

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

IPR No. 2023-00349

Patent 9,259,615

LULULEMON ATHLETICA
CANADA, INC. and
LULULEMON USA, INC.,
Petitioners,

vs.

NIKE, INC.,
Patent Owner

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VIDEO DEPOSITION OF  
KEVIN M. LYNCH, PH.D.

February 22, 2024

9:11 a.m. Central

70 West Madison Street, Suite 4200  
Chicago, Illinois

lululemon v. NIKE, Inc.  
IPR2023-00438  
Patent No. 8,620,413  
Ex. 2013

Stenographically Reported By:

Deanna Amore - CRR, RPR, CSR - 084-003999

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| I N D E X                                         |                         |             |
|---------------------------------------------------|-------------------------|-------------|
| WITNESS                                           |                         | EXAMINATION |
| KEVIN M. LYNCH, PH.D.                             |                         |             |
| CROSS-EXAMINATION BY MR. SWISHER                  |                         | 5           |
| EXHIBITS                                          |                         |             |
| Exhibit 1018                                      | 1.11.2024 Reply         | 6           |
|                                                   | Declaration of Kevin M. |             |
|                                                   | Lynch, Ph.D.            |             |
| EXHIBITS PREVIOUSLY MARKED PAGE FIRST REFERRED TO |                         |             |
| Exhibit 1001                                      |                         | 7           |
| Exhibit 1002                                      |                         | 50          |
| Exhibit 1003                                      |                         | 65          |
| Exhibit 1004                                      |                         | 78          |
| Exhibit 1014                                      |                         | 37          |
| Exhibit 2009                                      |                         | 42          |

1 THE VIDEOGRAPHER: Good morning. We are going  
2 on the record at 9:11 a.m. on February 22, 2024.

3 Please note that the microphones are  
4 sensitive and may pick up whispering and private  
5 conversations.

6 Please mute your phones at this time.

7 Audio and video recording will continue to  
8 take place unless all parties agree to go off the  
9 record.

10 This is Media Unit 1 of the video-recorded  
11 deposition of Dr. Kevin M. Lynch, taken in the  
12 matter of Lululemon Athletica Canada, Inc., and  
13 Lululemon USA, Inc., versus Nike, Inc., filed  
14 before The Patent Trial and Appeal Board,  
15 United States Patent and Trademark Office,  
16 Case No. IPR 2023-00438.

17 The location of the deposition is  
18 Arnold & Porter Kaye Scholer LLP, 70 West Madison  
19 Street, in Chicago, Illinois.

20 My name is Ross Colby, representing  
21 Veritext Legal Solutions, and I am the  
22 videographer. The court reporter is Deanna Amore  
23 also from Veritext.

24 I am not related to any party in this  
25 action, nor am I financially interested in the

1 outcome.

2 If there are any objections to the  
3 proceeding, please state them at the time of your  
4 appearance.

5 Counsel and all present, including  
6 remotely, will now state their appearances and  
7 affiliations for the record beginning with the  
8 noticing attorney.

9 MR. SWISHER: Jonathan Swisher, of  
10 Arnold & Porter Kaye Scholer, on behalf of the  
11 patent owner, Nike, Inc.

12 MS. NGUYEN: And Jean Nguyen, of Morrison  
13 Foerster, on behalf of petitioner Lululemon,  
14 Dr. Kevin Lynch. With me is my colleague  
15 Mehran Arjomand.

16 THE VIDEOGRAPHER: Thank you.

17 Will the reporter please swear in the  
18 witness?

19 KEVIN M. LYNCH, PH.D.,  
20 called as a witness herein, having been first duly  
21 sworn, was examined and testified as follows:

22 CROSS-EXAMINATION

23 BY MR. SWISHER:

24 Q. All right. Good morning, Mr. Lynch.

25 A. Good morning.

1 Q. You understand that you are under oath  
2 this morning for this deposition?

3 A. Yes.

4 Q. Okay. And is there any reason that you  
5 cannot give full and truthful testimony today?

6 A. No.

7 Q. Okay. All right. I assume you understand  
8 that you recently submitted a supplemental or reply  
9 declaration in this IPR. It's titled the "Reply  
10 Declaration of Dr. Kevin Lynch Ph.D."

11 Do you remember submitting that recently?

12 A. Yes.

13 Q. Okay. And I think you said you had a copy  
14 of it already in front of you, but I'm going to go  
15 ahead and just introduce that declaration into the  
16 record. So I'm going to hand you what has been  
17 marked as Exhibit 1018.

18 (Whereupon, Exhibit 1018 was  
19 marked for identification.)

20 BY MR. SWISHER:

21 Q. If you already have another copy you'd  
22 like to use, that's fine.

23 MR. SWISHER: Give this to you, Jean.

24 BY MR. SWISHER:

25 Q. And then, also, I'm going to introduce

1 what's been previously marked as Exhibit 1001, and  
2 Exhibit 1001 is the patent at issue in this IPR,  
3 U.S. Patent No. 8,620,413. If I refer to this as  
4 the '413 patent, you'll understand what I'm talking  
5 about?

6 A. Yes.

7 Q. Great.

8 Okay. Dr. Lynch, I'd like to start by  
9 asking you some questions about your claim  
10 construction opinions in your supplemental  
11 declaration, Exhibit 1018.

12 Just to do a little table setting, can you  
13 take a look at -- I'm sorry -- can you take a look  
14 at paragraph 5 of Exhibit 1018?

15 Let me know when you're there.

16 A. Yes.

17 Q. Okay. And so this paragraph references a  
18 claim term from the '413 patent that reads "wherein  
19 an exertion level is based on a level of physical  
20 fitness of a user."

21 Do you see that quote there in  
22 paragraph 5?

23 A. Yes.

24 Q. Okay. So I'm going to refer to the  
25 disputed term or the term we're talking about for

1 claim construction, and if you understand that's  
2 the term I just quoted is what we are going to talk  
3 about. Does that sound fair?

4 A. Yes.

5 Q. Okay. And then in the paragraph below, so  
6 paragraph 6 of Exhibit 1018, you have a statement  
7 there that supplies Nike's proposed plain and  
8 ordinary meaning, which reads "an exertion level  
9 that takes into account an individual user's  
10 particular physical fitness condition as assessed  
11 by fitness condition criteria such as  
12 cardiorespiratory endurance."

13 Do you see that?

14 A. Yes.

15 Q. And if I refer to that as Nike's proposed  
16 construction, will you understand that I'm talking  
17 about that construction that I just read?

18 A. Yes.

19 Q. Okay. And then, finally, if I can find  
20 it. Okay. Let's go to the next paragraph then in  
21 paragraph 7 in Exhibit 1018, and in that paragraph  
22 you recite what your proposed construction for the  
23 term is, which is in the middle of paragraph 7, and  
24 reads "wherein an exertion level is adaptive to a  
25 user's physical fitness."

1 Do you see that?

2 A. Yes.

3 Q. Okay. And if I refer to that as  
4 Lululemon's proposed construction, will you  
5 understand that I'm referring to the phrase I just  
6 read?

7 A. Sure.

8 Q. Okay. Just try to get some shorthand to  
9 make things easier. Okay. Now I want to ask you  
10 some questions about your opinions in this section.  
11 The end of paragraph 6 of Exhibit 1018 you state,  
12 "I disagree with their" -- meaning Nike's --  
13 "construction for the reasons set forth below."

14 Do you see that?

15 A. Yes.

16 Q. So I'm going to ask you some questions  
17 about your disagreement, but first I want to ask,  
18 just to confirm for me, you agree that the  
19 specification of the '413 patent describes setting  
20 an exertion level based on cardiorespiratory  
21 endurance; right?

22 MS. NGUYEN: Objection. Form.

23 THE WITNESS: No.

24 BY MR. SWISHER:

25 Q. Okay. I'm going to ask you to turn to

1 paragraph 8 of your declaration, Exhibit 1018.

2 A. Yes.

3 Q. So I was just referring to the first  
4 sentence of paragraph 8 where you recite, "With  
5 respect to the intrinsic evidence, the '413 patent  
6 specification exemplarily describes setting an  
7 exertion level based on cardiorespiratory  
8 endurance."

