14
139:22 145:5	194:17 204:1	62:14 63:1,4,6	193:10,12,19	194:22 206:15
145:16 148:10	217:17	69:10 71:8	194:8 196:20	<b>fractions</b> 114:5
149:7,20 150:9	<b>finding</b> 84:4	76:21,22 84:16	197:12 198:8	<b>fracture</b> 184:4
151:11 154:6	101:2 182:8	85:20 88:20	199:1	<b>fragment</b> 184:5
169:12,13,14	<b>fine</b> 224:19	94:4,10,11 95:8	<b>float</b> 55:6	<b>frame</b> 26:1,21
169:17 170:3,6	<b>finish</b> 96:7	95:11,14,15	<b>floating</b> 55:17	225:15 226:1
170:12,16,19	155:12 224:17	96:11,18,19	74:21	229:17 230:8
171:10 172:3	<b>finished</b> 171:8	97:3 98:12,16	<b>floor</b> 2:7 125:13	<b>frankly</b> 30:21
172:15 173:12	<b>firmly</b> 212:5	98:18 99:9	<b>FLORIDA</b> 233:9	32:22 33:2
173:12 178:18	<b>first</b> 4:9 5:7	112:11 114:20	<b>flush</b> 171:7 186:5	98:19 107:8
179:5,5 187:4,4	16:11 18:18	116:20 117:5	<b>focus</b> 108:5 190:1	114:14 176:9
187:7,8,13,16	20:18,20 21:2,8	117:21 118:1,3	<b>focusing</b> 25:22	176:20
187:21 189:13	29:7 33:18,20	118:4,9,11,14	49:12 212:16	<b>free</b> 111:9
191:19 194:18	34:3,4,4,6 35:1	118:17,20	<b>follow</b> 133:19	<b>freestanding</b>
199:5 205:2,5	35:2 43:2 45:2	119:18,20,22	<b>following</b> 96:10	109:14 212:6
205:14,16	45:14 84:21	120:3,11,13	<b>follows</b> 5:8	212:10 213:3
207:8 208:4,13	87:12,13 90:3,7	121:3,6,11,19	<b>forbidden</b> 234:21	214:22 215:2
209:5,6,8,11	107:21 129:14	122:2,8,8,12,19	<b>force</b> 118:7	215:20
218:16 220:5	129:21 130:8	123:14 124:8	125:11 194:14	<b>fresh</b> 19:3
220:18 221:18	130:12 136:18	124:18,22	<b>forced</b> 213:11	<b>front</b> 18:21 37:7
222:5,9,17	136:20 138:1	125:8,9,12,13	<b>forces</b> 183:8	143:6 164:17
223:1,4,18	164:7 166:9	125:22 126:5	217:8	175:10 206:8
224:10 225:5,7	169:8 180:6,15	126:16 127:8	<b>foregoing</b> 233:3	206:18 221:22
225:15 226:6,8	180:19 181:6,8	127:15,21	235:7	228:11
<b>figures</b> 124:15	181:19 199:14	129:22,22	<b>forgot</b> 148:4	<b>full</b> 8:9,10 14:3
141:18 161:3	199:15 200:5	130:9 131:1,3,7	<b>form</b> 104:17	40:20
173:4,7 174:1	200:13,17	131:11,22	106:14 159:15	<b>fully</b> 31:6 40:13

58:21 62:9	<b>geometry</b> 91:1,11	164:11 166:5	<b>Great</b> 5:17	73:9 79:3 123:1
<b>function</b> 71:7	92:18 107:12	176:6 180:3	<b>greatly</b> 208:12	124:12 125:17
110:14 178:1	107:22 148:4	190:12 191:15	<b>grip</b> 162:15,19,20	160:4 187:19
178:12,14	149:7,13 166:2	194:22 195:6	163:2	207:3 213:8
185:1 215:7	<b>getting</b> 19:19	198:9 203:10	<b>groove</b> 187:18	223:6,11
217:11 219:21	37:21 133:2	220:15 222:22	188:17 189:8	<b>harm</b> 197:5
<b>functional</b>	<b>GG987804</b>	<b>goes</b> 24:17	190:13,21	<b>head</b> 36:18
217:20	233:10	153:14 171:4	<b>grooves</b> 105:14	<b>headings</b> 21:20
<b>functionality</b>	<b>giant</b> 216:8	203:14	105:16 106:4	<b>health</b> 7:12 39:3
142:3	<b>give</b> 7:5 12:18	<b>going</b> 10:5 45:14	<b>group</b> 1:20 13:3	41:19
<b>functionally</b>	75:5 76:13	56:18 59:10	203:20 208:17	<b>hear</b> 136:6 222:2
113:8	137:14 139:9	68:14 73:16	234:19,20	<b>heard</b> 11:11
<b>functions</b> 185:3	140:5 141:21	91:10 96:1	235:1 236:1	<b>heart</b> 16:2 18:1
198:2 214:14	149:20 168:8	106:21 107:1	<b>groups</b> 122:15	33:22 34:2
<b>further</b> 34:4 35:2	195:12 221:15	110:12 114:12	124:17	37:11 82:9,13
46:10 196:4	229:9	114:14,15	<b>grown</b> 107:5	87:15 174:22
207:14,15	<b>given</b> 42:20 45:3	115:22 118:19	209:15	175:1
227:16 233:4	76:3 77:15	123:7 124:4	<b>guarantee</b> 218:1	<b>heat</b> 126:10
	93:12 128:22	126:18 131:13	230:5	<b>height</b> 96:21
<b>G</b>	151:12 215:9	132:12 134:22	<b>guess</b> 6:21 32:22	<b>helium</b> 126:10
<b>gasket</b> 169:18,22	235:10,13	142:10 155:10	74:14 75:18	<b>help</b> 165:18
170:7,13,20	<b>gives</b> 48:18	156:8,21	84:4 132:15	195:18 197:4
171:1,6,18	187:21 221:9	159:19 164:10	156:14 179:3	<b>helpful</b> 71:11
172:7	229:7	164:11 172:4	212:1	138:22 170:11
<b>gaskets</b> 231:8	<b>giving</b> 130:4	177:8,17	<b>guide</b> 84:19	222:15
<b>gel</b> 37:17	<b>gkim@fr.com</b>	184:12 188:4		<b>Helping</b> 204:10
<b>general</b> 32:20	2:20	230:16	<b>H</b>	<b>hereto</b> 233:5
64:20 74:21	<b>glance</b> 129:14	<b>good</b> 5:12,13,15	<b>half</b> 12:22	<b>hesitate</b> 234:15
102:21 149:11	<b>glue</b> 155:7,8	5:22 7:12,13,15	<b>hand</b> 90:13 119:2	<b>hesitating</b> 32:17
149:21 178:6	157:4,5,10,11	8:3 28:10 38:7	164:21	92:7 149:3
193:17 196:16	157:19,20	96:4 100:2	<b>handed</b> 113:15	151:5
197:6 229:14	158:2,7,10,13	127:10 155:11	218:1	<b>hey</b> 130:6
<b>generally</b> 16:21	158:15,17,22	162:7 189:2	<b>handheld</b> 112:19	<b>high</b> 120:15
192:5 195:9	159:4,6,12	197:6 207:2	185:14 217:22	<b>higher</b> 25:4,7
206:12 215:18	160:7,7 161:10	224:21 225:8	218:6,11 231:1	65:19
<b>generations</b>	161:10,16	232:4	<b>handle</b> 163:6,10	<b>highlighting</b>
131:9	163:20,21	<b>Goodin</b> 1:18 4:5	163:17	81:12
<b>generic</b> 181:21	<b>glued</b> 101:3	233:1,8	<b>handled</b> 75:1	<b>Historically</b>
<b>geograph</b> 149:13	<b>go</b> 29:7 41:2	<b>gouged</b> 106:12	<b>handling</b> 183:7	12:15
<b>geometric</b> 63:17	50:15 53:5	<b>gouges</b> 161:14,17	184:5 217:8	<b>history</b> 194:6
72:20 167:9	61:11 64:1	<b>governing</b> 234:13	<b>hands-on</b> 40:6	198:4
<b>geometrically</b>	75:15 80:15	<b>Grace</b> 2:17 9:14	<b>happen</b> 104:14	<b>hold</b> 163:14
168:19	81:6 87:9,20	<b>grammar</b> 212:4	183:18	<b>hole</b> 144:17,19
<b>geometries</b> 73:6	88:6 89:20	213:9	<b>happy</b> 33:5 73:5	150:17,21,22
73:10 109:8	99:15 120:2	<b>granite</b> 160:2	174:3 175:7	151:12,13
149:5 165:12	122:11 133:3	<b>gray</b> 107:7	176:13	<b>holes</b> 189:14,15
169:1	145:5 164:9,10	124:20 159:18	<b>hard</b> 18:20 19:1	<b>home</b> 39:3,12

224:12,16 <b>honest</b> 31:5,6 <b>honestly</b> 22:1 31:17 32:13,16 35:5 149:10 <b>hope</b> 27:15 <b>hopefully</b> 28:2,9 <b>hoping</b> 104:14 <b>hospital</b> 27:16 28:15 29:4 35:6 37:21 38:15 228:9 <b>hospitals</b> 28:22 36:3 39:18 <b>hour</b> 8:2 59:10 96:1 99:22 155:10 <b>hours</b> 9:20 10:1 167:20 168:13 <b>housing</b> 84:13,14 84:17 85:17,18 85:21 109:2 170:4,7,14,18 171:4,8,12,15 171:17 172:1,8 172:10,13,20 172:22 174:11 179:11 181:4 181:16 186:3,6 186:8,10,19,22 187:2,4,13,15 187:18 188:2 188:11 189:8 189:16 190:16 190:17,18,22 191:4,6,12 207:20 212:9 212:22 213:2 214:8,12,15 216:15,17,19 223:13,14,22 224:2 <b>hovering</b> 143:20 <b>huge</b> 121:11 <b>huh</b> 198:11 <b>hundreds</b> 126:2,3 <b>hybrid</b> 158:15	<b>hypothetical</b> 79:5 131:2 132:16 149:12 <b>hypothetically</b> 54:16 <b>hypotheticals</b> 20:5 169:1 <hr/> <b>I</b> <b>idea</b> 67:21 75:2 197:3 202:10 207:2 212:5 229:14 <b>identified</b> 226:9 <b>identify</b> 126:2 <b>ignore</b> 109:21 158:5 <b>ignoring</b> 200:20 <b>illustrate</b> 190:4 <b>illustrated</b> 208:9 <b>illustration</b> 87:5 141:15 <b>illustrations</b> 122:5,6 125:6 161:20 171:20 172:18 182:18 187:20 215:10 <b>illustrative</b> 82:7 <b>images</b> 118:8 <b>imagine</b> 20:1 60:9 68:4 72:18 92:17 121:8 195:13 225:11 225:14 <b>immediately</b> 110:21 184:22 212:11 <b>impact</b> 21:14 <b>imperceptible</b> 127:1,6 129:12 <b>imperfections</b> 106:10 118:22 <b>implies</b> 50:6 61:2 <b>imply</b> 49:19 <b>importance</b> 166:1 <b>important</b> 17:15	22:2 46:21 55:18 58:5 64:19 102:5,17 119:6 134:17 135:4,17 <b>impractical</b> 183:2 <b>impression</b> 128:15 129:21 130:8,12 140:20 <b>improve</b> 37:17 <b>improvements</b> 199:1 <b>in'</b> 42:20 43:12 45:3 48:2,7 80:21 84:13,21 <b>in-person</b> 9:10 <b>inch</b> 29:15 <b>include</b> 14:22 15:11,16 16:5 17:8 30:11 31:12 33:8 34:18 39:20 49:17 130:4 151:7 175:1 223:4 <b>included</b> 11:3 15:14 17:6 18:1 22:12 26:12 34:12,14 40:15 41:18 50:12 67:13 166:15 190:2 197:8 <b>includes</b> 14:16 21:11 23:6 31:15 35:1,1 49:8 60:12 105:17 153:16 153:17,20 183:21 203:15 <b>including</b> 24:20 25:15 28:2 30:20 32:10 34:14 47:22 53:15,16 54:9 58:10 60:11	73:19 208:14 208:17 222:7 231:12 234:21 <b>inconsistent</b> 168:2 <b>incorporate</b> 35:13 <b>incorporated</b> 15:13 166:12 166:19 167:12 168:6,14,22 169:2 <b>increase</b> 104:6 <b>INDEX</b> 3:1 4:1 <b>indicate</b> 48:2 <b>individual</b> 33:3 <b>inertial</b> 14:22 <b>Inexpensive</b> 193:2 <b>inform</b> 216:17 <b>information</b> 24:20,21 139:10 <b>infringement</b> 11:9 <b>initially</b> 210:19 <b>inner</b> 121:5 126:21 131:18 132:4 134:8,11 <b>input</b> 192:4 <b>inserted</b> 72:15 <b>inside</b> 35:13 52:15 56:10 58:13,22 62:6 73:21 74:22 88:2,16 89:3 92:21 94:8 95:2 95:5 97:11 101:14 102:9 102:20 127:2 128:20 134:21 139:13 189:8 190:21 193:19 194:17 197:4 197:17 203:22 <b>instance</b> 60:4 <b>instances</b> 13:1	<b>instantly</b> 218:4 <b>instrument</b> 17:5 27:9 30:8 31:14 34:16 38:8 40:18,20 112:20 <b>instrumentation</b> 26:14 36:12 38:16 <b>instruments</b> 16:19 28:21 39:3 123:10 125:12 128:15 130:22 <b>insufficient</b> 213:1 <b>insulating</b> 230:9 230:19 231:4,6 231:13 <b>integral</b> 165:4,11 165:13,14,16 165:21 <b>integrity</b> 109:22 218:9 <b>intended</b> 39:7 122:2,3,18 194:5 225:9 <b>intent</b> 38:3 190:6 <b>intentional</b> 117:1 119:10 123:4 160:14 <b>intentionally</b> 20:11 106:13 121:18,21 <b>interacting</b> 25:20 <b>interaction</b> 25:12 26:10 158:2 <b>interchangeable</b> 195:10 197:21 <b>interdiffusion</b> 104:17 <b>interested</b> 8:8 185:5 225:16 233:6 <b>interesting</b> 198:11 <b>interface</b> 156:11 <b>interior</b> 84:16
---	---	---	--	---