9 Do you see that?

10 A. Yes.

11 Q. So you agree that that is what the  
12 specification says; right?

13 A. The specification gives this as an  
14 example.

15 Q. Okay. So you agree that the specification  
16 describes setting an exertion level based on  
17 cardiorespiratory endurance; right?

18 A. Well, that's an example, yes.

19 Q. And you give a couple -- after that part  
20 of the sentence I just read, you give a couple  
21 examples of criteria that relate to  
22 cardiorespiratory endurance, and those include  
23 heart rate and breathing; right?

24 A. So in this subsequent portion of this  
25 paragraph, I'm describing what an easy level of

1 exertion could be. It could be one that slightly  
2 elevates the user's heart rate and breathing is  
3 only slightly greater than when the user began  
4 exercising.

5 Q. Right. No. Thanks. I appreciate that.  
6 I was just referring, actually, to the first  
7 sentence of the paragraph 8.

8 So you state "The '413 patent describes  
9 setting an exertion level based on  
10 cardiorespiratory endurance measured by a user's  
11 physical attributes such as the user's heart rate  
12 or breathing"; right?

13 A. Correct.

14 Q. Okay. So I was just trying to confirm  
15 that, in your opinion, several criteria that relate  
16 to cardiorespiratory endurance include the user's  
17 heart rate and breathing; is that right?

18 MS. NGUYEN: Objection. Form.

19 THE WITNESS: Those are attributes that are  
20 related to cardiorespiratory endurance.

21 BY MR. SWISHER:

22 Q. Okay. And that raises a question I wanted  
23 to explore with you.

24 So do you recall in paragraph 6, which  
25 recites Nike's proposed construction, Nike's

1 proposed construction refers to fitness condition  
2 criteria using the word "criteria."

3 Do you see that in paragraph 6?

4 A. I do.

5 Q. And then in paragraph 8, you refer to a  
6 user's physical attributes such as the user's heart  
7 rate or breathing.

8 Do you see that?

9 A. Yes.

10 Q. Now, in your opinion, is there a  
11 difference between criteria and attributes as they  
12 are used in these two phrases that I just read?

13 MS. NGUYEN: Objection. Form.

14 THE WITNESS: I believe that both criteria and  
15 attributes are referring to things that are  
16 measurable having to do with a person's physical  
17 fitness.

18 BY MR. SWISHER:

19 Q. Okay. That's fair.

20 So a heart rate, you would agree, is  
21 something that's measurable; right?

22 A. Yes.

23 Q. And a person's breathing while exercising  
24 would be measurable; right?

25 A. Yes.

1 Q. Okay. So it sounds like you're saying  
2 that it would be fair to characterize a heart rate  
3 as either an attribute or a criteria, criterion?

4 MS. NGUYEN: Objection. Form.

5 BY MR. SWISHER:

6 Q. Is that right?

7 A. So I don't use the word "criteria" or  
8 "criterion" in my own analysis. I'm trying to use  
9 the word "attribute" for the measurables consistent  
10 with your Caspersen reference, but I suspect that  
11 "criteria" here is trying to say attributes.

12 Q. Okay. Do you consider height to be an  
13 attribute?

14 A. Yes.

15 Q. Is height also a criteria or does that  
16 have the same meaning to you, criteria versus  
17 attribute?

18 MS. NGUYEN: Objection. Form.

19 THE WITNESS: Just to clarify, Nike's  
20 construction here is a complete rewriting of the  
21 disputed claim term that introduces a lot of new  
22 language, criteria being one of those; and it  
23 doesn't map directly onto the disputed claim  
24 language where it says "wherein an exertion level  
25 is based on the level of physical fitness of the

1 user."

2 It seems to be replacing that with an  
3 exertion level. So there's no wherein. And  
4 exertion level takes in many other things.

5 So I can't just take out the claim term  
6 "wherein an exertion level is based on a level of  
7 physical fitness of a user" and plop in Nike's  
8 construction and have that claim element make  
9 grammatical sense. So I just wanted to point that  
10 out.

11 Then the other thing I wanted to point out  
12 is that this is a complete rewriting using  
13 different words, and I understand that, you know,  
14 some of the changes here, which is, for example,  
15 "based on" has been changed into "that takes into  
16 account." The reason for that change is unclear  
17 both to me and to your expert.

18 So there's a lot of language here that's  
19 been added that -- that, you know, I don't know why  
20 it's been added, but the analysis that I performed  
21 in my declaration has all been to be able to  
22 account for Nike's construction or my  
23 construction -- or Lululemon's construction.

24 MR. SWISHER: I'll just strike that answer as  
25 nonresponsive.

1 BY MR. SWISHER:

2 Q. Dr. Lynch, I appreciate you can give  
3 details when I ask questions but that didn't answer  
4 my question. So let's try to focus on the  
5 questions I'm asking.

6 So the question I asked was, in your  
7 opinion, is height an attribute or a criteria or  
8 both?

9 MS. NGUYEN: Objection. Form.

10 THE WITNESS: So I'll refer to the Caspersen  
11 reference that was introduced by Nike to help  
12 answer that question, which defines -- I don't have  
13 it in front of me -- but defines physical fitness  
14 is a set of attributes that a person has or  
15 achieves that relates to their ability to perform  
16 physical activity and height is a -- and attributes  
17 need to be measurable, and height is a measurable  
18 attribute of physical fitness.

19 BY MR. SWISHER:

20 Q. Okay. So, in your opinion, height is an  
21 attribute of physical fitness that's relevant to  
22 the user's physical fitness recited in this  
23 disputed claim term; is that right?

24 MS. NGUYEN: Objection. Form.

25 THE WITNESS: So as I explained in my first

1 deposition, physical fitness is a multi-faceted,  
2 multi-dimensional concept that can only be measured  
3 by certain -- and I might have said characteristics  
4 at the time. Since then you've introduced the  
5 Caspersen reference, which refers to them as  
6 attributes. So height is one of those measurable  
7 attributes.

8 And does that answer your question?

9 BY MR. SWISHER:

10 Q. Not exactly. I'm asking in the context of  
11 the disputed term at issue which is "wherein as  
12 exertion level" -- I'm sorry -- wherein -- strike  
13 that. Let me start over.

14 I'm asking about the disputed term at  
15 issue, which is "wherein an exertion level is based  
16 on a level of physical fitness of a user."

17 So are you with me so far?

18 A. Yes.

19 Q. Okay. So in that context, I'm asking if  
20 you -- if your opinion is that height is an  
21 attribute that describes a level of physical  
22 fitness of a user?

23 A. Height is one of the set of attributes  
24 that is the physical fitness of a user.

25 Q. Okay. Let me ask you this: Is it your

1 opinion that all people who have the height six  
2 foot one inch tall have the same resting heart  
3 rate?

4 MS. NGUYEN: Objection. Form.

5 THE WITNESS: Resting heart rate is another  
6 attribute of physical fitness. As I mentioned  
7 earlier, physical fitness is a set of attributes,  
8 measurable attributes. One would be height. One  
9 would be resting heart rate, and there's many  
10 others.

11 BY MR. SWISHER:

12 Q. Okay. Let me ask the question again  
13 because that didn't answer my question. So let me  
14 start over.

15 Is it your opinion that all people who  
16 have the height of six foot one inch tall have the  
17 same resting heart rate?

18 A. Let me try to answer again because I think  
19 it was responsive.

20 Physical fitness is a set of measurable  
21 attributes. One of those attributes is height.  
22 One of them is resting heart rate. There are many  
23 others.

24 If I know the height, I don't know your  
25 resting heart rate and vice versa, but to be able

1 to talk about your physical fitness, I'm talking  
2 about multiple measurable attributes. You've  
3 mentioned two. One does not imply the other.

4 Q. Right.

5 So I think -- I think your answer is no,  
6 but I just can't tell. Is there any reason why you  
7 can't answer the question as I asked it?

8 Do you want me to repeat it?

9 A. I will tell you that there are multiple  
10 attributes to physical fitness. One is height.  
11 One is resting heart rate.

12 If I know your resting heart rate, I don't  
13 know your height. If I know your height, I don't  
14 know your resting heart rate. Two people can be  
15 the same height and have different resting heart  
16 rates. Those are only two attributes of their  
17 physical fitness, and they don't have to be the  
18 same if one of them is the same.

19 Q. Okay. So you agree that all people who  
20 have the height of six foot one inch tall do not  
21 have the same resting heart rate; right?

22 MS. NGUYEN: Objection. Form.

23 THE WITNESS: I think I just answered that,  
24 that physical fitness of a person is defined by  
25 many attributes. One is height. One is resting

1 heart rate. And if two people have the same  
2 height, it doesn't mean they have the same resting  
3 heart rate.

4 BY MR. SWISHER:

5 Q. Okay. I understand. So is there any  
6 reason why you can't answer the question as I asked  
7 it?

8 A. I did.

9 MS. NGUYEN: Objection.

10 THE WITNESS: I did answer your question.

11 BY MR. SWISHER:

12 Q. So you agree that all people who have the  
13 same height of six foot one inch tall do not have  
14 the same resting heart rate; correct?

15 A. That is what I just said.

16 Q. Do you agree that all people who have the  
17 same height of six foot one inch tall do not have  
18 the same amount of breathing when running at six  
19 miles per hour?

20 MS. NGUYEN: Objection. Form.

21 THE WITNESS: So breathing would be another  
22 attribute of physical fitness, and the answer would  
23 be the same as before. If I know -- and it will be  
24 to future questions you might have along this line.

25 If you know one attribute, that doesn't

1 mean that you know all of the other attributes. So  
2 physical fitness is a multi-dimensional concept and  
3 involves measurable -- many measurable attributes,  
4 and you have now named three.

5 BY MR. SWISHER:

6 Q. Okay. So you agree with the question  
7 I asked? Do you want me to state it again?

8 You didn't answer my question.

9 A. I think I've answered this question, which  
10 is if I know your height, if two people have the  
11 same height, they don't necessarily have the same  
12 heart rate or -- I forget was it breathing or  
13 heart rate? I don't remember.

14 Q. Let me repeat the question. Okay? Can  
15 you just answer -- listen to this question and see  
16 if you can give me an answer.

17 A. Okay.

18 Q. The question was do you agree that all  
19 people who have the same height of six foot one  
20 inch tall do not have the same amount of breathing  
21 when running at six miles per hour?

22 MS. NGUYEN: Same objection.

23 THE WITNESS: As I just explained, all people  
24 who are six one do not have the same other  
25 attributes of physical fitness necessarily.

1 BY MR. SWISHER:

2 Q. Okay. So the answer to my question is you  
3 agree; right?

4 MS. NGUYEN: Objection. Form.

5 THE WITNESS: Yes.

6 BY MR. SWISHER:

7 Q. All right. Just turning back to what you  
8 started out talking about a second ago, you say in  
9 your declaration at paragraph 6 that you disagree  
10 with Nike's construction for the reasons set forth  
11 below.

12 Now, I just wanted to ask you if you can  
13 explain what is it about Nike's construction that  
14 you disagree with?

15 Because I didn't see -- didn't see it  
16 addressed in the paragraphs that follow.

17 MS. NGUYEN: Objection. Form.

18 THE WITNESS: I think I gave an answer earlier,  
19 but let me say it again.

20 It's a complete rewriting of the text.

21 It's not -- doesn't make grammatical sense when  
22 plopped into the claim language, and it includes a  
23 phrase here that changes "based on" to "takes into  
24 account," and I don't know -- I can't understand  
25 why that change has been made, and apparently, your

1 expert also does not understand why that change has  
2 been made.

3 So if there's a complete rewriting that  
4 doesn't make grammatical sense and adds a lot of  
5 new language, I think it's not as faithful to the  
6 original claim as the construction that I proposed.

7 Now, having said that, all of the analysis  
8 in my declaration also applies to this  
9 construction.

10 BY MR. SWISHER:

11 Q. Okay. So you just mentioned a few things  
12 you disagreed with you. You said you had some  
13 grammatical issues with it. You didn't agree with  
14 it because you say it doesn't make sense when you  
15 drop it into the claim language. So let's set  
16 those aside.

17 I want to ask you about sort of  
18 substantive disagreements, if you have any, with  
19 Nike's proposed construction.

20 So, first, let's talk about the phrase  
21 that you mentioned, "takes into account." So why  
22 do you disagree with the use of "takes into  
23 account" in Nike's construction?

24 A. Well, as I mentioned, it's apparently  
25 replacing "based on" and changes it to "takes into

1 account." And I can't understand what that's  
2 trying to do to the words "based on."

3 So "based on" has a meaning. "Takes into  
4 account" has a meaning. I don't know why one  
5 phrase has been replaced for the other.

6 However, when I read this is "based on a  
7 level," and I read "takes into account," and also  
8 my own construction "wherein exertion level is  
9 adaptive to a user's physical fitness.

10 So "adaptive," "based on," and "takes into  
11 account," for all of them, should mean that the  
12 exertion level depends on, at least in part, one or  
13 more measurable attributes of physical fitness or  
14 one or more attributes of physical fitness.  
15 Attribute is by definition measurable.

16 So I am reading "based on a level," "takes  
17 into account an individual user's" and "adaptive"  
18 to all -- all to mean depends on, at least in part,  
19 one or more attributes of physical fitness.

20 And so my analysis is based on that. It's  
21 based on my plain and ordinary understanding of the  
22 original claim term wherein an exertion level is  
23 "based on a level of physical fitness of a user,"  
24 and where I change "based on a level of physical  
25 fitness of a user" to is "adaptive to a user's

1 physical fitness" based on, first of all, the title  
2 of the patent -- one of the two words is  
3 "adaptive"; it's a key idea -- and also in the  
4 prosecution history, this phrase "adaptive to a  
5 user's physical fitness" is used exactly.

6 So my construction is more faithful to the  
7 original claim language, simpler, and  
8 understandable whereas the grammatically incorrect  
9 and unknown reason for changing "based on" to  
10 "takes into account" is what's appearing in Nike's  
11 construction.

12 Q. If "based on" and "takes into account" had  
13 the same meaning, would you have any disagreement  
14 with the use of "takes into account" in Nike's  
15 construction?

16 MS. NGUYEN: Objection. Form.

17 THE WITNESS: So up to "based on" -- and  
18 forgetting grammar, up to "based on" in Nike's --  
19 or sorry -- the original claim language and "takes  
20 into account" and Nike's proposed construction, so  
21 up to those points -- I'm not talking about past  
22 there -- if you say to me that let's all agree that  
23 "takes into account" is equivalent to "based on,"  
24 then I would say, yes, those two, up to that point,  
25 are equivalent.

1 But having said that, the reason for  
2 changing from "based on" to "takes into account" is  
3 not clear to me or to your expert.

4 So if I may say one more time the way that  
5 I'm applying the original claim language, Nike's  
6 construction, and my construction, is to also mean  
7 depends, at least in part, on one or more  
8 attributes of physical fitness.

9 So that's really what my analysis is based  
10 on.

11 BY MR. SWISHER:

12 Q. Okay. Let me ask you this: Why do you  
13 disagree with the use of an individual user's  
14 particular physical fitness condition in Nike's  
15 proposed construction?

16 MS. NGUYEN: Objection. Form.

17 THE WITNESS: Again, it -- the biggest reason  
18 is it's a complete rewrite.

19 BY MR. SWISHER:

20 Q. Okay. Let me stop you there, though.  
21 I understand the grammar, rewrite issue. So can we  
22 agree to set aside those concerns of yours and what  
23 I'd like to do is focus on the substantive meaning  
24 of the phrase, and let's talk about any  
25 disagreement you may have about the meaning.

1 Does that make sense?

2 MS. NGUYEN: Objection. Form.

3 Counsel, please let the witness answer as  
4 he wishes.

5 MR. SWISHER: I just want to -- that's fine.

6 THE WITNESS: So I can set grammar aside.  
7 I don't have a problem with that. I don't need to  
8 mention that again.

9 But what I'm saying is a lot of words were  
10 added here to the original claim language whereas  
11 in the intrinsic evidence, both in the title of the  
12 patent and in the file history, the changing of  
13 "based on a level of physical fitness of a user" to  
14 "adaptive to a user's physical fitness" is well  
15 supported, whereas the language that's added here  
16 is not as well supported.