85:20 119:17 119:21 121:11 121:14 122:17 122:21 123:20 185:6 196:17 217:7 <b>intermediate</b> 159:7 <b>intermix</b> 157:17 <b>internal</b> 192:15 <b>interpret</b> 102:2 166:3 168:11 170:16 171:5 <b>interpretation</b> 171:20 172:18 186:17 188:20 188:22 189:19 190:13 <b>interpreted</b> 32:20 <b>interpreting</b> 145:11 153:2 <b>intersection</b> 212:2 <b>intervening</b> 55:4 56:17 74:12,19 153:11 <b>intrusion</b> 156:10 <b>invaded</b> 160:8 <b>invention</b> 42:16 197:10 <b>invoke</b> 88:20 <b>involved</b> 13:1,3 13:18 <b>involves</b> 209:18 210:12 <b>IPR</b> 1:5 4:15 6:2 6:5,9 7:2 11:1 12:3 13:14 19:7 22:4,18 42:10 <b>IPRs</b> 13:6 <b>irrelevant</b> 135:16 <b>Irvine</b> 2:8 <b>isolated</b> 153:18 231:18 <b>isolating</b> 152:10 153:5	<b>issue</b> 161:2 <b>issues</b> 22:3,7 <b>ITC</b> 13:16,19 <b>item</b> 50:9 83:3 132:15 140:13 143:19 145:12 148:11 169:17 169:21 170:2,3 175:15 177:13 177:14,22 178:12,14 185:16,22 187:9,10,15 190:6,7,15 191:3 194:18 204:14 209:16 211:4 214:8 215:16 216:4 219:12 220:3 220:16,17,17 222:7 223:13 <b>items</b> 31:7 175:1 210:3 213:9 220:11,11 222:9 <hr/> <b>J</b> <b>J</b> 1:18 2:6 4:5 233:1,8 <b>January</b> 19:14 <b>jargon</b> 230:18 <b>job</b> 28:10 118:14 118:15 175:4,5 175:9,21 176:22 <b>Jose</b> 14:2 <b>judgment</b> 73:3 78:22 135:3 167:21 <b>jump</b> 175:20 <b>June</b> 233:16 <b>jurisdictions</b> 13:5,16,17,22 <hr/> <b>K</b> <b>keep</b> 164:9 183:3 <b>Kenny</b> 1:13 3:2	4:2,14 5:5 100:7 234:1,4 235:5 236:9 <b>KENT</b> 233:18 <b>Kim</b> 2:17 9:14 <b>kind</b> 40:18 53:14 70:21 73:16 107:7 108:13 109:13 110:22 115:5 116:22 118:12 120:19 125:7 128:15 129:8 133:3 155:21 159:17 160:2 161:2 163:6,9 171:7 192:20 196:7 196:20 206:5 206:16 212:1 221:22 227:21 229:11 <b>kinds</b> 16:20 36:10 39:14 42:1 151:8 161:14 183:18 194:3 197:5 <b>kit</b> 30:16 36:13 <b>KNOBBE</b> 2:5,11 <b>know</b> 7:16,21 10:5,6 11:11 14:3,7 15:4,17 16:1,2 21:22 25:9 28:8 29:11 29:19 30:14,18 31:17 32:13 33:21 37:12 38:13 40:11,14 46:4 51:17 53:12,14 57:18 59:21 65:8,16 68:9,22,22 69:9 71:4 72:11,18 73:3 74:14 75:9 76:19 77:8,14 77:22 79:3 80:13 91:9 92:20 96:21	98:7,9,10 100:13,17 102:6,22 104:16 106:9 106:12,15,16 108:5 109:4,11 109:15 110:5 112:19 113:13 114:2 115:1,12 116:17,18 117:7,8 119:13 120:6,21 121:22 123:2,6 124:2 125:3,7 125:18 126:12 126:16 127:12 128:14 129:19 130:22 131:1,3 131:4,5 133:6 134:16 135:4 138:18 139:7 139:12 140:2 141:7,13 143:13 144:3 149:6,20 150:20,22 152:6 156:10 156:15,20 157:7 158:6 159:8,19,21 160:8,13,21 161:1,7 162:14 163:1,4,6 165:10,13,16 165:22,22 167:9 168:10 168:18 170:20 172:2 175:19 177:20 179:15 183:10,17 188:22 189:2 189:20 190:7 190:21 198:5 199:20 200:18 201:15 203:12 206:10,11,19 206:20 216:16	217:4 218:3 219:17,19 220:9,9,11 221:9 225:11 225:17 226:19 227:10,12,13 227:14,20 <b>knowing</b> 103:7 <b>knowledge</b> 202:5 <b>known</b> 43:1 229:16 <b>knows</b> 10:4 113:4 123:14,17 <hr/> <b>L</b> <b>L.L.C</b> 235:1 <b>label</b> 146:19 223:10 <b>labeled</b> 223:9 <b>labels</b> 30:17 <b>laboratory</b> 120:19 122:11 <b>land</b> 47:6 <b>language</b> 86:15 137:4 147:3 165:16 167:12 222:6 <b>large</b> 60:20 132:22 134:13 206:5 <b>larger</b> 25:16 106:9 116:17 116:20 166:15 <b>late</b> 8:20 16:12 <b>lawsuit</b> 11:14 <b>layer</b> 54:22 74:6 101:7,9,10 108:20 110:19 111:14,17 112:14 113:16 134:5 145:8,13 145:17 149:9 150:11 153:21 153:22 154:2 156:19 157:22 207:16 214:11 219:8
--	---	--	--	---

<b>layers</b> 56:17 74:12,19,20 104:16 141:22 142:1,7,8 195:21 208:20 209:2 <b>lead</b> 30:1,2,5,20 31:11 32:8 33:8 34:3,4,10,18 35:1,2,7,14,17 36:3 56:2 81:14 81:16,18,19 82:3,9,12,14,17 83:6,21 84:3,7 84:13,14,15 85:1,5,8,10,12 85:16,18,19 86:4,7,10,13 87:2,7,15,21,22 88:2,9,13,14,15 88:17 89:2,5,12 89:17 90:8,14 90:19 91:5,16 91:16 92:12 93:6,8,16,18 94:9,13,15,16 94:21,22 95:2,5 95:9,9 96:11,13 96:14 97:7 98:1 98:3 100:11 101:22 105:17 114:17 119:11 121:2 132:15 136:15,17 137:15,19 138:5,10,12 139:4,5 140:8 141:3 142:1 145:7,14,18,19 145:22 150:10 150:13,14 152:15,20 177:9 181:19 199:15,16 200:15 218:16 218:18,20,22 219:5,8,14	226:15 <b>lead/pad</b> 136:2 <b>leads</b> 15:11,14,19 15:21 17:8 18:1 18:11 29:4,9,12 30:6,6,11,18 32:17 37:13 38:1,4,12,21 113:4 125:16 152:1,8 153:3,7 153:16,18,19 154:7 196:18 226:9,10,13,14 226:18,18 227:2 <b>leaf</b> 15:16 191:19 191:22 192:6,9 192:14,19 193:9,11,20 194:9,13 195:8 195:14 196:11 196:13 197:9 197:20 199:3,4 199:11 200:5 200:11,20 201:2,6,12,16 202:2,8,18 203:6,8,10 <b>learning</b> 25:11 <b>leaves</b> 167:15 <b>LED</b> 142:2 <b>ledge</b> 112:15 171:6 <b>left</b> 20:11 86:3 100:7 <b>left-hand</b> 164:16 <b>legal</b> 22:17,22 23:3,7,10,17,18 42:9 <b>LEHIGH</b> 233:20 <b>length</b> 184:3 215:11 <b>lengthy</b> 167:8 <b>let's</b> 8:10 27:6 42:4 55:5 56:20 57:12 59:22 61:11 64:1,4,4	80:15 81:21 87:9 96:10 99:21 101:18 128:4 129:10 132:4 141:22 145:4 159:12 164:3 169:4,20 177:22 190:12 191:15 200:6 204:16 207:12 218:15 224:9 <b>letters</b> 21:21 <b>level</b> 15:2 24:1 25:4,7 26:3 40:13 118:9 122:20 <b>levitated</b> 74:13 79:22 <b>levitating</b> 55:8,9 <b>lid</b> 62:5 <b>life</b> 194:6 197:2 <b>light</b> 113:20 <b>lightweight</b> 21:3 <b>likelihood</b> 104:7 <b>limitation</b> 60:22 65:6 110:11 111:2 180:12 199:20 <b>limitations</b> 107:21 137:7 <b>limited</b> 24:20 <b>limits</b> 50:2 <b>line</b> 86:12 103:3 124:15 138:9 173:16 181:8 236:11 <b>linear</b> 193:4 <b>lines</b> 27:17 81:10 <b>linguistically</b> 48:16 <b>lip</b> 70:21 98:17 190:22 <b>list</b> 10:15,18 11:3 11:5 14:3 <b>literally</b> 138:14 <b>litigation</b> 12:7,14 <b>little</b> 32:19 63:18	79:22 94:19 117:8 126:12 128:6 131:3 143:17 149:11 159:20 167:13 168:4 187:19 223:11 <b>live</b> 125:20 <b>LLC</b> 236:1 <b>LLP</b> 2:5,11 <b>location</b> 64:17 <b>locations</b> 97:4 <b>long</b> 8:19 9:18 59:3 66:12 97:3 98:20 101:19 102:6 103:5,9 103:13 107:10 130:13 132:22 146:13 147:9 147:11 181:13 <b>long-term</b> 28:7 <b>long-winded</b> 58:13 161:7 <b>longer</b> 99:17 115:18 157:6 157:11 <b>look</b> 17:17 27:11 27:13,15,20 28:1,8 33:9 40:4 65:20 66:13 69:16 70:6,15 73:2 75:22 78:12,19 78:21 81:6,21 82:1 93:15 99:12 106:21 112:10 114:15 116:1 120:2,4 120:22 121:1 122:4,11,22 123:7,11 124:4 124:12,14 125:5 126:1 127:8 130:13 131:6 132:14 133:7 135:13 138:5 146:21	156:21 158:6 161:8 164:3 166:4 169:12 170:11 176:13 198:10 204:16 205:2 216:3 218:15 223:1 224:5,10 226:4 226:6 229:3 <b>looked</b> 29:12 30:1 40:12 79:6 193:19 203:22 204:1 226:9 <b>looking</b> 8:17 33:20,22 50:14 57:21 78:15 82:6 86:3 91:5 99:6 100:7,20 100:22 107:14 112:18 115:15 115:20 127:12 128:13 130:1 131:16 136:11 139:8 143:1 148:10 172:6 187:7 188:13 189:12 199:4 200:6 222:3,5 222:13 223:17 225:4 231:2 <b>looks</b> 69:13 120:3 125:12 127:9 131:7 133:7 160:1,4 171:9 187:22 201:18 222:13 <b>Lori</b> 1:18 4:5 233:1,8 <b>lose</b> 110:17 <b>lot</b> 41:18 137:18 159:17 193:6 193:19 196:15 202:9 <b>lots</b> 169:1 <b>love</b> 140:19 141:17 162:22 186:15
--	--	--	--	---

<b>low</b> 15:7	236:10	83:11,16 85:3	64:17 67:17,19	<b>meet</b> 9:7,11,18
<b>lower</b> 146:2	<b>marked</b> 4:8	87:4,8 89:19	72:11 73:9	26:2 56:13 66:4
<b>lull</b> 8:18	18:16 33:15,16	90:20 91:7,17	74:13 111:5	80:2 137:6
<b>lunch</b> 96:2,5	164:5 166:7	91:22 92:5,13	112:13 115:21	213:19
99:16	169:6 204:18	93:10,19 94:1	121:20 127:5	<b>meetings</b> 9:10
<b>lying</b> 32:3	<b>Markel</b> 4:12	94:17 99:2	152:3 157:10	<b>meets</b> 107:20
<hr/> <b>M</b> <hr/>	20:19 21:3	101:7 102:14	165:9,19	<b>melts</b> 157:5
<b>M</b> 1:21 235:1	192:13,16	103:14 104:9	168:16 198:1	<b>members</b> 38:18
236:2	204:16,17	105:4,15	202:4 220:12	<b>mention</b> 20:17
<b>macroscopic</b>	205:3,5,15	107:11 110:9	<b>meaning</b> 14:7	151:19
108:14 111:12	224:10 225:4,6	111:2 112:8	28:15 42:14,21	<b>mentioned</b> 26:6
161:5,15	<b>market</b> 27:22	113:5 134:5	43:5,8,11,14,18	30:5 36:7 48:10
<b>magically</b> 79:22	28:12,15 36:9	142:7 144:12	44:3,8,12,16,19	49:11 78:10
<b>magnitude</b> 110:6	36:17 39:7 41:6	144:21 145:8	45:4,11,21 46:7	112:1 194:9,11
<b>main</b> 2:7 17:12	41:10,18	146:1,12,14,18	47:10 48:3 50:3	<b>merely</b> 84:15
231:15	<b>MARTENS</b> 2:5	146:20 147:8	50:22 115:9	<b>met</b> 78:5
<b>maintained</b>	2:11	147:10,14,16	165:7 166:18	<b>metal</b> 37:15
197:2	<b>MARYLAND</b>	147:19 148:6	168:3 178:6	196:7,7 208:6
<b>making</b> 103:3	233:13	148:20 151:3	<b>meaningful</b>	<b>metallic</b> 208:15
167:17 200:17	<b>Masimo</b> 1:3 2:4	151:16 152:10	109:10 159:21	<b>method</b> 104:2
<b>male/female</b>	4:3 9:2 11:9	152:15 153:5	<b>meaningless</b>	<b>methods</b> 40:17
196:21	47:4 173:21	153:11,18	110:22	<b>micro</b> 107:12
<b>manufacture</b>	174:8 175:8	154:4 155:1	<b>means</b> 43:2 46:4	160:9
117:13 121:10	176:2,14 202:5	156:5,6,17	47:2 49:14 51:7	<b>micrometer</b>
<b>manufactured</b>	234:3 235:4	158:12,20	51:17 53:4	107:2 113:1
102:18 117:7	236:8	159:13 162:17	77:16,18 109:5	<b>micron</b> 113:16
<b>manufacturing</b>	<b>mass</b> 166:13,20	163:21 167:6	153:2 175:12	114:2 115:2,5
118:6 121:15	167:13 168:7	191:6	210:4 216:2	116:11 161:5
134:16 152:11	168:14	<b>material'</b> 43:16	228:12	<b>microns</b> 113:10
198:8	<b>Master's</b> 26:7	<b>materials</b> 10:15	<b>meant</b> 159:4	113:11,12
<b>map</b> 173:7,14	<b>material</b> 9:6 43:2	11:3,17 23:15	<b>measure</b> 228:22	114:5 116:11
174:17	43:3 44:11,21	31:3 196:22	229:21 231:15	116:19
<b>mapped</b> 180:11	45:13 46:1,9,17	209:3 231:5,6	<b>measurement</b>	<b>microscope</b>
<b>mapping</b> 174:6	46:18 49:16	<b>math</b> 198:17,19	230:10,11	118:7 120:15
175:6,10 176:7	50:10,17 51:2,9	<b>matter</b> 28:3 97:2	<b>measurements</b>	122:11 125:10
176:10,18,21	51:10 52:16	97:6 103:21	126:9 228:2	125:11
177:3,21	54:4 55:2,14,20	107:9 113:9	<b>measuring</b> 36:12	<b>microscopes</b>
178:14 179:10	56:6,13 58:7	119:9,10 120:1	130:4 230:12	124:4
179:20	59:6 60:2,3,6	160:14 234:6	<b>mechanical</b>	<b>microscopic</b>
<b>mappings</b> 173:22	60:14,19,20	<b>matters</b> 12:14	24:13	160:22
174:8 175:8	61:18 62:12,15	22:1 76:11 97:9	<b>mechanically</b>	<b>middle</b> 6:22 41:1
176:15,21	62:17 65:3,5	97:21 116:15	195:13	128:9,19
180:5	66:7,14,19 67:2	<b>mean</b> 22:6 28:5	<b>medical</b> 16:4	151:12
<b>marble</b> 160:2	67:3,5 72:10	35:20 45:6	17:2 18:6	<b>mil</b> 116:19
<b>March</b> 1:15 4:4	73:14,14 74:6,8	48:14 49:13	<b>medication</b> 7:7	<b>millimeter</b> 107:2
5:1 234:4 235:5	74:9 75:8 76:16	50:8 51:5,12	<b>Medtronic</b> 15:6	183:11
	79:14,18 80:4	60:17 61:21	26:13 27:5	<b>millimeters</b>