17 BY MR. SWISHER:

18 Q. Okay.

19 A. But having said that -- let me just  
20 finish -- and I'll say it one more time if this  
21 helps us get past here is that I am -- when I'm  
22 analyzing the art in my declaration throughout,  
23 it's with the understanding that it depends at  
24 least in part on one or more attributes of a user's  
25 physical fitness.

1           So if we can agree on that, then I'm happy  
2 to continue on that basis.

3           Q.    That's fine. I appreciate that, but,  
4 Dr. Lynch, I'd ask if you please answer my  
5 questions and that will help us, I think, do this  
6 much more efficiently. I'm trying to be efficient  
7 today.

8           So I was asking a question about comparing  
9 Nike's proposed construction to the claim language  
10 and asked if you had an opinion about that. So let  
11 me ask it again. Okay. And maybe I'll ask a more  
12 focused question and this will help.

13           What I'm trying to get at is this: In  
14 your mind, is there a difference between "a level  
15 of physical fitness of a user" in the claim term  
16 and "a user's particular physical fitness  
17 condition" in Nike's construction?

18           A.    Well, what I would say is "physical  
19 fitness" is what's used in the claim term.  
20 "Physical fitness" is what's defined in Caspersen,  
21 for example, and so I don't see a reason to add the  
22 word "condition" there which is not in the original  
23 claim language.

24           Q.    Okay. And do you see that Nike's proposed  
25 construction uses the word "condition" in that

1 particular phrase instead of "level"?

2 Do you follow me on that?

3 MS. NGUYEN: Objection. Form.

4 THE WITNESS: Yes.

5 BY MR. SWISHER:

6 Q. Okay. So what I'm getting at is do you  
7 see there's a difference between a user's  
8 particular fitness condition and their level of  
9 physical fitness?

10 A. So this is not something that I have  
11 opined on, a difference between level of physical  
12 fitness and physical fitness condition.

13 So, again, what I mentioned before,  
14 physical fitness is a set of attributes that are  
15 measurable and could that mean -- could that set of  
16 measurements along these multiple dimensions be  
17 equated to condition?

18 It's not something that I've opined on.

19 Q. Well, what do you think is meant by "a  
20 level of physical fitness" as it's recited in the  
21 claim language?

22 And I'm sorry. I didn't want to cut you  
23 off. What I'm focusing on, to make this efficient,  
24 what is the "level" referring to there, "a level of  
25 physical fitness"?

1 MS. NGUYEN: Objection. Form.

2 THE WITNESS: So "physical fitness" refers to  
3 the measurable attributes of a user, and "level"  
4 refers to the values of those measurables.

5 BY MR. SWISHER:

6 Q. So can you give an example, in your mind,  
7 of what you would agree is "a level of physical  
8 fitness of a user"?

9 If I were to ask you, Dr. Lynch, can you  
10 give me an example of "a level of physical fitness  
11 of a user"? What would that be?

12 MS. NGUYEN: Objection. Form.

13 THE WITNESS: Sorry. You're an engineer.  
14 I just want to make sure I'm using words -- you are  
15 familiar with the words "scale" and "vector."

16 BY MR. SWISHER:

17 Q. Yes.

18 A. Can I use those?

19 Q. Sure.

20 A. So a physical fitness is a set of  
21 measurable attributes. So you can think of that as  
22 a vector meaning that there's many measures. You  
23 can put them in a list if you want to; right?

24 So a level refers to that vector, the  
25 values in that vector. So, for example, if --

1 well, I'll stop there.

2 Q. Okay. And to follow on your example,  
3 could you put a label or a name on the vector in  
4 total for a given user to describe a level?

5 MS. NGUYEN: Objection. Form.

6 THE WITNESS: So the level is the vector of  
7 measurables.

8 BY MR. SWISHER:

9 Q. Right.

10 But if you wanted to shorthand what is the  
11 set of values for the vector for a given user and  
12 describe that vector, could you put a name to that  
13 to the -- maybe -- let me strike that. Maybe we  
14 should be a little more closer to the '413 patent  
15 so -- and to this realm of art.

16 Like, have you ever heard someone say that  
17 someone is in good shape?

18 A. Yes.

19 Q. Okay. Or that someone is in poor shape?

20 A. I have heard people say that.

21 Q. So, in your mind, have you considered that  
22 "a level of physical fitness of a user" could refer  
23 to sort of colloquial terms for describing a level  
24 terms such as poor shape, good shape, excellent  
25 shape?

1 MS. NGUYEN: Objection. Form.

2 THE WITNESS: So to give you an example, since  
3 physical fitness is a set of attributes, if I had  
4 two users, two people, with a different collection  
5 of such attributes, different values in their  
6 vectors, and some of those values were better for  
7 one person than the other, and the other person had  
8 better in other attributes than the first person,  
9 I would not be able to say Person A is in better  
10 condition or shape than Person B.

11 Now, if there were a case where one  
12 person, every attribute is better along whatever  
13 the scale is than another person, then I  
14 think I would be able to say that person has better  
15 physical fitness than the other person.

16 BY MR. SWISHER:

17 Q. Right.

18 Because you agree that physical fitness  
19 refers to the collection of attributes for a user;  
20 right?

21 Or let me strike that.

22 The claim term says "physical fitness of a  
23 user"; right?

24 So if we're talking about a user as a  
25 specific person's physical fitness, physical

1 fitness refers to the collection of attributes or  
2 criteria for that person; right?

3 A. Correct.

4 Q. Okay. So what I'm getting at then is what  
5 does the level mean, the level of physical fitness,  
6 in your mind?

7 MS. NGUYEN: Objection. Form.

8 THE WITNESS: It refers to that collection of  
9 values in the vector. So if I saw somebody that  
10 was apparently very good at lifting weights but not  
11 so good at running or took short strides or had a  
12 body mass index that was too high or something,  
13 I would not be able to say that person is in good  
14 physical fitness or bad physical fitness because  
15 some attributes are good and some are not so good.

16 BY MR. SWISHER:

17 Q. So how would you determine what a user's  
18 level of physical fitness is?

19 A. As I mentioned before, it would -- as used  
20 in the claim language, it would be at least based  
21 on one or more attributes of physical fitness. So  
22 when you're talking about an exertion level that is  
23 based on "a level of physical fitness of a user,"  
24 you're talking about an exertion level that depends  
25 on, at least depends on, one or more attributes of

1     that user's physical fitness.

2           Q.     So would the level of physical fitness  
3     involve a ranking of some kind?

4                   I'm just trying to put some -- put an  
5     example to this to make it more clear because I'm  
6     not sure if I follow your explanation.

7                   You know, is it something like low,  
8     medium, high, or is it a numerical scale?

9                   As a level of physical fitness, could you  
10    put it on a 1-to-10 scale or something like that?

11           MS. NGUYEN:  Objection.  Form.

12           THE WITNESS:  No, because it's  
13    multi-dimensional, like I said.  It's not a single  
14    spectrum.  So those attributes, many of them, will  
15    be associated perhaps with a scalar value for one  
16    those attributes.  Some might be chosen from  
17    discrete sets.  So I can't collapse this  
18    multi-dimensional concept onto a one-dimensional  
19    spectrum.

20    BY MR. SWISHER:

21           Q.     So if you wanted to set an exertion level  
22    for a person based on that person's level of  
23    physical fitness, how would you go about doing  
24    that?

25           A.     Like I said before, and I'll say it again,

1 it would have to depend on at least -- at least  
2 depend on one or more of the attributes of that  
3 user's physical fitness.

4 So, for example, I'll choose Nike's  
5 proposed construction "takes into account." It  
6 would take into account one of those physical  
7 fitness attributes or more but at least one.  
8 Otherwise, it's not based on the user's physical  
9 fitness.

10 And "takes into account," other things  
11 could come into it perhaps but at least one of the  
12 attributes, measurable attributes, of physical --

13 Q. Okay.

14 A. -- has to be considered or taken into  
15 account.

16 Q. And do you agree that the claim language,  
17 when it refers to "a level of physical fitness of a  
18 user," is referring to a specific user; right?

19 MS. NGUYEN: Objection. Form.

20 THE WITNESS: It's talking about the person  
21 using the device, yes.

22 BY MR. SWISHER:

23 Q. Right. Okay. I just want to make sure  
24 there wasn't a disagreement there.

25 So when you were talking about that the

1 exertion level would have to depend on or take into  
2 account the physical fitness attributes of the  
3 person, those physical fitness attributes would be  
4 considered separately for each user -- right? -- or  
5 just distinctly for each user?

6 MS. NGUYEN: Objection. Form.

7 THE WITNESS: Yeah, to take into account the  
8 level of physical fitness of a user, you would be  
9 talking about that user's measurable attributes.

10 MS. NGUYEN: Counsel, can we take a break?

11 MR. SWISHER: We can if it's a quick one.  
12 I was kind of in the middle of things, but I'll  
13 leave it up to you.

14 MS. NGUYEN: How much longer?

15 MR. SWISHER: Maybe like ten minutes.

16 MS. NGUYEN: Yeah.

17 BY MR. SWISHER:

18 Q. Okay. Dr. Lynch, let's switch gears a  
19 bit. I wanted to ask you just a little bit more  
20 about your proposed construction.

21 So, first question -- we've touched on  
22 this some but just to ask you pointedly -- why did  
23 you replace is "based on" with "is adaptive to"?

24 A. Because, as I mentioned, adaptive is in  
25 the title of the patent, but the main thing is that

1 this was a key phrase in the prosecution history  
2 when Nike was overcoming a rejection of its claims.

3 Q. I guess what I'm getting at, though, is  
4 what problem or issue did you have with "is based  
5 on" that you believe needed to be clarified or  
6 changed in some way?

7 A. So I gave the claim language as it's  
8 written in the patent its ordinary and customary  
9 meaning, and then I proposed a modification of that  
10 that I believe has the same meaning and is faithful  
11 to the patent and its prosecution history.

12 But I'm okay with the original claim  
13 language also, but I think that this claim  
14 construction I've offered, since Nike changed it,  
15 I provided an alternative change that I think is  
16 more faithful to the claim language, but my --  
17 as a POSITA reading the file history and the  
18 patent, I believe these are the same meaning.

19 Q. Okay. So just to clarify, you believe  
20 that "is adaptive to" and "is based on" have the  
21 same meaning, in your understanding?

22 MS. NGUYEN: Objection. Form.

23 THE WITNESS: So both of these mean to me that  
24 exertion level depends at least on one or more  
25 attributes of the user's physical fitness.

1 BY MR. SWISHER:

2 Q. So the phrases "is based on" and "is  
3 adaptive to," in your opinion, have the same  
4 meaning?

5 MS. NGUYEN: Objection. Form.

6 THE WITNESS: In the context of this patent,  
7 yes.

8 BY MR. SWISHER:

9 Q. Okay. I appreciate that.

10 I was going to quickly introduce  
11 Exhibit 1014, which I think is the file history  
12 portion you were just referring to.

13 So in Exhibit 1014, which is one of the  
14 applicant responses to an Office Action at the  
15 Patent Office, if you turn to page 8, you'll see a  
16 few paragraphs here that you cited in your  
17 declaration, and the only question I was going to  
18 ask you is that you agree that the applicant here  
19 uses both the phrases "is based on" and "is  
20 adaptive to"; right?

21 MS. NGUYEN: Objection. Form.

22 THE WITNESS: So in the first full paragraph at  
23 the end, it says "Because Lubell's exercise test  
24 protocol is predetermined, it is not adaptive to  
25 the physical fitness of the user."

1           And then it goes on and says "So,  
2           therefore" -- sorry -- "Accordingly, nowhere does  
3           Lubell disclose, teach, or suggest a prompt for a  
4           user to exercise 'at a plurality of successive  
5           exertion levels, wherein an exertion level is based  
6           on a level of physical fitness of a user.'"

7           So in two paragraphs it's referring to  
8           adaptive and based on in two successive paragraphs.  
9           It's using both those terms.

10          BY MR. SWISHER:

11           Q.    Okay. Let me ask you this, Dr. Lynch.  
12           I have a hypothetical for you.

13                   If you were to go to a store and get  
14           measured for a custom suit and they took a bunch of  
15           measurements of your, you know, your chest, your  
16           arms, your legs, waist, all the things they need to  
17           take measurements for and then the tailor made a  
18           suit for you, would that suit be based on your  
19           measurements?

20           MS. NGUYEN: Objection. Form.

21           THE WITNESS: Yes.

22          BY MR. SWISHER:

23           Q.    Okay. Now, instead, if you were to go to  
24           the store and just buy a suit off the rack, let's  
25           say it happened to be your standard size, would

1     that suit be based on your measurements?

2           A.     The manufacturing of the suit wouldn't  
3     have been based on me, but my purchasing of it  
4     would have been based on my measurements.

5           Q.     Okay. I want to ask you a few more  
6     questions about your proposed construction.  
7     I think the best place to look is -- let me find  
8     the right place -- if we can turn to paragraph 11  
9     of your supplemental -- or your reply declaration,  
10    Exhibit 1018.

11          A.     Yes.

12          Q.     Okay. So this paragraph you refer to the  
13    Caspersen reference, which is Exhibit 2009.

14                 Do you see that?

15          A.     Yes.

16          Q.     Okay. Now, I just wanted to ask,  
17    Dr. Lynch, why did you remove the word "level" from  
18    "a level of physical fitness of a user" in your  
19    proposed construction?

20          MS. NGUYEN: Objection. Form.

21          THE WITNESS: So, again, in the context of the  
22    patent and its file history, these two phrases in  
23    paragraph 7, the original claim language and my  
24    construction, are equivalent. Okay?

25                 So I removed level so that I could use the

1 phrase from the file history, but both of these  
2 constructions by their ordinary and customary  
3 meaning within the context of the patent from the  
4 view point of a POSITA are the same.

5 BY MR. SWISHER:

6 Q. Well, I guess I'm not sure I follow. So  
7 your construction reads "wherein an exertion level  
8 "is adaptive to a user's physical fitness"; right?

9 A. (Witness nodding head.)

10 Q. So you're saying or what I'm asking,  
11 I guess -- strike that -- is why is it your  
12 construction "wherein an exertion level is adaptive  
13 to a level of physical fitness of a user"?

14 Why did you remove the second "level" from  
15 your construction?

16 MS. NGUYEN: Objection. Form.

17 THE WITNESS: So, to be clear, in paragraph 11  
18 of my reply declaration, I'm explaining that  
19 "wherein exertion level is based on a level of  
20 physical fitness of a user" and "wherein exertion  
21 level is adaptive to user's physical fitness" would  
22 both reflect the user's level of physical fitness.

23 The reason that I used the wording that  
24 I did was because I was pulling it from the file  
25 history, and since I was providing a slightly

1 differently written version of the claim language  
2 in case it was easier for somebody to understand,  
3 and also because Nike had provided a very different  
4 construction, since I was writing something  
5 different, I used that language instead of the same  
6 language that was already in the claim element, but  
7 a person of ordinary skill in reading this in the  
8 context of the patent file history would  
9 understand.

10 BY MR. SWISHER:

11 Q. So I think what you're saying is in  
12 paragraph 11, where you refer to Caspersen, and  
13 then the final sentence of paragraph 11 reads  
14 "Thus, a construction of 'wherein an exertion level  
15 is based on a level of physical fitness of a user'  
16 as 'wherein an exertion level is adaptive to a  
17 user's physical fitness' would reflect the user's  
18 level of physical fitness."

19 Do I read that right?

20 A. Yes.

21 Q. Okay. So what you're saying is that those  
22 two phrases, in your opinion, have the same  
23 meaning; is that right?

24 MS. NGUYEN: Objection. Form.

25 THE WITNESS: From the viewpoint of a POSITA

1 who had read the patent and particularly with the  
2 definition of physical fitness that we've been  
3 discussing.