111:13 113:6 114:4 183:3 <b>million</b> 113:13 <b>Mills</b> 4:13 20:21 21:6,9,12 169:10,12,13 169:15,17 170:12 173:4 173:12 176:11 177:5,6 178:15 179:22 184:6 185:17,18,21 187:8,9,10 189:13 190:1 191:19 192:2 192:13,14 194:1,16 195:16 196:2,4 197:9,14 198:5 198:11,22 199:4,5 200:12 201:5 208:3 209:5 222:22 223:4,18,21,22 224:5 <b>Mills'</b> 192:1 <b>Mind</b> 33:9 <b>minimal</b> 183:13 <b>minimum</b> 183:9 <b>Minneapolis</b> 2:19 5:21 96:3 234:2 <b>Minnesota</b> 2:19 5:19 131:9 234:2 <b>minus</b> 116:11,19 125:1 <b>minute</b> 109:15 111:21 130:2 <b>minutes</b> 59:10 61:6,6 99:18,20 162:4 179:13 211:21 213:10 232:2 <b>minutia</b> 73:17 <b>misrepresenting</b> 146:22 <b>mistake</b> 21:7,10	21:13 <b>mistaken</b> 8:15 <b>misunderstand...</b> 175:4 <b>mobile</b> 205:20 <b>modern</b> 16:15 <b>moisture</b> 185:7 <b>molded</b> 162:12 162:19 <b>molding</b> 101:17 163:7 <b>moment</b> 13:21 148:4 192:11 195:12 224:21 <b>monitor</b> 18:6 21:4 39:14 40:19 <b>monitoring</b> 16:20 36:9 39:4,8 41:19 208:8 <b>monitors</b> 16:4,8 17:2,7 39:17 <b>monolayer</b> 64:16 65:9 108:8 126:10 <b>morning</b> 5:12,13 163:5 <b>move</b> 213:18,20 <b>moveable</b> 197:9 197:20 212:13 212:19 215:3 <b>moved</b> 209:19 210:5 214:5 <b>movement</b> 196:15 210:13 <b>moving</b> 196:17 197:3 <b>mushy</b> 159:7 <hr/> <b>N</b> <hr/> <b>naked</b> 106:22 108:15 123:3 127:1 129:13 130:14 132:19 133:13 <b>Name</b> 235:5 236:9	<b>names</b> 36:19 <b>nanoscale</b> 107:13 <b>narrower</b> 48:3 49:3 <b>nature</b> 160:21 <b>necessarily</b> 142:4 183:14 206:11 220:13,16 221:7,12 223:15 <b>necessary</b> 43:10 67:12 195:4 199:22 <b>need</b> 7:22 20:15 21:17 39:8,9 46:3 52:15 54:13 56:2 58:18 68:18,21 69:12,16,18 70:5,8 71:5 74:8 77:18 78:4 79:13 81:13 90:19 98:2,12 109:12 111:3 112:7 115:12 122:10 125:10 146:12 147:7 148:1 152:9 153:5 179:14 194:19 196:10 199:19 200:3 206:12 211:22 213:20 216:18 218:8 227:11 <b>needed</b> 109:22 <b>needs</b> 58:20 67:5 79:17 <b>neither</b> 52:7 63:7 161:11,19 233:3 <b>never</b> 31:6 33:2 209:16,21 210:15 <b>new</b> 129:10 156:18 158:14 158:20 195:1 <b>news</b> 231:21	<b>nice</b> 164:22 172:2 <b>night</b> 41:2 <b>Nike</b> 36:11 37:3 37:22 38:10 39:6 <b>nitride</b> 209:1 218:2 <b>nitrogen</b> 208:17 <b>noble</b> 196:7 <b>noise</b> 229:5 <b>Nope</b> 19:3 <b>normal</b> 104:11 184:5 <b>normally</b> 97:12 104:13 130:3 <b>northern</b> 131:8 <b>Notary</b> 233:1,2,8 233:10 235:22 <b>notches</b> 105:13 <b>noted</b> 235:11 <b>notes</b> 19:2 <b>notice</b> 130:15 <b>noticeably</b> 134:14 161:15 <b>noticing</b> 234:12 <b>noting</b> 234:12 <b>notion</b> 71:22 152:13 212:12 <b>nots</b> 191:9 <b>November</b> 24:6 26:1,17,22 27:20 28:12 29:22 32:9 36:6 38:10 39:1 41:8 228:1 229:17 230:8 <b>nowadays</b> 196:5 <b>number</b> 6:3,6 14:21 25:16 35:10 62:11 178:18 199:16 230:1 233:10 <b>numbered</b> 21:21 <b>numbers</b> 21:21 222:17 <b>nurse</b> 31:18,22 <b>NW</b> 1:21 235:1	236:2 <hr/> <b>O</b> <hr/> <b>object</b> 49:21 50:6 50:11 52:18,19 52:20 53:5,6 60:18 62:4 66:15,17 76:6 78:7 79:10,10 79:20,20 80:11 80:11 84:21,21 84:22 88:19 91:2 94:8 95:14 95:15 96:18 101:11,12 106:21 111:6,7 111:8,10,18,20 119:12 120:18 123:20,21 124:1 127:15 133:14,15 134:2 135:5,6 141:1 143:13 143:19,21 150:20 151:2,6 151:13,15 156:2,16,16,18 158:7 161:11 165:10,11 210:11,12 226:21 <b>objection</b> 76:17 127:3 144:15 175:17 178:3 178:16 180:1 202:3 205:7 <b>objective</b> 104:19 <b>objects</b> 51:22 52:2,6 53:3 62:6 65:13 118:21,22 119:5 120:6 121:1 123:8 155:4 159:9 212:12 <b>obnoxious</b> 176:17
--	--	---	---	---

<b>obvious</b> 109:5 110:18 123:19 125:7 157:6,7 223:9 <b>obviously</b> 128:16 134:15,17 219:20 <b>occasionally</b> 195:18 <b>occurred</b> 31:6 <b>offer</b> 21:1 <b>offered</b> 27:18 39:13 <b>offerings</b> 17:21 <b>office</b> 1:1 96:3 234:7,15 <b>official</b> 29:19 <b>oh</b> 5:15 122:7 128:16 131:10 216:6 <b>okay</b> 6:13,13 7:19 10:8 18:19 19:4 33:13 34:18 42:7 59:15 61:4,15 64:3 74:7 80:18 96:8 99:14,19 100:1,17 115:17 124:6 132:20 135:21 136:14 137:9 140:6 141:3 145:6 148:6,21 152:17 153:14 162:2,6,18 165:2 167:1 169:11 170:3 182:2 189:12 190:12 191:17 197:19 198:11 204:22 205:4 207:11 223:2 224:22 226:7 231:19 <b>old</b> 128:5 129:11 <b>OLSON</b> 2:5,11 <b>once</b> 73:11 77:22	121:22 210:8 217:8 <b>ones</b> 126:5,5 <b>open</b> 56:21,22 57:1,13 77:6 167:15 <b>opened</b> 30:16 163:19 <b>opening</b> 142:17 142:19,20,21 143:19,20 144:10 171:15 186:8 216:9 <b>openings</b> 143:2 154:9 <b>opens</b> 143:9 <b>opinion</b> 24:1,8 28:3 42:18,19 44:13,17 54:8 81:4 86:17 93:5 192:17 195:8 197:19 202:17 210:6,14 211:13,18 214:11 223:17 <b>opinions</b> 19:10 19:12,13,17,20 20:10 42:12 173:16 174:3,7 <b>opportunities</b> 16:7 <b>opportunity</b> 17:19 230:3 <b>opposed</b> 61:22 <b>opposite</b> 207:6 <b>option</b> 209:14 234:9,10 <b>options</b> 229:7 <b>order</b> 9:7 46:4 54:14 56:3 70:3 70:16 71:9 90:21 91:22 97:22 98:14 108:17 112:7 137:6 183:3 193:16 200:4 <b>orders</b> 110:6	<b>ordinary</b> 24:1,5,9 25:8 26:4,16,22 27:19 38:9 42:14,15,20 43:5,8,11,14,18 43:21 44:3,7,12 44:16,18,19 45:4,10,11,21 46:2,6,22 47:6 50:21,22 56:14 66:5,13 67:1 68:1 70:19 73:1 74:3 75:3 76:4 77:11 78:6,11 78:18 79:8 83:8 83:18 84:11,20 85:6,11,15 86:2 87:1,6 89:16 91:4,9,10,15 92:11 93:1,5,14 99:5 101:11 102:2,12 105:19 106:20 108:4 112:10 112:18 113:3 114:14 116:6 117:22 119:15 120:2,10,22 121:8 122:3 123:22 124:3,6 124:16 125:9 127:7 128:12 130:9,17 131:13 132:13 133:6,10 134:12 135:2 135:12 137:18 144:20 145:21 146:21 147:11 148:17 151:1 151:14 154:14 155:21 156:20 160:6,17 161:8 161:22 165:7 166:2,18 167:16,18 168:3 172:5	182:14 184:8 184:19 188:13 191:2 192:18 193:8 194:7 196:19 197:11 198:14 200:14 212:3 214:14 216:10 217:20 218:13 219:3 221:2 223:7 229:19 <b>organization</b> 27:4 <b>original</b> 234:11 <b>orthogonal</b> 71:5 <b>Oslan</b> 9:3 47:3 52:5 62:19 63:11 128:2 173:20 174:9 175:8 176:2,14 202:5 <b>Oslan's</b> 51:21 <b>ought</b> 23:14 <b>outcome</b> 233:6 <b>outer</b> 81:15,19 86:14 171:7,18 186:10 190:17 208:10 <b>outside</b> 128:20 150:2 178:5 182:1 183:7,17 183:19 197:16 <b>outward</b> 97:8 163:8 <b>overall</b> 109:2 <b>overcome</b> 197:4 <b>overdue</b> 228:12 <b>overlap</b> 168:17 168:22 <b>overlook</b> 133:10 <b>overlooking</b> 106:17 <b>owner</b> 1:8 2:15 232:10 <b>owners</b> 131:10 <b>oxide</b> 195:21 197:1	<b>oxides</b> 196:8 <b>oximeter</b> 17:5 <b>oximetries</b> 16:12
<b>P</b>				
<b>P.C</b> 2:16 234:1 <b>p.m</b> 100:4,5 162:8,9 225:1,2 232:7,8,13 <b>pace</b> 18:1,2 <b>pacemaker</b> 15:21 <b>pacemakers</b> 15:1 15:12 26:14 <b>package</b> 185:6 197:16 <b>packages</b> 30:17 <b>pad</b> 17:8 30:12 30:20 31:12,15 32:11 33:8 34:3 34:5,7,12,13,19 35:1,3,17,19 36:3 39:18 52:15 56:2,5,9 56:12 58:17 60:13 62:12,14 62:16 63:13,16 65:5 66:18 67:1 67:2,5,7,18 73:14 74:8,13 74:21 78:12,15 78:16 79:13,16 83:1,6 85:1 89:15 90:5,5 99:2,4 100:13 100:18 101:3,4 102:8,9,19 103:9,17 104:5 104:9,20 105:9 105:10 106:2,5 107:16,17,20 107:21 108:2 108:12,17 109:19 112:2,8 121:13 122:20 124:9 127:1 131:19,20 132:7,21 144:7				

144:9,11,12,14	80:15 83:20	177:4,5,8,9,11	71:16,21 72:4,5	217:14 225:9
146:11,13,14	87:9,13 88:7	177:13,18	72:9,9,17,21,21	225:21 230:1
147:7,8,10,12	94:20 112:5	178:2,15,19	73:13 74:5,7	<b>particularly</b>
147:17 148:7,8	135:19 136:1	179:1,11,11,21	75:6,7,12,17	14:21 165:18
148:13,15,18	136:10,11	180:13,15,16	76:6,6,14,15	<b>particulars</b> 11:12
148:22 177:9	151:18 152:6	181:11,15	77:2,12,17,17	92:10
192:7 199:12	191:15,18	183:6,14 186:1	78:2,3,16,20,20	<b>parties</b> 233:4,5
199:14,15	192:12 207:9	188:2 190:8	79:17,18 80:3,7	<b>partly</b> 65:2 66:6
200:5,10,12,13	214:7	194:1,12	80:7 83:10,10	75:13,18 76:1,1
200:13,14,15	<b>Paragraphs</b>	200:20 210:14	83:13,15 85:1,2	77:2,7 93:2,3
200:16,17,18	205:12	211:17,20,20	87:3,3,7,8	103:13 107:10
200:21 201:4,6	<b>parallel</b> 52:2	212:20 213:6,6	89:18,18 90:4,6	113:5 129:1
201:17,19,22	63:1,6 94:4	214:12 216:8	90:8,11,14,15	130:19 133:14
202:2,8,15,15	118:20 155:4	216:15 218:18	90:16,16,21	143:15 144:20
202:19 213:14	205:6,9,11,13	218:22 219:10	91:6,7,16,17,20	144:21 146:1,9
214:2	205:15 206:3	219:11,12,14	92:1,12,15 93:9	147:13 149:18
<b>pads</b> 15:11 29:10	207:1	219:20 220:4	93:10,20 94:1	151:2,3,16
29:18 30:18	<b>parameters</b>	220:13,17	94:12,16 97:4	158:11 160:10
32:17 37:13	43:10 217:17	221:1,4,11,19	97:15 98:1,13	160:10 161:18
101:13 199:14	<b>Pardon</b> 198:19	223:13 224:4,8	98:20 99:4,7	163:22 165:20
200:8	<b>parents</b> 10:6	<b>partial</b> 54:11	102:10,13	166:22 167:6
<b>page</b> 3:4 4:10	<b>parse</b> 78:4	71:9	103:14 104:7	167:22,22
20:18 21:2	<b>parsing</b> 35:14	<b>partially</b> 43:15	104:22 105:3	168:19,19
23:12 42:6	<b>part</b> 14:20 17:15	43:15 44:10,10	105:11,20,22	<b>parts</b> 29:5 30:16
84:10,10 86:4	25:3 27:4 32:11	44:20,21 45:12	106:5,18 107:5	34:19 75:20
110:7 120:17	32:16 35:14	45:13,22,22	119:12 124:1	76:10 102:6
164:9 192:12	36:13 45:15	46:8,8,16,16	132:17 133:21	122:13 124:22
234:12 235:4	47:17 53:4 54:9	49:15,15,21,21	134:7 145:22	125:2 157:17
236:11	57:5 60:1 68:3	50:10,16,17	146:9 147:13	173:3,12,12
<b>pages</b> 20:22	78:4 81:14	51:1,1,4,6,9,9	147:18 148:8	181:12 182:10
22:21 235:7	82:19 83:1,4	51:11,18 52:10	148:19,19	182:13,16,21
<b>pair</b> 37:7	84:10 90:3	52:10,14,21	149:1,18	183:16 185:10
<b>pairs</b> 72:19 229:3	94:10,11 95:18	53:4,21,21 54:3	151:15 154:15	185:10 190:5
229:4,6	102:17 106:12	54:7 55:2,13,14	154:16 158:11	194:3 197:3
<b>paper</b> 54:18,22	109:2 113:17	55:20 56:5,6,12	158:19 160:18	199:20 215:4
55:17 73:20	122:7,8,9 127:7	56:12 58:20	160:18 163:16	215:21 216:13
110:2,2,4,6	134:17 135:14	59:5,18 60:5,11	163:16,22	216:14,17
206:17	135:14,18	60:17,17 61:17	165:20 166:21	<b>patch</b> 35:6 37:20
<b>paperback</b> 128:8	142:15 144:2	61:17,21 62:7	167:5 168:9,9	<b>patches</b> 30:8
128:10 129:16	144:19 150:9	62:17 63:3	172:13 186:19	<b>patent</b> 1:1,1,6,8
<b>papers</b> 17:22	154:9 158:22	64:12 65:2	191:3	2:15 4:11 6:2,9
18:21	163:9 165:4,11	66:15,17,19	<b>particular</b> 29:11	6:10,10,15 8:17
<b>paragraph</b> 21:9	165:13,14,21	67:2,3,4,6,14	31:19 41:13	11:10 12:4 13:2
23:13 24:7 42:5	172:22 173:5	67:14,19,19	49:19 51:15	17:16 19:7,11
42:8,17 44:22	173:13 174:12	68:2,19 69:4,14	52:18 73:6 79:7	20:12 21:18
46:10 47:17	174:13,19	70:5,9,12,17,20	124:15 167:7	22:4,12 23:5
50:15 61:11	175:16 176:11	71:1,13,13,16	167:14 182:18	24:2 32:18 33:6