4 BY MR. SWISHER:

5 Q. Okay. So by removing the second instance  
6 of "level" from the claim language for this term,  
7 you didn't intend to change the meaning of the term  
8 by removing that second "level"?

9 A. No.

10 I intended it to be a restatement of the  
11 original claim language which I ascribe its  
12 ordinary and customary meaning to.

13 Q. Okay. I have one more quick question on  
14 that point. We can take a break in a minute.

15 I'm going to hand you what's been marked  
16 Exhibit 2009, and this is the Caspersen reference  
17 that we've been talking about.

18 And if you can turn to page 5 of  
19 Caspersen, there's a highlighted portion there, and  
20 if you can read that to yourself and let me know if  
21 you agree whether that quote is the same quote  
22 that's cited in paragraph 11 of your reply  
23 declaration.

24 A. What is highlighted in this marked-up copy  
25 of Caspersen you've given me is the phrase that

1 I quoted in my paragraph 11.

2 Q. Okay. And that phrase from Caspersen,  
3 Exhibit 2009, that's quoted in paragraph 11 of your  
4 declaration says "...no person has no fitness - all  
5 or active or fit to greater or lesser degrees";  
6 right?

7 A. Yes.

8 Q. And I just wanted to ask the next sentence  
9 of Caspersen references levels; right?

10 So I'm going to read that.

11 So then it says, in Caspersen, "When it is  
12 necessary to categorize members of the population  
13 into those who achieve certain levels and those who  
14 do not, operational definitions can be used."

15 Do you see that?

16 A. I do.

17 Q. So would it be fair to say Caspersen is  
18 also acknowledging that greater or lesser degrees  
19 of fitness can be called levels of fitness?

20 MS. NGUYEN: Objection. Form.

21 THE WITNESS: What I've said is that greater or  
22 lesser degrees -- let me go to the second sentence  
23 since it's not quoted in my report.

24 This says "When it is necessary to  
25 categorize members of the population into those who

1 achieve certain levels and those who do not,  
2 operational definitions can be used."

3 So, there, the operational definition  
4 would operate on that set of attributes the user  
5 has or achieves, and so I would come up with a  
6 definition that says, okay, looking at Attribute A  
7 or possibly A, B, and C, I'm going to create some  
8 definition or function based on those that can put  
9 people into different categories.

10 So that's what that sentence is saying in  
11 Caspersen. So I would need to operate on the  
12 attributes of physical fitness to come up with a  
13 categorization.

14 BY MR. SWISHER:

15 Q. Okay. So all I'm asking is kind of even a  
16 more basic question is you're not relying on  
17 Caspersen to remove the word "level" from the  
18 construction, because, you know, Caspersen tells  
19 you that we don't need to think about levels or  
20 something like that; right?

21 I'm just trying to get at because  
22 Caspersen also refers to levels as does the plain  
23 claim language; right?

24 MS. NGUYEN: Objection. Form.

25 THE WITNESS: So just to say it one more time,

1 I think the plain claim language and my  
2 construction have the same meaning from a POSITA's  
3 viewpoint in the context of the file history and  
4 the patent. So I'm not trying to explicitly get  
5 rid of "level of physical fitness." I'm trying to  
6 use words that are supported in the intrinsic  
7 evidence.

8 BY MR. SWISHER:

9 Q. Right.

10 And even the extrinsic evidence,  
11 Caspersen, in particular, refers to levels as well;  
12 right?

13 MS. NGUYEN: Objection. Form.

14 THE WITNESS: It talks about levels based on  
15 operational definitions that are not given.

16 BY MR. SWISHER:

17 Q. Okay.

18 A. That's not part of the paper.

19 Q. Okay. Just a couple more questions on  
20 this, and then we can take a break.

21 In the next paragraph, Dr. Lynch,  
22 paragraph 12, you reference other extrinsic  
23 evidence, and the first one you reference is the  
24 Matsumoto reference; right?

25 A. Yes.

1           Q.    Okay.  And Matsumoto is one of the  
2   asserted prior art references in this IPR; right?

3           A.    Yes.

4           Q.    Okay.  So why did you rely on Matsumoto  
5   for your claim construction opinions?

6           A.    I did not rely on Matsumoto for my claim  
7   construction.

8                   So my claim construction came from the  
9   intrinsic evidence, but Matsumoto is an example  
10  where it's describing these measurable physical  
11  attributes, but there is many others, some of the  
12  other asserted prior art as well as, you know, many  
13  things out there are using other measurables of  
14  attributes.

15          Q.    Okay.  So you did not rely on Matsumoto  
16  for your claim construction opinions; is that  
17  right?

18          MS. NGUYEN:  Objection.  Form.

19          THE WITNESS:  I did not rely on it, but it  
20  supports my claim construction.

21          BY MR. SWISHER:

22          Q.    Did you formulate your proposed claim  
23  construction to change the meaning of the claim  
24  term in an effort to make the claim term fit the  
25  Matsumoto reference?

1 MS. NGUYEN: Objection. Form.

2 THE WITNESS: No.

3 BY MR. SWISHER:

4 Q. Okay. On the next page, still in  
5 paragraph 12, the first full sentence of that  
6 paragraph reads "A POSITA would understand weight  
7 to be a measurable physical attribute related to a  
8 level of physical fitness of a user."

9 Do you see that?

10 A. Yes.

11 Q. In your opinion is weight, by itself, a  
12 measure of body composition?

13 A. So weight is one of many in the set of  
14 measurable attributes that relates to a person's  
15 ability to do physical activity. So it's one of  
16 many.

17 Q. Okay. I think I asked a slightly  
18 different question which is -- strike that. Let me  
19 start over.

20 In your opinion, Dr. Lynch, is weight, by  
21 itself, a measure of body composition?

22 A. Weight is one measurable that relates to  
23 body composition.

24 Q. Okay. So weight by itself, though, is not  
25 a measure of body composition; is that right?

1           A.    It's one of the measures of body  
2 composition.

3                    So I'm sorry. Can I look at Caspersen?

4                    Okay. So body composition is a phrase  
5 that Caspersen uses as a fitness component, one of  
6 five, and weight would be a measurable within that  
7 component.

8           Q.    So weight is within a body composition  
9 component but weight by itself is not a measure of  
10 body composition; is that right?

11           MS. NGUYEN: Objection. Form.

12           THE WITNESS: Weight is one measurable  
13 attribute of body composition.

14           BY MR. SWISHER:

15           Q.    I guess what I'm getting at -- maybe we're  
16 talking past each other. So the next -- or the  
17 quoted part in paragraph 12, after the phrase  
18 I just read, refers to Exhibit 2010, and you quote  
19 a portion of that exhibit stating "body composition  
20 has been estimated by measuring body height and  
21 weight and calculating body mass index, which is  
22 weight over height squared."

23                    Do you see that?

24           A.    Yes.

25           Q.    Okay. So you agree that body mass index

1 is a measure of body composition; right?

2 A. Yes.

3 Q. And weight is one component of a body mass  
4 index calculation; right?

5 A. Weight is one measurable that goes into  
6 that calculation, and for adults for the vast  
7 majority of their life, height doesn't really  
8 change but weight does, and that's something that  
9 you'd want to keep measuring.

10 Q. Well, let me just ask you this: If you  
11 knew someone's weight but didn't know their height,  
12 could you calculate their body mass index?

13 MS. NGUYEN: Objection. Form.

14 THE WITNESS: If you only knew the weight  
15 attribute and no other attributes, you would not be  
16 able to calculate the body mass index attribute.

17 MR. SWISHER: Okay. I think this is a good  
18 time for a break.

19 THE VIDEOGRAPHER: We'll go off the record.  
20 The time is 10:11 a.m. This is the end of Media  
21 Unit No. 1.

22 (A short break was taken.)

23 THE VIDEOGRAPHER: We are back on the record at  
24 10:22 a.m. This is Media Unit 2.

25

1 BY MR. SWISHER:

2 Q. All right. Dr. Lynch, I want to switch  
3 gears a bit and ask you some questions about the  
4 Amano reference and ask you some questions about  
5 the section of your reply declaration that starts  
6 in paragraph 14.