33:8,10,14	2:13	102:2,12	<b>pieces</b> 33:3 217:6	124:22
34:22 35:18,21	<b>pause</b> 17:10	105:19 112:10	223:10	<b>pocket</b> 143:5,10
37:20 42:13	<b>pay</b> 118:12	114:14 115:15	<b>pin</b> 196:21	143:18 163:20
43:6 44:2,14	<b>PCB</b> 192:7 201:7	115:17 117:22	<b>pins</b> 192:22	164:1 183:22
47:2,19,21 48:6	<b>peel</b> 41:3	124:3,6,16	<b>place</b> 33:20 41:3	<b>point</b> 27:14 78:5
48:11,14 49:13	<b>penetration</b> 53:1	130:9,17	57:1 97:12,16	135:10 165:17
56:1 74:17	156:22	134:12 135:2	117:6 127:21	223:16
80:20 81:9 82:2	<b>PENNSYLVANIA...</b>	135:12 137:18	128:8 129:16	<b>points</b> 206:12,20
82:5 84:11	233:20	146:20 160:6	151:9 176:5	<b>polished</b> 117:10
86:12,16 87:15	<b>people</b> 10:3 15:4	160:17 161:8	195:6 199:21	160:2
88:9 100:8,15	36:10 39:3,12	167:16,18	230:8	<b>pondering</b> 212:1
107:15,22	88:20 120:10	172:5 192:8	<b>placed</b> 31:8 37:7	<b>pop</b> 194:22
109:1 111:2	<b>perceive</b> 130:17	193:8 198:13	51:12 54:5,19	<b>pores</b> 159:13,20
112:21 122:6	<b>perceived</b> 28:10	212:3 214:14	62:14 64:6	160:3,12
124:14 131:17	<b>percent</b> 120:12	221:2 229:16	109:4 123:20	<b>portion</b> 11:19
138:4 139:17	189:21	229:19 230:7	132:7 141:1,7	30:12 39:22
140:2 145:5	<b>percentage</b> 61:2	<b>personally</b> 18:5,9	186:5 230:20	60:13,18,19
151:21 152:7	<b>perceptible</b> 96:21	<b>persons</b> 112:17	<b>places</b> 14:2 23:9	63:13,16 64:6
161:3,21	<b>perform</b> 69:4	188:13	101:1 167:15	66:18 67:5 68:7
175:13 176:12	198:1 214:13	<b>Petitioner</b> 1:4 2:4	193:21	72:2,14 84:14
178:11 182:4	<b>performance</b>	<b>Ph.D</b> 1:13 3:2 4:2	<b>placing</b> 68:16	84:17,22 85:18
184:6,13,15	36:9	5:5 16:18 25:6	102:22	85:21 94:8 95:1
188:7 190:1,1	<b>performing</b>	25:15 26:7,10	<b>plain</b> 42:20 43:4	97:2,13 109:20
192:19 198:3,6	110:18	69:21 126:9	43:7,10,14,18	109:20 120:8
198:10,15	<b>performs</b> 110:14	234:1,4 235:5	44:3,7,11,16,19	136:3,18,20
199:11,13	<b>perimeter</b> 112:14	236:9	45:3,11,21 46:6	137:6 138:1
200:7,9 201:5	143:22 190:20	<b>phrase</b> 46:3,7,19	50:22 166:17	145:12 156:17
201:11,21	225:12	50:13 67:20	168:3	170:7,14
211:7 218:15	<b>period</b> 234:13	73:13 151:19	<b>plan</b> 8:1	171:12 172:8
221:17 223:5	<b>periodically</b>	169:3 196:1	<b>plane</b> 150:22	172:10 180:4,6
223:20 226:5	194:20	<b>phrases</b> 49:2	206:6,9,11,13	180:15,19,21
226:12 232:10	<b>person</b> 24:5,9,11	<b>physical</b> 65:14	206:16,21,22	181:1,3,3,7,9
<b>patentability</b>	25:8 26:16,22	67:10 102:1	207:1,3,3	181:19,22
19:11	27:19 38:9	104:11 109:13	<b>planes</b> 205:6,9,11	186:22 189:7
<b>patents</b> 13:4	42:15 43:21	121:1	205:13,15	190:17 191:4
27:12 124:21	44:18 45:9 46:2	<b>physically</b> 213:18	206:1,3	199:6,6,11
162:1 221:14	46:22 47:6	<b>physics</b> 24:14,16	<b>Plastics</b> 231:8	200:4,11 201:1
227:22	50:21 56:14	25:6 69:21	<b>plating</b> 208:10	201:3,9,13,16
<b>path</b> 35:11,16	66:5,12,22 68:1	227:9	214:11	202:1,8,13,14
193:5	70:19 73:1	<b>physiological</b>	<b>play</b> 181:14	202:18 207:20
<b>patient</b> 30:13	77:10 78:6,10	24:21	224:7	211:9 212:9,22
32:3,12 33:1	78:14 79:8 83:8	<b>pick</b> 18:19 127:7	<b>played</b> 184:20	213:15 214:3,8
34:20 38:8	83:18 84:11,19	206:20	<b>plays</b> 170:20	215:6 218:7
39:19 40:21	85:6,11,15 86:2	<b>picking</b> 184:1	<b>please</b> 234:6,10	220:7
41:19	89:16 91:4,9,15	<b>piece</b> 30:3 58:7	234:11,14	<b>portions</b> 72:12
<b>PAUL</b> 2:11	92:11 93:1,5,14	124:13 157:11	<b>plug</b> 143:11	92:4 96:12
<b>paul.spiegel@kn...</b>	99:8 101:10	173:15 216:16	<b>plus</b> 116:11,18	122:1,2 145:18

157:16 181:6 189:17 199:7 199:22 215:9 <b>POSITA</b> 42:15 43:1,13 45:9,20 207:14 <b>position</b> 55:19 74:22 88:2,15 95:5 103:10 137:9 205:19 209:10,11,12 209:17 210:2,9 210:16 211:2 212:4 213:22 <b>positioned</b> 16:1 84:15 85:19 87:16 100:16 100:18 136:19 136:22 137:21 137:22 148:11 150:21 151:13 158:10 186:2,7 207:18 209:17 209:18 210:3,7 210:18,20 211:8,10,12,16 213:14,22 214:2 <b>positioning</b> 209:14 210:11 211:4,19 213:5 <b>positions</b> 59:2 <b>possibility</b> 40:16 207:17,19 229:12 230:6 <b>possible</b> 70:18 72:19 141:19 173:22 213:16 <b>possibly</b> 160:22 194:18 226:3 <b>potential</b> 228:22 230:12,15 231:16 <b>poured</b> 155:7 157:4 160:7 161:10,16 <b>power</b> 15:7	<b>practical</b> 108:20 <b>practically</b> 74:12 <b>practitioner</b> 31:18,22 <b>pre-November</b> 36:2 <b>precise</b> 167:14 168:21 <b>precisely</b> 117:7 <b>precision</b> 118:13 123:10 125:19 <b>precludes</b> 207:17 <b>prefer</b> 76:1 196:20 <b>preferably</b> 208:5 208:15 <b>preparation</b> 8:7 8:22 <b>prepare</b> 8:4 9:8 9:11,19 10:14 10:20 <b>prepared</b> 8:11 22:15 <b>preparing</b> 9:5 <b>prescribed</b> 200:2 <b>presence</b> 101:9 <b>present</b> 2:21 41:7 154:7 155:22 175:6 <b>presented</b> 41:13 <b>press</b> 19:3 <b>pressure</b> 7:8 <b>pressures</b> 183:8 <b>pretty</b> 5:15 75:2 125:12,13 127:10 131:7 133:8 150:4 167:21 203:19 214:20 <b>prevent</b> 105:10 <b>previous</b> 79:12 <b>previously</b> 4:8 18:16 33:15,16 112:1 127:18 164:5 166:7 169:6 186:15 204:18	<b>principle</b> 23:17 <b>principles</b> 22:17 22:22 23:3,7,11 23:19 <b>printed</b> 203:1,3 203:13,17,21 204:6 <b>prior</b> 26:6 28:12 28:22 29:22 31:8 32:9 36:5 39:1 40:5 41:8 106:13 122:5 124:13 150:3 161:20 173:15 191:9 <b>probably</b> 6:22 9:22 12:22 35:10 38:13 39:7 83:18 90:12 92:14 93:14 113:8,18 114:21 117:2 118:15 119:4 129:22 133:18 140:20,22 143:1,8 160:3 160:17 185:4 188:14 206:5 208:22 228:12 <b>problematic</b> 200:18 <b>problems</b> 108:20 181:20 185:8 231:11,11 <b>procedure</b> 38:19 234:14 <b>proceeding</b> 11:16 19:7 <b>proceedings</b> 5:2 7:2 <b>process</b> 79:4 101:17 104:12 104:18 105:16 124:12 152:12 163:3 193:15 211:9 <b>processes</b> 104:15	118:6 <b>processing</b> 24:19 <b>processor</b> 34:7 34:21 35:4,12 35:17,19 <b>produced</b> 102:6 <b>product</b> 27:17 37:3,16 74:22 109:10 183:3 183:19,21 184:10,11,21 185:14 194:7 196:17 197:2 217:7 <b>products</b> 17:17 27:16 28:21 29:1 36:8,16 37:22 38:11 41:7,18 124:21 185:14 193:18 196:6 <b>professionally</b> 126:13 <b>progression</b> 114:19 <b>properly</b> 68:12 <b>properties</b> 65:15 108:10 195:19 215:11 <b>proposals</b> 176:13 <b>propose</b> 175:10 176:2 <b>proposed</b> 47:4 174:8 175:8 176:21 <b>proposing</b> 115:4 <b>protect</b> 185:6 190:8 217:6 <b>protecting</b> 231:10 <b>protection</b> 185:13 <b>protrude</b> 90:20 91:22 92:4 <b>protrudes</b> 99:7 <b>protruding</b> 72:3 92:15	<b>protrusion</b> 60:1 73:21 74:1 <b>protrusions</b> 53:12 59:20 60:5 76:22 105:18 106:4 <b>provide</b> 20:4 34:6 35:3 38:7 46:11 71:9 109:11 185:5 185:12 192:20 193:12 194:10 215:7,8 217:10 218:8 <b>provided</b> 173:21 187:20 <b>provides</b> 47:17 194:13 197:14 <b>providing</b> 219:21 <b>provisionals</b> 198:4 <b>Public</b> 233:8 <b>publications</b> 16:11 27:12 <b>pull</b> 18:14 82:1 164:8 <b>pulse</b> 16:12 17:4 17:6 <b>purchased</b> 234:8 <b>purpose</b> 133:12 191:22 204:3 <b>put</b> 57:12 73:22 118:18 133:18 142:18 143:14 154:11 178:14 179:10,20 195:2 204:21 210:20 219:22 <b>putting</b> 37:16 147:2 183:22 <b>putty</b> 134:4
<b>Q</b>				
<b>Qualcomm</b> 13:12				
<b>qualifications</b> 24:8				
<b>quality</b> 38:7				



120:15	<b>reached</b> 78:5	<b>receives</b> 188:2	127:13	<b>relevance</b> 31:2
<b>quantify</b> 67:11	<b>read</b> 17:22 24:7	<b>receptacles</b>	<b>reflects</b> 19:12	144:15 178:3
<b>quarter</b> 17:13	27:10 44:22	192:22	<b>regard</b> 52:8 55:1	178:16 180:2
<b>question</b> 12:21	46:11 80:16	<b>recess</b> 61:8,9	58:10 110:3	202:3 205:7
14:11 22:9 32:5	164:20 165:2	100:4,5 141:6	<b>regarded</b> 41:6	<b>relevant</b> 24:18
68:11 70:1 73:5	211:5,17	162:8,9 188:1,5	56:7 66:16 80:8	91:14 113:8
82:20 85:9 86:9	213:12 235:6	225:1,2 232:7,8	109:2 111:18	115:3 116:21
96:7 108:6	<b>readily</b> 28:6	<b>recessed</b> 188:9	117:12 118:16	117:2,14 119:1
136:7,14	<b>reading</b> 9:2	189:7,16 190:9	<b>regarding</b> 14:4	<b>reliable</b> 28:7 76:5
143:16 146:4	47:20 84:9	190:14,17	19:10 20:12	193:2
146:17 147:1	138:8,14	<b>recited</b> 181:9	24:1 44:1	<b>relied</b> 42:3
148:5 149:19	212:14,15	<b>recognize</b> 44:19	<b>regardless</b>	<b>reluctant</b> 32:19
149:22 154:3	214:3 223:8	50:21	107:12,17	<b>rely</b> 23:18
158:16 160:21	<b>ready</b> 234:6	<b>recognized</b> 43:13	<b>regards</b> 67:17	<b>relying</b> 139:2
168:8 170:10	<b>real</b> 65:14 120:18	45:10 67:1	<b>region</b> 156:13	<b>remember</b> 18:3
177:17 178:17	<b>really</b> 11:18	84:12 85:16	159:4 208:11	29:3,14 32:14
179:16 199:19	30:22 89:8	<b>reconvene</b> 99:21	<b>regions</b> 118:8	35:9 36:18
205:22 206:2	91:14 107:9	<b>record</b> 33:14	<b>relate</b> 51:19	41:15 182:8
222:2 224:12	108:11 115:21	<b>recorded</b> 235:10	161:20	<b>remembering</b>
<b>questions</b> 7:17	116:3 129:12	235:14	<b>related</b> 11:14	37:3
20:2,7 59:13	141:20 158:21	<b>rectangles</b>	14:14 24:15	<b>REMOTE</b> 1:12
133:4 155:13	170:22 187:20	225:18	165:12 233:3	2:1
159:18 175:22	196:16 201:11	<b>rectangular</b> 71:5	<b>relates</b> 11:19	<b>removable</b> 194:3
231:20 232:3,9	201:11 206:19	<b>redefining</b>	<b>relating</b> 6:2	217:2
234:14 235:10	216:7 223:9	156:11	<b>relationship</b>	<b>remove</b> 194:19
235:13	225:9,16	<b>reducing</b> 40:19	48:19 49:20	194:22
<b>quickly</b> 22:1	<b>realm</b> 90:22	<b>refer</b> 6:10,14	50:6 53:14	<b>removed</b> 149:9
100:22 214:20	<b>Realtime</b> 148:1	98:10	55:19 159:10	163:7
<b>quite</b> 12:15,17	<b>reason</b> 7:4 92:6	<b>reference</b> 20:19	182:1 190:4	<b>Removing</b> 49:10
29:7 149:12	132:12 149:3	20:21 21:10,12	226:21	<b>render</b> 173:16
165:17 199:16	151:5 231:15	169:10 175:6	<b>relationships</b>	174:7
<b>quote</b> 21:9,12	<b>reasonable</b>	191:20 204:16	166:1	<b>rendering</b> 116:2
50:16	111:12 167:2	205:3 222:17	<b>relative</b> 16:1	188:19
<b>quoting</b> 151:21	167:21 171:19	222:22 224:10	19:18 49:7	<b>renderings</b> 172:6
	172:17 183:4	<b>referenced</b> 20:22	103:10 148:11	<b>repeat</b> 32:5
	186:16 188:20	234:6	182:13 184:3	<b>rephrase</b> 57:11
<b>R</b>	199:3	<b>references</b> 135:9	207:18 208:13	<b>replace</b> 194:19
<b>radii</b> 92:9,18	<b>reasonably</b> 195:3	<b>referral</b> 4:9	209:19 210:2	<b>replaced</b> 146:17
<b>radius</b> 114:9,10	<b>reasons</b> 180:21	18:18 33:18	210:11,12,21	157:14
<b>raggedness</b>	197:8 202:14	164:7 166:9	211:4,20	<b>replacing</b> 193:22
120:16	231:12,14	169:8 204:20	212:13,19	<b>report</b> 9:2 17:18
<b>ran</b> 30:8 34:13	<b>reassembleable</b>	<b>referring</b> 21:3	213:6,18,21	19:18,22 20:3
<b>rarely</b> 193:20	194:3	47:19 52:17	215:3 227:13	31:3 41:14
<b>rate</b> 17:6	<b>recall</b> 8:19 15:18	104:12 117:3	227:20 233:5	47:20 51:20,21
<b>ratio</b> 229:5	18:8 28:14	208:4	<b>relatively</b> 68:4	82:15 94:19
<b>ratios</b> 92:9	36:20 112:4	<b>reflection</b> 19:16	127:11 182:21	176:5 180:4,18
<b>re-ask</b> 211:22	203:5	<b>reflections</b>	227:12	192:10 202:9
<b>reach</b> 58:2				

<b>Reported</b> 1:18	200:2 204:15	<b>rigidity</b> 217:15	60:16 71:12	<b>sections</b> 21:20
<b>reports</b> 9:1	214:6 215:15	<b>role</b> 69:4 109:11	80:19 81:14	<b>secured</b> 100:14
<b>represent</b> 86:21	216:9	170:20 171:1	82:5 86:13	<b>see</b> 22:22 23:1,2
148:18	<b>restate</b> 147:21	181:14,22	100:15 138:15	57:22 58:2
<b>represented</b>	<b>resting</b> 57:20	<b>roles</b> 177:15,18	139:2,17 152:8	65:21 66:2,6,14
19:22	80:12	181:18 184:21	166:11 192:3	81:2,14 83:9
<b>representing</b>	<b>restore</b> 195:18	<b>rolling</b> 130:5	201:5	86:4 87:18
71:19	<b>retained</b> 12:2,6	<b>room</b> 125:13	<b>scale</b> 106:4,8,17	91:15 100:22
<b>represents</b> 50:11	12:13	129:20,20	107:1,3 113:1	106:21,22
121:1 222:19	<b>return</b> 228:13	130:3 131:2	114:3 115:10	107:1,4 108:14
<b>require</b> 42:21	<b>review</b> 10:13,17	<b>rough</b> 163:8	115:21 118:5	112:11 113:4,7
44:15 45:4,16	10:22 234:8	<b>roughly</b> 17:20	118:13 119:1	113:17,18
45:18 49:20	<b>reviewed</b> 10:16	29:15	119:13 120:20	114:15,16
62:11 66:9	11:6,13,18,22	<b>roughness</b> 106:8	121:7 126:14	120:15,19
73:13 79:19	<b>reviewing</b> 9:1,5	107:1 116:10	132:11 133:9	123:3,14,18
193:3 213:5	<b>RICHARD</b> 2:17	120:20 123:4	161:5 184:7	128:6,14 129:1
217:1,1,14	<b>RICHARDSON</b>	135:16	<b>scars</b> 161:15	129:3,4 130:5
<b>required</b> 110:18	2:16 234:1	<b>routine</b> 38:19	<b>scenario</b> 129:10	130:14 131:5
137:4 178:8	<b>Rick</b> 9:13	<b>RPR</b> 1:18 4:5	<b>scope</b> 115:13	131:15 132:11
229:22	<b>right</b> 5:20 8:16	233:1,8	<b>scratch</b> 27:3,7	133:14 136:5,7
<b>requirement</b>	19:20 32:4	<b>RSA</b> 1:19 4:6	<b>scratched</b> 106:13	145:7,10 160:4
108:1 148:9	33:10 47:20	<b>rubber</b> 231:8	161:13	160:10 161:6
<b>requirements</b>	57:11 59:15	<b>rubbing</b> 183:22	<b>scratches</b> 161:17	162:22 169:20
25:8 26:3	60:21,22 66:18	<b>rule</b> 64:14 65:9	<b>screen</b> 138:7,13	187:14 188:8
199:17	67:6 74:11	<b>Rules</b> 234:14	139:5 140:10	189:13 199:5,8
<b>requires</b> 84:13	76:16 79:15	<b>rupturing</b> 195:20	140:14,17	207:12,21
85:17 136:4,17	98:18 103:9		164:20 222:1	215:1 216:7
136:21 152:19	109:21 115:12	<b>S</b>	231:2	223:8,9,15,18
174:21 182:4	120:19 121:6	<b>San</b> 14:2	<b>screw</b> 189:14,15	224:5 232:3
184:15 210:2	124:10 134:11	<b>SARASOTA</b>	<b>screws</b> 187:14	<b>seeing</b> 10:6
211:19 212:18	136:12 142:14	233:9	194:22 195:3	<b>seen</b> 156:11
213:21 214:4	143:6 145:8,13	<b>satisfactory</b>	<b>seal</b> 171:3	163:22 176:22
215:2,20	147:3,19 148:9	108:15	<b>sealed</b> 62:8	<b>sees</b> 99:6
<b>research</b> 27:17	149:2 163:15	<b>satisfied</b> 78:1	<b>searching</b> 17:17	<b>selected</b> 234:10
203:4 204:9	167:3 169:20	<b>satisfy</b> 60:22	<b>Seattle</b> 2:12	<b>semantics</b> 23:16
<b>researchers</b>	170:1,9 171:15	63:14 65:6	<b>second</b> 43:3	<b>send</b> 205:19
26:11	172:1 177:2	66:20 73:7	52:19 85:2	206:9
<b>reset</b> 148:1	185:9,11 186:8	77:21 111:1	94:20 130:15	<b>sense</b> 75:12
<b>respect</b> 8:14	186:11,22	<b>satisfying</b> 148:9	180:21 181:6,9	102:21 163:1
87:14 133:5	189:14,18	<b>saw</b> 34:11	199:15,16	176:10 180:8
134:20 161:3	195:15 202:21	<b>saying</b> 50:2 58:13	200:13,18	197:13 207:7
210:13 215:18	205:11 212:14	63:5 69:6 98:5	202:2,15,19	<b>sensing</b> 15:8
<b>respond</b> 198:14	213:4,20,22	103:12 140:3	205:19 207:13	17:15 18:2
<b>responsible</b>	214:10 215:17	144:5 150:5	208:16 226:21	<b>sensor</b> 34:1,2
177:15	222:17 226:10	152:14,22	<b>section</b> 22:22	37:6 82:9,13
<b>rest</b> 105:21	232:11	179:6 203:7	23:6 59:14 82:5	87:16 174:22
167:11 177:10	<b>rigid</b> 133:19	<b>says</b> 45:2 51:7	98:16,18	175:1

<b>sensors</b> 14:6,10 14:15,17,19,22 15:10,15,19 17:2,12 <b>sentence</b> 20:18 20:21 21:2,5,5 21:8,15 45:2,7 45:14 48:20 50:7,12 63:12 80:16 94:20 136:8 152:5,6 153:3 207:13 <b>sentences</b> 87:12 <b>separate</b> 57:7 58:6 206:1 209:16 214:5 215:3,21 216:14,17 <b>separately</b> 210:4 <b>September</b> 233:19 <b>serve</b> 12:3 <b>set</b> 19:10 23:22 42:8 43:15 44:10,20 45:12 45:22 46:8,16 49:15,21 50:3 50:10,16 51:1,4 51:6,9,11,12,18 52:10,15,21 53:4,21 55:13 56:5,12 59:17 59:18 60:2,3,5 60:11,13,17,20 60:21 61:17 67:3 71:13,16 71:21 72:4,9,21 73:13 74:5,8 75:6,12,17 76:1 76:6,14 77:2,12 77:17 78:2,16 78:20 79:17 80:7 83:10,13 85:2 87:3,7 89:15,18 90:4,6 90:11,15,21 91:6,17,21 92:1	93:2,9 102:10 103:13 104:7 105:1,11,20 106:6 107:5 132:17 133:4 133:15,22 134:7 144:21 145:22 146:9 147:13 148:19 149:18 151:2 151:15 154:15 158:11,18 159:2 160:10 160:18 161:18 163:16,22 165:20 166:21 167:5,22 168:9 168:19 172:9 176:3 186:21 191:6 <b>shade</b> 7:13 <b>shallow</b> 64:5,21 65:17 67:22 68:4 72:6 96:16 129:8 <b>shape</b> 53:6 97:17 107:8 113:22 115:6 116:16 116:17,18 117:19 119:7 121:17 123:5 130:6 133:20 134:6 151:11 189:15,17 206:19 225:17 225:21 <b>shaped</b> 71:6 111:16 <b>shapes</b> 72:20 91:12 101:20 102:12 116:8 119:11 127:13 151:8 225:10 <b>share</b> 174:3 <b>sheet</b> 217:17 234:11 235:11 236:6	<b>shift</b> 59:2 <b>shorted</b> 230:17 <b>shorting</b> 231:11 <b>show</b> 182:18 205:5 225:9 <b>shown</b> 85:4 87:4 87:20 88:12 89:13 94:20 109:4 138:10 140:9 148:12 170:6 171:9 172:15 177:4 187:4,13 194:1 194:17 208:12 218:19 223:3 225:7 <b>shows</b> 84:2 88:9 205:15,16 209:5 222:18 <b>side</b> 8:13 9:2 69:19,20 70:8 70:11 71:2,4 95:20 97:18 126:17 133:16 141:5 142:20 164:16 173:20 192:7 199:7 201:7 216:16 222:14 228:11 <b>sides</b> 54:11 58:3 58:11,19 62:4 62:11 65:19 69:7,13 70:15 80:1 88:17,20 89:9 95:16 96:20 97:1 98:8 112:19 145:18 146:14 147:10 147:17 148:7 148:15 149:1 150:13 171:22 207:6 221:20 222:7 <b>sign</b> 234:7,8 <b>signal</b> 29:5 34:2,6 34:16 35:4 38:7 192:4 229:5,5,8	229:10,10,13 229:15 230:4 <b>signals</b> 17:9 26:21 27:2,22 28:12,22 29:2 36:4,13 37:1,11 38:22 40:18 41:10 228:17 229:20 <b>signature</b> 232:12 234:6,12 235:4 235:17 236:22 <b>signed</b> 234:11 <b>signing</b> 234:10 <b>silicone</b> 118:8 <b>similar</b> 39:3,17 90:9 92:17 96:15 139:21 150:16 <b>simple</b> 151:6,10 <b>simply</b> 84:17 85:20 140:3 177:4 <b>Sincerely</b> 234:18 <b>single</b> 13:2 49:7 111:14 118:8 124:13 126:2 167:19 214:1 <b>Sir</b> 63:18 <b>sit</b> 20:14 <b>sitting</b> 9:15 149:15 212:14 <b>situation</b> 55:6 70:19 75:22 77:14 78:22 146:21 192:9 <b>situational</b> 119:14 <b>situations</b> 167:9 <b>six</b> 9:20 <b>Sixth</b> 2:18 234:2 <b>size</b> 40:20 107:8 159:20 183:4 <b>skill</b> 24:2,5,9 25:8 26:4,16 27:1,20 38:9 42:15 43:21	44:18 45:10 46:2,22 47:6 50:21 56:14 66:5,13 67:1 68:1 70:20 73:2 74:3 75:3 76:4 77:11 78:6,11 78:15,18 79:8 83:8,18 84:12 84:20 85:6,11 85:16 86:2 87:1 87:6 89:16 91:4 91:10,15 92:11 93:1,5,14 99:5 101:11 102:2 102:12 105:19 106:20 108:4 112:10,18 113:3 114:14 115:15,17 116:6 117:22 118:16 119:15 120:2,10,22 121:8 122:4 123:22 124:3,6 124:16 127:7 128:12 130:10 130:17 131:13 132:13 133:7 133:10 134:12 135:3,12 137:19 144:20 145:21 146:21 147:11 148:17 151:1,14 154:14 155:22 156:21 160:6 160:17 161:8 161:22 166:2 167:16,19 172:5 182:14 184:8,19 188:13 191:2 192:8,18 193:8 194:7 196:19 197:11 198:14 212:3 214:14
---	--	---	---	--