7 I'll go ahead and introduce for the record  
8 what's been marked as Exhibit 1002. This is the  
9 Amano reference. It's A-m-a-n-o.

10 All right. Dr. Lynch, if I could direct  
11 you to paragraph 16 of your reply declaration,  
12 which is on page 9, and let me know when you're  
13 there.

14 A. Yes.

15 Q. Okay. And you have a table in  
16 paragraph 16 that lays out some steps related to  
17 Amano's calculation display processing; right?

18 A. Correct.

19 Q. Okay. And I just wanted to confirm that  
20 in these steps of Amano, Amano calculates exercise  
21 intensity after the user is running at the pitch  
22 for which exercise intensity is calculated; right?

23 MS. NGUYEN: Objection. Form.

24 THE WITNESS: So I didn't understand the  
25 question.

1 BY MR. SWISHER:

2 Q. Yeah. Maybe it would be easier if I refer  
3 to some of the steps.

4 Do you see Step Sa3?

5 A. Yes.

6 Q. And Step Sa3 recites "calculate exercise  
7 intensity," and then there's some other material,  
8 but do you see where it says "calculate exercise  
9 intensity"?

10 A. Yes.

11 Q. And so what I was asking is does that  
12 step, Step Sa3, where Amano calculates exercise  
13 intensity occur after the user begins running at  
14 the pitch for which that exercise intensity is  
15 calculated?

16 MS. NGUYEN: Objection. Form.

17 THE WITNESS: Give me one second.

18 BY MR. SWISHER:

19 Q. And to make things easier so you  
20 understand what I'm asking, before Step Sa3 in  
21 paragraph 16, there's a line that is for Step Sa2.

22 Do you see that?

23 A. Yes.

24 Q. Okay. And Step Sa2 is what Amano detects  
25 the running pitch of the user; right?

1           A.     Step Sa2 is using pitch detection in  
2     column 11 of the Amano patent.

3           Q.     Okay. So all I'm asking is that in Amano,  
4     the step where it calculates exercise intensity,  
5     that happens once the user is already running at  
6     the pitch for which exercise intensity is  
7     calculated; right?

8           MS. NGUYEN: Objection. Form.

9           THE WITNESS: So the calculation -- calculation  
10    of exercise intensity, which is the product of  
11    pitch, stride length, and body weight -- sorry.  
12    Start over.

13                   Exercise intensity is the product of  
14    pitch, stride length, and body weight. Stride  
15    length and body weight are known, and then you  
16    detect the pitch in Step Sa2, which is  
17    Section 1.2.2 of the patent, and then when you have  
18    the pitch, you multiply by stride and body weight  
19    to get the exercise intensity, to calculate the  
20    exercise intensity.

21    BY MR. SWISHER:

22           Q.     Right.

23                   So Amano calculates the exercise intensity  
24    in Step Sa3 which occurs after Amano detects the  
25    running pitch of the user in Step Sa2; correct?

1           A.    The calculation of exercise intensity  
2           needs to know the pitch. So the pitch has to be  
3           calculate -- has to be detected first, and then you  
4           put it into an equation, and then you get exercise  
5           intensity.

6           Q.    Okay. And then, similarly, I wanted to  
7           ask you about the steps in the exercise intensity  
8           increase notifying means which are set forth in  
9           paragraph 17 on the same page.

10                  Do you see that?

11           A.    I do.

12           Q.    Okay. And in this table there's two  
13           steps, Step Sb1 and Step Sb2.

14                  Do you see that?

15           A.    Yes.

16           Q.    Okay. And I just wanted to confirm that  
17           Amano's exercise intensity increase notifying means  
18           process detects the pitch of the user running  
19           first, and that's Step S1b; right?

20           A.    Sb1.

21           Q.    Sb1. Apologies.

22                  So Amano's exercise intensity increase  
23           notifying means process, first Amano detects the  
24           pitch of the user running in Step Sb1; right?

25           A.    Correct.

1           Q.    And then in the next step, Sb2, Amano  
2 determines the pitch at which there is a 10 percent  
3 increase over the pitch that was detected in Sb1;  
4 right?

5           A.    Right.

6                    So to be clear, the exercise intensity  
7 increase notifying means and the calculation  
8 display processing are two processes happening in  
9 parallel, the interrupts, and so then in my figure  
10 on page 11 of my declaration, just before  
11 paragraph 19, I show the chronology of the  
12 calculation display processing and the exercise  
13 increase intensity notifying means.

14          Q.    I'm going to ask you some different  
15 questions about Amano. If you can turn to  
16 paragraph 27 of your declaration, which begins  
17 there's a title Section C, right above that. Let  
18 me know when you're there.

19          A.    I'm there.

20          Q.    Okay. So, Dr. Lynch, it's your opinion  
21 that Amano's first, fourth, and eighth embodiments  
22 are not distinct embodiments?

23          A.    Correct.

24                    So the text that appears in the section  
25 labeled fourth embodiment says first do the V02max

1 calculation, which comes from the first embodiment  
2 and then continues with the teaching.

3 Q. Okay. I want to ask you a couple of  
4 things about the Amano reference. So if you look  
5 at Exhibit 1002, can you flip to Figure 5, which  
6 I think appears on page 6 of Exhibit 1002.

7 A. Yes.

8 Q. Okay. And maybe put a thumb in there and  
9 then flip to column 9 of Exhibit 1002 and --

10 A. Okay.

11 Q. Actually, I apologize. I meant column 8,  
12 the page before, and if you go to line 54 of  
13 column 8, do you see it says "External structure."

14 A. Yes.

15 Q. Okay. And then the paragraph below that,  
16 in column 8, the specification of the Amano  
17 reference starts referring to Figure 5.

18 Do you see that?

19 A. Yes.

20 Q. I just wanted to set the table here.

21 So you agree that this column, in  
22 column 8, discussing Figure 5, is referring to the  
23 Embodiment 1 of Amano; right?

24 Actually maybe to help you out, flip one  
25 page before, column 6. The top of column 6 refers

1 to Embodiment 1. Do you see that?

2 MS. NGUYEN: Objection. Form.

3 THE WITNESS: There are many section numbers in  
4 Amano, and the high level section number is 1 for  
5 this external structure that you're referring to in  
6 column 8.

7 BY MR. SWISHER:

8 Q. Yes. Okay. So all I'm trying to do is  
9 just set the -- make sure we are on the same page  
10 that Figure 5 is described in the Embodiment 1  
11 section. Do you agree with that?

12 A. It's described in the section entitled  
13 "Embodiment 1."

14 Q. And if you can flip to a different figure,  
15 I want to go to Figure 16 of Amano which appears on  
16 page 16.

17 A. Okay.

18 Q. Okay. And then if you put your thumb in  
19 there and then flip to column -- let me find it --  
20 19. Hold on one second. I'm going to read my  
21 notes here. I had the wrong numbers.

22 Look at column 20 about midway down,  
23 line 38, you'll see a reference to Figure 16.

24 Do you see that?

25 A. Yes.

1 Q. Okay. So, again, all I wanted to confirm  
2 here is that when we're talking about Figure 16,  
3 you can see, if you look back on column 19, we are  
4 in the section that is titled "Embodiment 4" of  
5 Amano; right?

6 A. That's correct.

7 Q. Okay. So you agree that Figure 16 is  
8 discussed within the Embodiment 4 section of Amano;  
9 right?

10 A. It's in the section entitled  
11 "Embodiment 4," Section 4, "Embodiment 4."

12 Q. Now looking back at the two figures  
13 I pointed out earlier, Figure 5 and Figure 16, if  
14 you could kind of look at those side by side, my  
15 question, Dr. Lynch, is it your opinion that  
16 Figures 5 and 16 depict the same device?

17 MS. NGUYEN: Objection. Form.

18 THE WITNESS: They are illustrations of the  
19 same device. The illustrations are slightly  
20 different, but major components are the same.  
21 I see five buttons on Figure 16 and four on  
22 Figure 5.

23 BY MR. SWISHER:

24 Q. Okay. So the figures have different  
25 numbers of buttons on the depicted devices; is that

1 right?