216:3,11	203:7 205:8	<b>SPIEL</b> 2:11	123:1 128:3	217:5,19
218:13 219:3	222:2 224:1	<b>split</b> 192:5	157:8 212:21	218:21 222:20
221:2 223:7	226:13	<b>spoken</b> 137:18	<b>statements</b> 32:21	<b>structures</b> 34:9
229:16,19	<b>sort</b> 35:8 59:21	<b>sporting</b> 36:15	<b>states</b> 1:1 61:16	55:3 64:18
230:7	109:11 112:12	<b>spring</b> 191:19	<b>stay</b> 194:6	66:13 69:2 71:5
<b>skills</b> 198:19	114:19 128:18	192:1,6,9 193:9	<b>stays</b> 59:4	72:19 74:20
<b>skin</b> 18:10 37:18	131:4 134:2,5	193:12,20	<b>steel</b> 208:7,21	106:18 108:5
38:2,4,21	134:14 151:13	194:9,12,13	<b>steps</b> 8:6 193:15	109:12 112:18
<b>skin-contactable</b>	158:14 160:13	195:9,14	<b>sticking</b> 53:12	124:20 134:22
208:10	160:20 161:15	196:11,13	<b>sticks</b> 130:5	184:2,9,20
<b>slice</b> 146:2	163:6 183:17	197:9,20 199:3	<b>stiff</b> 184:4	195:5 199:18
148:13	193:3 203:15	199:4,11 200:5	<b>story</b> 8:9,10	215:10 224:8
<b>slidable</b> 196:11	212:2	200:11,21	<b>straightforward</b>	<b>stubborn</b> 176:16
196:13	<b>sound</b> 7:19 218:5	201:2,6,9,12,16	115:10	<b>student</b> 204:10
<b>slidably</b> 192:6	<b>sounded</b> 149:17	202:2,8,18	<b>strap</b> 37:5 38:12	<b>students</b> 16:17
195:14 196:2	<b>sounds</b> 5:18 8:3	203:6,8,10	38:20	16:18 17:13,21
<b>sliding</b> 195:19	100:1 162:7	204:4	<b>Street</b> 1:21 2:7	25:13,15,16,21
<b>slight</b> 112:15	232:4	<b>spring-like</b>	2:18 234:2	26:11 40:10,14
117:8,9,15	<b>South</b> 2:18 234:2	203:15	235:1 236:2	203:2,19
<b>slightly</b> 128:9	<b>space</b> 28:4 55:17	<b>springing</b> 194:10	<b>strength</b> 109:13	<b>stuff</b> 35:13 130:7
<b>slot</b> 53:14,16 72:1	111:10 114:12	<b>springs</b> 15:16	<b>stress</b> 214:20	157:15 158:1,5
72:15 73:16	121:9 134:3	192:14,19	<b>stretch</b> 8:19	158:14
74:1 75:10 77:9	206:12	194:2 195:9	224:12,16	<b>subject</b> 183:18
91:2	<b>speak</b> 10:2,10	204:1	<b>strictly</b> 227:21	<b>submitted</b> 9:1
<b>slots</b> 53:13 60:8	<b>speaking</b> 40:8	<b>stack</b> 18:20	<b>strike</b> 21:2	11:1 19:6
60:10,12	<b>speaks</b> 45:7	<b>stainless</b> 208:7	<b>strikes</b> 197:5	<b>sued</b> 11:9
105:14,15	<b>spec</b> 138:9,15	208:20	<b>structural</b> 109:22	<b>sufficient</b> 62:15
<b>small</b> 60:20 64:6	153:3 170:22	<b>stand</b> 212:20	142:7 160:22	112:9 114:7
118:5 127:11	<b>specific</b> 31:7 44:3	<b>standards</b> 42:9	183:6 217:15	115:18 117:16
<b>small'ish</b> 156:22	49:8 61:2 63:19	<b>stands</b> 214:7	218:9	135:17 141:15
<b>smaller</b> 119:8	66:9 111:4	<b>Stanford</b> 14:17	<b>structurally</b>	147:18 148:8
<b>smartest</b> 25:13	<b>specifically</b> 18:4	16:10 25:10,21	108:22 109:9	228:5
<b>smooth</b> 113:15	64:11 90:2	26:8	160:14	<b>Suite</b> 1:21 2:18
135:1	109:17 182:12	<b>start</b> 27:1,6 93:1	<b>structure</b> 30:3	234:2 235:1
<b>snow</b> 5:21	<b>specification</b>	101:18 108:19	43:2,4 55:21	236:2
<b>someplace</b>	43:20 48:4,6	200:6	93:6 99:6	<b>summer</b> 8:14
193:20	80:21 82:10,16	<b>started</b> 8:17	105:17,22	<b>super</b> 108:20
<b>soon</b> 224:13	84:19 116:7	<b>starting</b> 27:3,6	107:6 108:7	216:6
<b>sorry</b> 11:2 17:10	<b>specifications</b>	27:14 41:17	109:1 110:11	<b>supported</b> 43:19
30:14 33:19	43:7 117:18	208:3	110:13,15	215:15
58:12 63:16	<b>specifics</b> 36:19	<b>starts</b> 80:17	111:16 121:18	<b>supporting</b> 109:6
64:11 70:2	<b>specified</b> 116:18	<b>state</b> 25:19 46:21	122:1 133:7	<b>suppose</b> 29:19
82:21 86:8 89:4	182:7	193:1 233:9,11	158:6 167:7,13	37:19 181:8
89:20 95:4	<b>specify</b> 116:9	233:13,18,20	178:18 188:19	187:1 200:16
126:8 136:6,9	<b>spectrum</b> 115:14	<b>stated</b> 19:14	192:15 193:3	200:22
148:3 179:15	<b>spent</b> 8:17 9:20	23:19	197:4 208:21	<b>suppressed</b>
198:17,19	32:14	<b>statement</b> 20:9	212:7 215:3,21	230:16

<b>sure</b> 6:16 8:12	139:13 140:21	75:14,18 76:2,7	94:13 98:20	132:1 133:5
13:7 15:17 18:2	140:21 141:10	76:15 77:3,7,17	99:8 129:2	134:20 135:9
19:1 22:6,9	144:8,9 153:22	78:3,20 79:18	186:10 217:19	141:2,12 143:1
28:20 31:2 32:7	154:1,5,19,20	80:3,8 83:10,15	222:10	143:6,14,15,20
33:10,12 63:20	155:1,16,17,19	85:2 87:3,8	<b>survive</b> 184:11	144:1,17,22
75:19 100:3	155:20 156:1,2	89:18 90:8,16	215:14	150:18,22
120:12 139:14	156:3,5,7,10,18	90:16 91:7,17	<b>suspect</b> 171:2	151:4,12,17
141:9 147:6,22	158:11 159:1,2	92:12 93:4,10	185:3 203:18	155:3,7,8
151:9 154:13	160:13 161:1	93:18,20 94:1	<b>suspended</b>	156:12 157:4,5
170:11 188:20	163:8 171:8	94:17 97:13,20	232:13	157:11,19,21
189:1 190:10	186:6 196:7	98:1 102:13	<b>sworn</b> 5:7 233:3	158:3,8,15
203:19 209:8	208:11 211:8	103:14 104:22	<b>system</b> 109:3	159:5,6,14
212:17 213:8	213:15 214:3	105:4,22	110:14 204:15	160:1,7,9 161:8
222:16	222:1	107:11 113:5	216:4	161:9,13,16
<b>surface</b> 37:8	<b>surfaces</b> 52:1,2	124:1 130:19	<b>T</b>	163:20 164:1,2
53:10,19 57:22	63:1,6 88:20	143:15,22	<b>tab</b> 53:14,15	<b>tables</b> 125:15
62:15 65:10	89:1,11 94:4	144:12,21	71:22 72:15	<b>tabletop</b> 64:16
66:1 68:16,17	106:2 118:5	146:1,10	73:15,18,19,20	95:12 127:21
68:19 69:10	119:21 134:9	147:13,18	74:4 75:10,17	127:22 129:11
70:4,16 71:8,8	135:8 155:4	148:19 149:1,8	77:9,11 92:3	129:15,17
79:14 80:1	167:10 183:17	149:18 150:21	97:22	<b>tabs</b> 53:12 60:8,9
81:15,19 84:16	195:22 196:21	151:3,16	<b>table</b> 32:3 51:22	60:11 91:21
85:20 86:14	<b>surround</b> 69:7,14	154:16 157:9	52:6,9,10,11,13	<b>take</b> 7:22 8:1
87:16,21 88:3	69:18 70:8,17	158:12,19	52:13 53:13,16	33:9 39:12
88:13,16,22	98:13,14 99:4	160:11 163:16	53:16 60:8,10	60:17 61:5
89:3,5,6,9,10	106:18 171:17	163:22 165:20	60:12 62:20,21	97:15 99:15
90:13,14 91:1	190:18	166:22 167:6	62:22 63:4,8,9	114:18 143:13
91:13 94:15,16	<b>surrounded</b>	167:22 168:9	63:9 69:16 70:6	150:11 155:14
94:17,21 95:2,6	43:16 44:10,21	172:1,13	70:17 71:22	162:3,13
95:8,14 98:9,13	45:13,22 46:8	186:19 187:2	72:3,15 74:1,5	192:10 193:17
98:14 99:6,10	46:16 49:15,22	191:3,4 222:21	75:11 76:21,21	206:15 219:22
100:16 101:22	50:10,17 51:2	<b>surrounding</b>	77:3,4,12 94:6	224:13,16,17
103:18 106:11	51:10,18 52:11	48:20 50:3	103:2,7 106:16	224:18
112:6,12	53:22 54:3,7	54:11 65:4,5,10	117:4,6,13,15	<b>take-home</b> 39:16
113:16,22	55:2,14,17 56:6	66:15,17 67:12	117:19,21	<b>taken</b> 37:21 61:8
115:6 116:10	56:13 58:18,20	67:14 69:4	118:1,10,13,14	100:4 162:8
118:3 119:7,17	58:21 59:5	70:11,12,13	118:17,20	225:1 228:2
121:5,11,14,19	61:17,22,22	71:10 97:5	123:8 125:8	232:7 233:4
122:17,21	62:7,9,12,16,16	111:19 119:12	126:16 127:19	<b>talk</b> 33:5 63:21
123:21 124:8	62:22 63:3,7,9	146:20 147:17	128:4,5,7,9,10	73:6 110:12
126:21 130:5	63:10,14 64:12	148:7,8,15	128:11,14,17	157:12 173:22
131:18 132:2,4	65:3 66:1,6,10	160:19 166:13	128:18 129:1,4	205:13 232:2
132:6,8,17,21	66:19 67:3,4,6	166:20 167:13	129:9,18,20,21	<b>talked</b> 71:19
132:22 133:15	67:16 68:2,8	168:7,14,20	130:3,7,11,13	110:1 127:18
134:11,21	69:11 70:5,9,20	199:17	130:18,20	133:4 160:16
136:20 137:1	71:13,17 72:5,9	<b>surrounds</b> 55:21	131:2,6,6,8	167:10 217:5
138:1,17 139:8	72:17,22 75:7	68:20 71:1 94:9		218:16 226:8

228:9	<b>temporary</b> 111:9	65:15 107:17	177:12 182:19	91:4,15 92:6,11
<b>talking</b> 39:15	<b>term</b> 17:22 29:12	108:2,14,17	183:5,18 185:7	92:14 93:1,2,5
64:15,17 65:13	29:20 42:19	109:21 111:4	193:11 204:1	93:12,20 95:14
65:17 68:7	43:5,6,11,12,14	142:16,21	208:2 209:19	96:1,15 97:9,19
69:22 70:10,12	43:19,22 44:7	143:22 182:5	211:11 213:2	98:6 99:5,12,14
92:20 100:11	45:3,11 46:6,12	182:10,12	227:10	101:6,19 102:5
101:20 106:16	46:20 47:7,14	183:1,2,10,12	<b>think</b> 7:6 8:16	102:11,16
107:22 109:17	47:21 48:1,2,3	183:13 184:16	9:17 10:21 12:9	103:20,21
112:15,17,20	48:7,11,13,19	208:13 215:11	12:16,22 13:7	104:10,13
114:2,4 115:5	49:4,12,14	<b>thin</b> 108:6,21	13:12,18,21	105:3,18
125:14,15	50:22 80:21	110:16 111:16	14:1 15:8 16:21	106:15,20
126:14,19	173:9 182:2	111:17 148:12	17:15,18 18:7	107:7 108:4,13
129:7,9 134:20	227:20 230:18	182:15,19,22	18:12 19:12,15	109:7 110:10
139:19,21	<b>terminal</b> 192:4	184:21 198:8	19:18 20:6,19	111:5,11,15,15
151:6 156:15	<b>terms</b> 11:20 31:7	207:15 208:21	22:1,8,14 25:1	112:9,13 113:3
157:1 159:18	31:19 32:17	212:6,21	27:10,11,19	113:12 114:1
159:21 161:4	33:1,5 44:2,14	214:12 216:6	28:1,8,14,20	114:13 115:3,9
165:22 168:18	47:10 48:8	217:10	30:9 34:8 35:5	115:9,20 116:5
173:6 174:16	49:18 80:22	<b>thin-diameter</b>	35:7,12,16 36:7	117:1,11
178:4,7,10	147:2 173:7,15	192:21	38:17 39:2 41:5	119:15 120:1,7
179:18 180:14	173:17 174:1	<b>thing</b> 57:7,10	41:12 44:13	120:21 121:7
183:13 188:6	174:16 175:22	60:9 73:11	45:7,20 46:5,21	121:22,22
201:22 210:10	181:19 225:8	110:20 113:5	47:6 50:5 51:7	122:3 123:2,6
211:3 221:13	<b>test</b> 135:11	119:14 131:10	51:8,14,17	123:13,17
228:1 230:22	204:14	131:11 134:19	52:20 54:1	124:2,3,11,16
<b>talks</b> 180:4	<b>testified</b> 5:7	137:17 168:12	55:12,16,18	125:6,16 126:4
<b>taught</b> 14:18	127:20	179:7 188:17	56:5,11 58:6,12	127:6,14
<b>teach</b> 14:17	<b>testimony</b> 7:5,9	195:17 201:12	59:3,11 60:4,7	128:12,22
<b>teaching</b> 14:16	233:2	211:9	60:16 61:4 62:2	129:19 130:16
16:6 25:10	<b>testing</b> 204:11	<b>things</b> 8:19 20:7	62:13,18,20	130:16 131:12
26:10 227:9	<b>tests</b> 158:8	29:14 30:10	63:6,11 64:17	132:13 133:6,9
<b>team</b> 26:13	<b>text</b> 139:2	32:20 35:11	65:12,16,18	133:20 134:4
165:15	<b>textbooks</b> 27:10	36:21 39:11	66:12 67:8,21	134:12 135:2,7
<b>tearing</b> 74:2	<b>texture</b> 160:9	41:5 65:11,14	68:1,6,21 70:10	135:11 136:12
<b>technical</b> 217:16	<b>Thank</b> 5:15 11:7	70:15 74:18	70:11 71:11,18	137:2,13,18
<b>technician</b> 2:22	14:11 33:13	80:6 91:12	72:11,12,18	139:19 142:4
<b>technologies</b>	57:17	109:8 111:12	73:1,10,15 74:3	144:6,19 145:3
16:16	<b>Thanks</b> 33:19	111:14 114:12	74:11,15,18	145:21 146:4
<b>technology</b> 40:2	<b>thereof</b> 24:22	114:19 116:8	75:9,11,21 76:1	146:16,19
41:16,19	114:5	118:2 119:8,9	76:3,11 77:5,8	147:20 148:17
<b>tell</b> 79:4,7 84:6	<b>thesis</b> 126:9	122:12 123:13	77:9,13,15,22	148:21 149:4
117:20,22	<b>thick</b> 68:4 109:9	123:16 125:7,8	78:18 79:6,8,21	149:10,19
122:7 129:12	110:19 111:14	125:22 126:14	83:8,14,17 85:6	150:1,16 151:1
129:14 170:19	182:16,19,22	127:13 132:19	85:11,15 86:20	151:14 154:14
<b>telling</b> 82:10	183:20 184:3	135:11 136:21	87:6 88:19	155:2,20 156:8
<b>temporarily</b>	184:10 218:1	143:11,12	89:14,16 90:7	156:20 158:5
110:20	<b>thickness</b> 64:22	161:4,5 166:1	90:12,12,18	159:8,17 160:6

160:9,17 161:1 161:7,17,22 162:2 163:5,9 163:11,18,21 165:8,17 166:19 167:1,4 167:12,19 168:2,7,10,16 168:18,21 169:1 170:15 171:19 172:5 172:15,17,21 173:2,20 174:4 174:5,15,15 175:3,5,7,9,21 176:6,9,11,15 176:17,20 177:7,11,14 178:21 179:6 180:19,21 181:1,13,17 182:11,14 183:1,5,10,16 184:8,19 185:4 185:13 186:9 186:16,20 188:12 189:4 189:20,22 190:6 191:2,10 191:13 192:17 193:8,17 194:7 194:11 195:7 196:2,16,19 197:7,11 198:2 198:3,9,13,21 200:3,17 202:21 206:4 206:14 207:7 210:8 211:1,5,7 211:9 213:8,11 213:16 214:4,6 215:5,9 216:1,2 216:10 217:4 217:18 218:10 218:13 219:2 219:11,20 220:2,10,15	221:2,6 222:20 223:7,14,21 224:3,14 225:19 226:19 227:3,10,13,19 228:4,5,6,8,10 228:19 229:12 229:18 230:17 231:4,15 <b>thinking</b> 8:18 12:20 17:21 48:15 54:17 57:4 59:19 63:17 74:12 125:9 135:5 161:2 162:11 195:11 <b>thinner</b> 110:6,8 148:12 <b>third</b> 80:16 229:2 230:3 <b>Thomas</b> 1:13 3:2 4:2 5:5 234:1,4 235:5 236:9 <b>thought</b> 30:22 32:13 33:2 213:12 <b>three</b> 49:2 206:12 206:15,20 225:18 228:7 228:10 229:3,4 <b>three-dimensio...</b> 172:6 <b>threshold</b> 61:3 <b>tighten</b> 37:5 <b>tighter</b> 92:18 <b>tilting</b> 113:19 <b>time</b> 1:16 8:13,17 16:10 18:4 19:14 25:22 26:2,6,12,21 29:2 30:15 32:15 41:16 42:16 96:4 130:13 136:16 155:11 177:12 192:18 193:1	193:18 197:10 198:2,9,10,14 199:2 203:3 224:13 227:22 229:17 230:8 230:21 234:13 <b>times</b> 6:19 110:8 220:21 <b>timing</b> 199:2 <b>tiny</b> 160:3 <b>titanium</b> 208:16 208:22,22 209:1 218:2 <b>title</b> 47:22 <b>to'</b> 48:8 81:1 <b>today</b> 6:1 7:5,10 8:5 9:5,14 10:6 10:20 13:2 20:2 20:14 135:9 149:14,15 150:3 175:4 212:15 217:4 <b>tolerance</b> 116:17 116:21 117:1 117:12 121:19 134:17 <b>tolerances</b> 116:4 116:7,14 119:4 119:22 120:20 121:15 125:4 <b>toothbrush</b> 162:14,20,21 163:5,11 <b>toothbrushes</b> 162:14 <b>top</b> 36:18 56:21 57:1,13,14,20 62:8 69:3,14,15 127:21 128:7,9 129:16,22 131:10 142:13 142:14,15,17 142:19 144:3 144:13 149:2 179:5 192:7 193:3 195:2,16 199:6,11	200:11 201:7 201:13 202:7 202:13 209:6,8 221:19 <b>topics</b> 25:14 <b>topology</b> 149:14 <b>touch</b> 214:16 218:2 <b>touching</b> 183:21 <b>TRADEMARK</b> 1:1 <b>training</b> 36:10,14 <b>transcribed</b> 21:7 <b>transcript</b> 234:6 234:7 235:7 <b>transcription</b> 20:20 235:10 235:12 <b>transcripts</b> 9:3 <b>transfer</b> 104:8,11 <b>trapezoid-shape</b> 192:5 <b>TRIAL</b> 1:1 <b>trip</b> 27:16 228:9 228:13 <b>trips</b> 29:3 <b>trivial</b> 126:4 <b>true</b> 20:8 41:12 56:16 107:12 118:2 235:9,11 <b>truthful</b> 7:5 <b>try</b> 6:11 112:22 115:22 118:10 <b>trying</b> 23:7 67:8 67:11 73:4 84:1 103:20 104:16 114:11 125:18 148:22 149:4 198:22 <b>Tuesday</b> 4:4 5:1 <b>turn</b> 22:20 42:4,5 42:17 135:19 151:18 169:4 187:7 207:9 224:9 <b>Twin</b> 5:19 <b>two</b> 20:22 21:19	24:18 25:2 51:22 52:6 53:3 59:13 63:1,6 71:18,19 72:12 72:13 75:9,20 76:10 77:19 79:20 87:12 94:4 118:20 120:6 123:8 125:19 130:2 132:18 136:21 155:3,4 157:16 158:21 159:9 171:20 177:11 206:2 208:1,19 209:2,18 211:11 212:12 212:18 213:9 225:18,18 227:10 228:3,5 228:5,10,15,18 228:21,22 230:9,13 231:13,16 <b>two-thirds</b> 50:15 135:22 <b>type</b> 31:11 38:15 134:9 185:2 204:4 218:8 231:6 <b>types</b> 230:19 231:11 <b>typically</b> 49:20 231:7 <b>typo</b> 21:19 <hr/> <b>U</b> <hr/> <b>U.S</b> 1:6 4:11 6:2 <b>Uh-huh</b> 67:15 81:8 87:11 88:8 100:9 105:6 143:7 145:15 150:8,19 162:16 164:3 173:10 231:19 <b>ultimately</b> 103:10 150:4
---	--	---	--	---

<b>ultra</b> 15:6	<b>undulations</b>	<b>v</b> 1:5 4:3 234:3	119:3 122:22	196:18
<b>unclear</b> 140:6	131:19,20	235:4 236:8	149:10 150:1	<b>wearable</b> 16:19
<b>uncomfortable</b>	132:6,8,10,20	<b>vague</b> 150:5	159:3,8 162:3	36:12 40:18
114:21 150:5	132:22 133:9	165:8	163:15 176:16	41:9,21 185:14
167:16	133:11,16,20	<b>vaguely</b> 36:20	183:19 184:2	196:14 224:8
<b>underlying</b> 107:5	134:6,10,13,15	37:2	196:17 222:16	<b>wearer</b> 37:9 38:2
140:21 149:9	135:4,13	<b>vapor</b> 103:17	224:18 226:19	38:5,8
<b>underneath</b> 32:6	<b>unintentional</b>	104:2,5,11,20	230:18 231:4	<b>wearing</b> 40:21
97:16 136:19	135:16	105:9 106:1,14	231:15 232:2	<b>weeds</b> 76:9
136:22 137:5	<b>unitary</b> 216:19	<b>various</b> 14:2	<b>wanted</b> 13:20	<b>week</b> 9:4
137:12,22	<b>UNITED</b> 1:1	16:20 29:5	99:16	<b>weeks</b> 9:22
140:14 142:8	<b>universe</b> 73:10	36:10 48:1	<b>wants</b> 175:20	<b>weird</b> 131:1
145:14 148:13	151:7 200:19	135:9 197:4	<b>warp</b> 128:17	151:8
213:14 214:2	<b>University</b> 14:17	<b>verb</b> 48:17	<b>warped</b> 130:14	<b>went</b> 53:13
219:8	<b>unpacking</b> 136:9	209:18 210:3	<b>washboard</b> 132:2	<b>weren't</b> 180:10
<b>understand</b> 5:22	<b>unreasonable</b>	211:10	133:18,22	<b>white</b> 120:17
7:16,18 22:9	25:19	<b>verify</b> 188:16	134:6,7 160:15	<b>width</b> 184:4
31:14 35:18	<b>unsupported</b>	<b>versa</b> 25:5	<b>Washington</b> 1:21	<b>wife</b> 10:4
43:22 45:20	212:10	<b>versions</b> 16:15,16	2:12 233:15	<b>wild</b> 27:9
46:5 47:1,3,7	<b>Upper</b> 192:3	29:7	235:2 236:3	<b>willing</b> 20:4
50:8,20 52:4,12	<b>upward</b> 66:2,3	<b>versus</b> 52:9 123:4	<b>wasn't</b> 176:4	<b>winter</b> 8:21
56:14 84:20	<b>upwards</b> 69:3	212:4	177:21 225:20	<b>wire</b> 30:11,12,20
101:11 114:3	71:7 98:18 99:7	<b>vice</b> 25:5	<b>watching</b> 5:21	31:12,13,15
116:6 119:16	99:12	<b>VIDEOTAPED</b>	<b>waterproof</b> 171:3	32:11,12 34:13
144:5 159:3	<b>use</b> 28:16,16,17	1:12	<b>way</b> 12:20 15:1	39:18
161:21 165:19	31:18 36:14	<b>view</b> 30:19 82:7	21:20 25:1	<b>wireless</b> 40:1,2,4
166:3 182:15	40:16 41:21	222:14	31:20 32:2	42:2
184:9,20 188:6	43:19 49:2,7	<b>visible</b> 112:12	34:15,20 40:19	<b>wires</b> 30:7 42:2
192:19 206:6	81:17,20	134:14 143:8	43:5 50:16	<b>withstand</b> 183:6
206:16 207:14	129:22 142:8		58:13 70:14,18	183:20 213:1,3
212:3 217:18	183:21 184:11	<b>W</b>	73:3,20 92:2,22	<b>witness</b> 3:2 5:6
229:20	192:8 193:10	<b>waive</b> 234:9	97:6 99:7	12:3 18:19
<b>understandably</b>	198:12 203:3	<b>waived</b> 232:12	101:10 103:3	33:19 61:7
166:21	217:7,21	<b>walk</b> 129:19	108:9 114:20	76:19 127:5
<b>understanding</b>	<b>useful</b> 41:6	<b>walking</b> 128:13	114:22 130:4	144:16 162:5
31:11 38:6	134:15 194:2	<b>wall</b> 66:3	134:18 135:22	164:13 175:19
47:18 55:12	196:3 218:5,11	<b>walls</b> 57:19,20	143:9 144:19	178:4,17 180:3
65:12 68:11	<b>user</b> 81:17,20	66:2 68:9 71:2	146:20 150:2	202:4 204:21
73:7 79:1	194:4,19,21	71:4 95:20	154:9,10 196:8	205:8 224:11
116:13,14	195:6	<b>wandered</b> 148:3	197:14 198:9	224:20 231:21
119:6 137:3	<b>user's</b> 15:1 34:1	<b>want</b> 22:9 35:12	201:14 203:12	233:2 234:8
175:11 186:4	<b>uses</b> 47:21 48:1	47:5 61:5 64:14	204:12 211:5	235:5,17 236:9
186:12 216:12	48:11	65:9 74:21 75:3	222:20 228:8	<b>wondering</b>
221:10 222:6	<b>usual</b> 7:21	75:19 89:1,8	<b>ways</b> 29:8 53:18	205:14
<b>understood</b>	<b>utilize</b> 192:14	108:5 110:15	70:22 102:19	<b>word</b> 49:3,7,9
119:6		112:22,22	165:11 222:4	50:2,12 67:13
<b>undulated</b> 135:8	<b>V</b>	116:1 118:12	<b>wear</b> 37:4,20	178:6 216:1,12



<b>words</b> 71:14 138:15 168:21	<b>yeah</b> 59:12 72:11 114:16 120:3,5	211:19 213:5 215:1,18,19	177:14 179:8 179:10,18,19	174:13,17 175:2 186:14
<b>work</b> 12:10 13:8 14:14,16 18:10 18:12 24:18 25:3 27:1 174:5 176:4 202:10 202:13 203:19	121:2 125:12 127:8 128:16 133:3 135:13 144:16 145:11 146:16 147:20 150:16 153:17 155:12 164:22 184:17 187:1 194:10 198:18 198:21 212:1 213:16 216:6 223:15 227:3	217:1,12 223:1 223:4,18 233:16 <b>1,000</b> 110:7,8 <b>1,500</b> 17:22 <b>1:19</b> 100:5 <b>10</b> 6:21 61:6 116:11 162:4 <b>10,076,257</b> 1:6 4:11 6:3 <b>100</b> 116:19 120:12 189:21 <b>1001</b> 4:11 33:15 33:17 81:7 100:10 226:5 <b>1005</b> 4:12 204:17 204:19 224:9 225:5 <b>1006</b> 4:13 169:5,7 187:8 199:5 223:1	179:21 180:10 180:16 181:2 181:10 185:16 185:22 186:2,5 186:7,11,18,21 187:3 192:3 198:5,7,16,19 199:1 208:5,19 215:16	223:13,15 <b>18a</b> 169:18,22 <b>19</b> 84:10 <b>1980's</b> 16:13 <b>1983</b> 26:6 <b>1989</b> 26:6 <b>1994</b> 26:8 198:16 198:18,21
<b>worked</b> 14:5,7 15:4,5,20 16:18 18:10 25:16	155:12 164:22 184:17 187:1 194:10 198:18 198:21 212:1 213:16 216:6 223:15 227:3	<b>10,076,257</b> 1:6 4:11 6:3 <b>100</b> 116:19 120:12 189:21 <b>1001</b> 4:11 33:15 33:17 81:7 100:10 226:5 <b>1005</b> 4:12 204:17 204:19 224:9 225:5 <b>1006</b> 4:13 169:5,7 187:8 199:5 223:1	198:5,7,16,19 199:1 208:5,19 215:16	198:18,21
<b>working</b> 121:9 203:2	198:21 212:1 213:16 216:6 223:15 227:3	<b>10,076,257</b> 1:6 4:11 6:3 <b>100</b> 116:19 120:12 189:21 <b>1001</b> 4:11 33:15 33:17 81:7 100:10 226:5 <b>1005</b> 4:12 204:17 204:19 224:9 225:5 <b>1006</b> 4:13 169:5,7 187:8 199:5 223:1	<b>14a</b> 207:17 208:1 208:6,7,11,11 208:14,20,20 209:2,6,8,13,15 209:22 210:7,7 210:8,21	<b>2</b> <b>2</b> 170:12,16,19 173:4,7,12 174:1 178:18 179:5 183:11 186:5,17 187:4 191:19 199:5 208:9 233:14
<b>works</b> 8:2 61:7 229:11	<b>years</b> 13:20 14:18,22 15:8 17:20 24:18 25:2,10,19 26:9 69:21 198:5,7 198:16,19 199:1 203:11 227:9 228:12	<b>1001</b> 4:11 33:15 33:17 81:7 100:10 226:5 <b>1005</b> 4:12 204:17 204:19 224:9 225:5 <b>1006</b> 4:13 169:5,7 187:8 199:5 223:1	209:2,6,8,13,15 209:22 210:7,7 210:8,21	<b>2:51</b> 162:8 <b>2:58</b> 162:9 <b>20</b> 6:22 15:8 59:10 84:10 99:21 100:1 228:12
<b>world</b> 25:13 148:4 149:13	14:18,22 15:8 17:20 24:18 25:2,10,19 26:9 69:21 198:5,7 198:16,19 199:1 203:11 227:9 228:12	<b>1005</b> 4:12 204:17 204:19 224:9 225:5 <b>1006</b> 4:13 169:5,7 187:8 199:5 223:1	<b>14a's</b> 209:10 <b>14b</b> 207:19 208:1 208:12,20,21 209:2,7,9,11,13 209:15,21 210:6,20 214:8	<b>2000</b> 41:17 <b>2000's</b> 36:17 <b>2003</b> 4:14 18:15 18:17 19:5,9,22 20:16 42:5 61:12 87:10 <b>20036</b> 1:21 235:2 236:3 <b>2005</b> 4:16 166:5,8 <b>2006</b> 4:17 164:4,6 164:15,18 <b>2007</b> 151:20 <b>2008</b> 24:6 26:1,17 26:22 27:20 28:13 29:22 31:9 32:9 36:2 36:6 38:10 39:1 39:4,22 40:3,5 41:8,16,17 198:3,18 228:1 229:17 230:8 <b>2016</b> 164:13
<b>wouldn't</b> 46:3 72:8 74:21 92:14 93:8 99:8 105:10 106:3 110:15 117:2 183:14 195:12 214:13	25:2,10,19 26:9 69:21 198:5,7 198:16,19 199:1 203:11 227:9 228:12	<b>1005</b> 4:12 204:17 204:19 224:9 225:5 <b>1006</b> 4:13 169:5,7 187:8 199:5 223:1	<b>14a's</b> 209:10 <b>14b</b> 207:19 208:1 208:12,20,21 209:2,7,9,11,13 209:15,21 210:6,20 214:8	<b>2:51</b> 162:8 <b>2:58</b> 162:9 <b>20</b> 6:22 15:8 59:10 84:10 99:21 100:1 228:12
<b>wow</b> 130:12	195:15 196:2 196:11	<b>11</b> 23:12 <b>11:20</b> 61:8 <b>11:27</b> 61:9 <b>118</b> 192:12 <b>12</b> 170:2,3,8,14 170:18 171:12 171:17 172:1 172:13,20,22 174:12 186:3,8 186:10,19,22 187:2,4,13,15 187:18 188:2 188:11 189:8 190:7,17,18 191:6,12 216:4 216:4 223:9 233:10 <b>12:38</b> 100:4 <b>123</b> 22:21 <b>124</b> 22:21 <b>13959</b> 1:19 4:6 233:2,11 <b>14</b> 26:9 42:6 175:2 177:13	<b>15</b> 224:10 225:5,7 <b>156</b> 191:15,18 <b>16</b> 174:18 175:1 175:15 177:22 178:12,14,18 187:9,10,12,15 187:17 188:2 188:10 189:5,7 189:18 190:6 190:15,18,20 191:1,3,5,11 195:2	<b>2000</b> 41:17 <b>2000's</b> 36:17 <b>2003</b> 4:14 18:15 18:17 19:5,9,22 20:16 42:5 61:12 87:10 <b>20036</b> 1:21 235:2 236:3 <b>2005</b> 4:16 166:5,8 <b>2006</b> 4:17 164:4,6 164:15,18 <b>2007</b> 151:20 <b>2008</b> 24:6 26:1,17 26:22 27:20 28:13 29:22 31:9 32:9 36:2 36:6 38:10 39:1 39:4,22 40:3,5 41:8,16,17 198:3,18 228:1 229:17 230:8 <b>2016</b> 164:13
<b>wrapped</b> 54:18 73:19	195:15 196:2 196:11	<b>11</b> 23:12 <b>11:20</b> 61:8 <b>11:27</b> 61:9 <b>118</b> 192:12 <b>12</b> 170:2,3,8,14 170:18 171:12 171:17 172:1 172:13,20,22 174:12 186:3,8 186:10,19,22 187:2,4,13,15 187:18 188:2 188:11 189:8 190:7,17,18 191:6,12 216:4 216:4 223:9 233:10 <b>12:38</b> 100:4 <b>123</b> 22:21 <b>124</b> 22:21 <b>13959</b> 1:19 4:6 233:2,11 <b>14</b> 26:9 42:6 175:2 177:13	<b>15</b> 224:10 225:5,7 <b>156</b> 191:15,18 <b>16</b> 174:18 175:1 175:15 177:22 178:12,14,18 187:9,10,12,15 187:17 188:2 188:10 189:5,7 189:18 190:6 190:15,18,20 191:1,3,5,11 195:2	<b>2000</b> 41:17 <b>2000's</b> 36:17 <b>2003</b> 4:14 18:15 18:17 19:5,9,22 20:16 42:5 61:12 87:10 <b>20036</b> 1:21 235:2 236:3 <b>2005</b> 4:16 166:5,8 <b>2006</b> 4:17 164:4,6 164:15,18 <b>2007</b> 151:20 <b>2008</b> 24:6 26:1,17 26:22 27:20 28:13 29:22 31:9 32:9 36:2 36:6 38:10 39:1 39:4,22 40:3,5 41:8,16,17 198:3,18 228:1 229:17 230:8 <b>2016</b> 164:13
<b>wrapper</b> 73:21 74:2	<b>yielding</b> 192:6 195:15 196:2 196:11	<b>11</b> 23:12 <b>11:20</b> 61:8 <b>11:27</b> 61:9 <b>118</b> 192:12 <b>12</b> 170:2,3,8,14 170:18 171:12 171:17 172:1 172:13,20,22 174:12 186:3,8 186:10,19,22 187:2,4,13,15 187:18 188:2 188:11 189:8 190:7,17,18 191:6,12 216:4 216:4 223:9 233:10 <b>12:38</b> 100:4 <b>123</b> 22:21 <b>124</b> 22:21 <b>13959</b> 1:19 4:6 233:2,11 <b>14</b> 26:9 42:6 175:2 177:13	<b>14th</b> 2:7 <b>15</b> 224:10 225:5,7 <b>156</b> 191:15,18 <b>16</b> 174:18 175:1 175:15 177:22 178:12,14,18 187:9,10,12,15 187:17 188:2 188:10 189:5,7 189:18 190:6 190:15,18,20 191:1,3,5,11 195:2	<b>2000</b> 41:17 <b>2000's</b> 36:17 <b>2003</b> 4:14 18:15 18:17 19:5,9,22 20:16 42:5 61:12 87:10 <b>20036</b> 1:21 235:2 236:3 <b>2005</b> 4:16 166:5,8 <b>2006</b> 4:17 164:4,6 164:15,18 <b>2007</b> 151:20 <b>2008</b> 24:6 26:1,17 26:22 27:20 28:13 29:22 31:9 32:9 36:2 36:6 38:10 39:1 39:4,22 40:3,5 41:8,16,17 198:3,18 228:1 229:17 230:8 <b>2016</b> 164:13
<b>wrapping</b> 54:22 101:9 110:2,2,4 110:5	<b>yielding</b> 192:6 195:15 196:2 196:11	<b>11</b> 23:12 <b>11:20</b> 61:8 <b>11:27</b> 61:9 <b>118</b> 192:12 <b>12</b> 170:2,3,8,14 170:18 171:12 171:17 172:1 172:13,20,22 174:12 186:3,8 186:10,19,22 187:2,4,13,15 187:18 188:2 188:11 189:8 190:7,17,18 191:6,12 216:4 216:4 223:9 233:10 <b>12:38</b> 100:4 <b>123</b> 22:21 <b>124</b> 22:21 <b>13959</b> 1:19 4:6 233:2,11 <b>14</b> 26:9 42:6 175:2 177:13	<b>14th</b> 2:7 <b>15</b> 224:10 225:5,7 <b>156</b> 191:15,18 <b>16</b> 174:18 175:1 175:15 177:22 178:12,14,18 187:9,10,12,15 187:17 188:2 188:10 189:5,7 189:18 190:6 190:15,18,20 191:1,3,5,11 195:2	<b>2000</b> 41:17 <b>2000's</b> 36:17 <b>2003</b> 4:14 18:15 18:17 19:5,9,22 20:16 42:5 61:12 87:10 <b>20036</b> 1:21 235:2 236:3 <b>2005</b> 4:16 166:5,8 <b>2006</b> 4:17 164:4,6 164:15,18 <b>2007</b> 151:20 <b>2008</b> 24:6 26:1,17 26:22 27:20 28:13 29:22 31:9 32:9 36:2 36:6 38:10 39:1 39:4,22 40:3,5 41:8,16,17 198:3,18 228:1 229:17 230:8 <b>2016</b> 164:13
<b>wrist-worn</b> 16:4 16:8,12 17:1,7 18:6 21:4	<b>yielding</b> 192:6 195:15 196:2 196:11	<b>11</b> 23:12 <b>11:20</b> 61:8 <b>11:27</b> 61:9 <b>118</b> 192:12 <b>12</b> 170:2,3,8,14 170:18 171:12 171:17 172:1 172:13,20,22 174:12 186:3,8 186:10,19,22 187:2,4,13,15 187:18 188:2 188:11 189:8 190:7,17,18 191:6,12 216:4 216:4 223:9 233:10 <b>12:38</b> 100:4 <b>123</b> 22:21 <b>124</b> 22:21 <b>13959</b> 1:19 4:6 233:2,11 <b>14</b> 26:9 42:6 175:2 177:13	<b>14th</b> 2:7 <b>15</b> 224:10 225:5,7 <b>156</b> 191:15,18 <b>16</b> 174:18 175:1 175:15 177:22 178:12,14,18 187:9,10,12,15 187:17 188:2 188:10 189:5,7 189:18 190:6 190:15,18,20 191:1,3,5,11 195:2	<b>2000</b> 41:17 <b>2000's</b> 36:17 <b>2003</b> 4:14 18:15 18:17 19:5,9,22 20:16 42:5 61:12 87:10 <b>20036</b> 1:21 235:2 236:3 <b>2005</b> 4:16 166:5,8 <b>2006</b> 4:17 164:4,6 164:15,18 <b>2007</b> 151:20 <b>2008</b> 24:6 26:1,17 26:22 27:20 28:13 29:22 31:9 32:9 36:2 36:6 38:10 39:1 39:4,22 40:3,5 41:8,16,17 198:3,18 228:1 229:17 230:8 <b>2016</b> 164:13
<b>write</b> 17:18 20:2 <b>written</b> 20:7 21:6 188:5,16 190:3 234:22	<b>yielding</b> 192:6 195:15 196:2 196:11	<b>11</b> 23:12 <b>11:20</b> 61:8 <b>11:27</b> 61:9 <b>118</b> 192:12 <b>12</b> 170:2,3,8,14 170:18 171:12 171:17 172:1 172:13,20,22 174:12 186:3,8 186:10,19,22 187:2,4,13,15 187:18 188:2 188:11 189:8 190:7,17,18 191:6,12 216:4 216:4 223:9 233:10 <b>12:38</b> 100:4 <b>123</b> 22:21 <b>124</b> 22:21 <b>13959</b> 1:19 4:6 233:2,11 <b>14</b> 26:9 42:6 175:2 177:13	<b>14th</b> 2:7 <b>15</b> 224:10 225:5,7 <b>156</b> 191:15,18 <b>16</b> 174:18 175:1 175:15 177:22 178:12,14,18 187:9,10,12,15 187:17 188:2 188:10 189:5,7 189:18 190:6 190:15,18,20 191:1,3,5,11 195:2	<b>2000</b> 41:17 <b>2000's</b> 36:17 <b>2003</b> 4:14 18:15 18:17 19:5,9,22 20:16 42:5 61:12 87:10 <b>20036</b> 1:21 235:2 236:3 <b>2005</b> 4:16 166:5,8 <b>2006</b> 4:17 164:4,6 164:15,18 <b>2007</b> 151:20 <b>2008</b> 24:6 26:1,17 26:22 27:20 28:13 29:22 31:9 32:9 36:2 36:6 38:10 39:1 39:4,22 40:3,5 41:8,16,17 198:3,18 228:1 229:17 230:8 <b>2016</b> 164:13
<b>wrong</b> 143:9 182:7 188:22 198:17	<b>yielding</b> 192:6 195:15 196:2 196:11	<b>11</b> 23:12 <b>11:20</b> 61:8 <b>11:27</b> 61:9 <b>118</b> 192:12 <b>12</b> 170:2,3,8,14 170:18 171:12 171:17 172:1 172:13,20,22 174:12 186:3,8 186:10,19,22 187:2,4,13,15 187:18 188:2 188:11 189:8 190:7,17,18 191:6,12 216:4 216:4 223:9 233:10 <b>12:38</b> 100:4 <b>123</b> 22:21 <b>124</b> 22:21 <b>13959</b> 1:19 4:6 233:2,11 <b>14</b> 26:9 42:6 175:2 177:13	<b>14th</b> 2:7 <b>15</b> 224:10 225:5,7 <b>156</b> 191:15,18 <b>16</b> 174:18 175:1 175:15 177:22 178:12,14,18 187:9,10,12,15 187:17 188:2 188:10 189:5,7 189:18 190:6 190:15,18,20 191:1,3,5,11 195:2	<b>2000</b> 41:17 <b>2000's</b> 36:17 <b>2003</b> 4:14 18:15 18:17 19:5,9,22 20:16 42:5 61:12 87:10 <b>20036</b> 1:21 235:2 236:3 <b>2005</b> 4:16 166:5,8 <b>2006</b> 4:17 164:4,6 164:15,18 <b>2007</b> 151:20 <b>2008</b> 24:6 26:1,17 26:22 27:20 28:13 29:22 31:9 32:9 36:2 36:6 38:10 39:1 39:4,22 40:3,5 41:8,16,17 198:3,18 228:1 229:17 230:8 <b>2016</b> 164:13
<b>X</b>	<b>yielding</b> 192:6 195:15 196:2 196:11	<b>11</b> 23:12 <b>11:20</b> 61:8 <b>11:27</b> 61:9 <b>118</b> 192:12 <b>12</b> 170:2,3,8,14 170:18 171:12 171:17 172:1 172:13,20,22 174:12 186:3,8 186:10,19,22 187:2,4,13,15 187:18 188:2 188:11 189:8 190:7,17,18 191:6,12 216:4 216:4 223:9 233:10 <b>12:38</b> 100:4 <b>123</b> 22:21 <b>124</b> 22:21 <b>13959</b> 1:19 4:6 233:2,11 <b>14</b> 26:9 42:6 175:2 177:13	<b>14th</b> 2:7 <b>15</b> 224:10 225:5,7 <b>156</b> 191:15,18 <b>16</b> 174:18 175:1 175:15 177:22 178:12,14,18 187:9,10,12,15 187:17 188:2 188:10 189:5,7 189:18 190:6 190:15,18,20 191:1,3,5,11 195:2	<b>2000</b> 41:17 <b>2000's</b> 36:17 <b>2003</b> 4:14 18:15 18:17 19:5,9,22 20:16 42:5 61:12 87:10 <b>20036</b> 1:21 235:2 236:3 <b>2005</b> 4:16 166:5,8 <b>2006</b> 4:17 164:4,6 164:15,18 <b>2007</b> 151:20 <b>2008</b> 24:6 26:1,17 26:22 27:20 28:13 29:22 31:9 32:9 36:2 36:6 38:10 39:1 39:4,22 40:3,5 41:8,16,17 198:3,18 228:1 229:17 230:8 <b>2016</b> 164:13
<b>XY</b> 150:22	<b>yielding</b> 192:6 195:15 196:2 196:11	<b>11</b> 23:12 <b>11:20</b> 61:8 <b>11:27</b> 61:9 <b>118</b> 192:12 <b>12</b> 170:2,3,8,14 170:18 171:12 171:17 172:1 172:13,20,22 174:12 186:3,8 186:10,19,22 187:2,4,13,15 187:18 188:2 188:11 189:8 190:7,17,18 191:6,12 216:4 216:4 223:9 233:10 <b>12:38</b> 100:4 <b>123</b> 22:21 <b>124</b> 22:21 <b>13959</b> 1:19 4:6 233:2,11 <b>14</b> 26:9 42:6 175:2 177:13	<b>14th</b> 2:7 <b>15</b> 224:10 225:5,7 <b>156</b> 191:15,18 <b>16</b> 174:18 175:1 175:15 177:22 178:12,14,18 187:9,10,12,15	