2 A. Yes.

3 Q. Do the devices have different display  
4 sizes?

5 MS. NGUYEN: Objection. Form.

6 THE WITNESS: Looks to be about the same.

7 BY MR. SWISHER:

8 Q. About the same or exactly the same?

9 A. Well, these two pictures aren't sized  
10 exactly. About the same. So as a person of  
11 ordinary skill looking at these two pictures,  
12 I don't see significant differences between them.

13 Q. So you think they are the same device?

14 MS. NGUYEN: Objection. Form.

15 THE WITNESS: I think they are different  
16 representations of the same device.

17 BY MR. SWISHER:

18 Q. Okay. And Figure 5, do you see two items  
19 labeled with the numbers 511 and 512?

20 A. I do.

21 Q. Okay. If you turn to column 9 at line 15,  
22 you see that Item 511 is referred to as  
23 "button switch 511"?

24 A. Yes.

25 Q. Okay. And then one paragraph below in

1 line 19 of column 9, do you see that Item No. 512  
2 is referred to as "button switch 512"?

3 A. Yes.

4 Q. Okay. Do those two button switches,  
5 511 and 512, appear on the device depicted in  
6 Figure 16?

7 A. No.

8 Q. Okay. If you turn to column 19 at  
9 line 64, do you see where Amano refers to "pressing  
10 set switch S" in column 19?

11 A. Yes.

12 Q. Okay. And if you flip back to Figure 16,  
13 do you see a button or a switch that's labeled "S"  
14 in that figure?

15 A. Yes.

16 Q. Okay. And is there a button labeled "S"  
17 in Figure 5?

18 A. No, but I think a POSITA would read this  
19 to mean the same device with slightly different  
20 interfaces because you can use Figure 16 to perform  
21 the V02max estimation that's discussed with respect  
22 to Figure 5 and then continue from there.

23 So --

24 Q. Okay.

25 A. -- you would use Embodiment 1 to do or

1    what's listed under the section called Embodiment 1  
2    to figure out V02max and then continue with this  
3    section.

4                So I don't see anything in Figure 5 or  
5    Figure 16, for example, that would prevent me from  
6    doing a V02max calculation as taught earlier in the  
7    patent.

8                Q.    Okay.  So it's still your opinion that  
9    Figures 5 and 16 depict the same device?

10              A.    I think they are depicting the same  
11    invention and slightly different physical  
12    instantiations of it but functionally the same.

13              Q.    Let me ask you what you were just talking  
14    about, the V02max calculation.

15                    In paragraph 27 of your reply declaration  
16    about midway down or, I should say, the fourth line  
17    down in paragraph 27, you state, [as read] "Amano  
18    explicitly connects its first and fourth embodiment  
19    stating for the fourth embodiment that the user  
20    estimates his own V02max in advance using the methods  
21    explained in the first embodiment."

22                    Do you see that?

23              A.    Yes.

24              Q.    Okay.  And there you're referring to  
25    column 19 at lines 49 through 50 of Exhibit 1002;

1 right?

2 A. Yes.

3 Q. Okay. All right. Let's just -- I want to  
4 ask you just a scenario here. Let's say a user did  
5 use the first device of Matsumoto's first  
6 embodiment to calculate a V02max. How would the  
7 fourth embodiment device then access that V02max  
8 information?

9 MS. NGUYEN: Objection. Form.

10 THE WITNESS: So Embodiment 4 teaches that the  
11 user could enter that information -- I'm sorry --  
12 give me a minute to read here.

13 So in column 20 of the Amano reference,  
14 lines 7 through 13 or so, it talks about the user  
15 using switches to enter their V02max that they've  
16 estimated from the earlier discussion called -- in  
17 the section called Embodiment 1 in Amano.

18 So here the user effectively uses switches  
19 to type in their V02max. For a person of ordinary  
20 skill reading this, it would be immediately  
21 apparent that, if possible, you would just import  
22 without having to have the user type it in again.

23 BY MR. SWISHER:

24 Q. Okay. So for the fourth embodiment, Amano  
25 described that the user has to input their V02max by

1 pressing on some switches; right?

2 A. Correct.

3 Q. Okay. There's no disclosure in  
4 Embodiment 4 that the device described in  
5 Embodiment 4 imports data from the first  
6 embodiment; right?

7 A. The way it's written it's so that it could  
8 get that V02max from other sources, and they point to  
9 other options down here in column 19, but a person  
10 of ordinary skill who is using the same device to  
11 both estimate V02max and do the training, it would be  
12 apparent to them to just use the result that was  
13 already stored instead of having them to go through  
14 the user and have them type it back in.

15 Q. So just to be clear, you're saying that a  
16 person of ordinary skill could modify the device in  
17 Embodiment 4 so that it was able to import data  
18 that had been calculated by the device in  
19 Embodiment 1?

20 MS. NGUYEN: Objection. Form.

21 THE WITNESS: I don't know -- I mean, the  
22 modification is just read the value from memory  
23 instead of having the user's memory in their brain  
24 type it in.

25

1 BY MR. SWISHER:

2 Q. Well, maybe -- let me ask you this: Is  
3 there any disclosure in Embodiment 4 explaining  
4 that the device in Embodiment 4 is capable of  
5 estimating VO2max?

6 MS. NGUYEN: Objection. Form.

7 THE WITNESS: Well, it's certainly capable of  
8 estimating VO2max.

9 BY MR. SWISHER:

10 Q. What are you basing that opinion on?

11 A. Maybe you should define what you mean by  
12 "capable."

13 Q. Like does a device described in  
14 Embodiment 4 have the capability or the  
15 components -- however you want to phrase it -- like  
16 is it a device that measures VO2max?

17 MS. NGUYEN: Objection. Form.

18 THE WITNESS: So the one of those that I can  
19 answer has the components, yes, it has the  
20 components that would allow it to measure VO2max.

21 BY MR. SWISHER:

22 Q. And does anything in Embodiment 4 describe  
23 the device of Embodiment 4 as measuring VO2max?

24 A. It says you can use the teaching from the  
25 earlier section labeled Embodiment 1 to get that

1 value and then continues with the rest -- you need  
2 V02max to use the material in Embodiment 4. So it  
3 offers multiple ways that you could get that, but  
4 one of the ways is using the method described in  
5 Embodiment 1, and the device has all the components  
6 to be able to implement that -- the same device.

7 Q. Now, Embodiment 4 doesn't say that the  
8 device in Embodiment 4 uses the method of  
9 Embodiment 1; right?

10 Embodiment 4 says, as you described  
11 earlier, the user has to input the V02max by pressing  
12 on buttons; correct?

13 MS. NGUYEN: Objection. Form.

14 THE WITNESS: So the text in Embodiment 4 says  
15 that the user estimates their V02max in advance using  
16 methods explained in the first through third  
17 embodiments, and so -- and, also, there could be  
18 other methods, this indirect method that they cite.  
19 So there could be other ways to get V02max.

20 So if you have a device that, you know,  
21 the software is not calculating V02max, then you  
22 could type it in, but it would only be a software  
23 change. It has all the components it needs to be  
24 able to calculate V02max in the same device described  
25 here in Embodiment 4.

1 BY MR. SWISHER:

2 Q. Okay. Does the user -- strike that.

3 Does Embodiment 4 disclose that the user  
4 inputs any heart rate measurements into the device?

5 A. Would you like to point me to a place?

6 Q. Let me ask a slightly different question.

7 Does Embodiment 4 disclose that the user  
8 can input heart rate measurements so that the  
9 Embodiment 4 device can calculate a V02max?

10 MS. NGUYEN: Objection. Form.

11 THE WITNESS: Do you know that there's a place  
12 that it does? If so, you could point me to that.

13 BY MR. SWISHER:

14 Q. It doesn't, but I'm asking if you agree,  
15 I guess. Do you agree that it doesn't --

16 A. I am not aware that it does that. I am  
17 aware that it allows the user to enter their V02max.

18 Q. Okay. Okay. I am going to introduce into  
19 the record what's been marked as Exhibit 1003.  
20 This is the Matsumoto reference. That's  
21 M-a-t-s-u-m-o-t-o.

22 All right. Dr. Lynch, I'm going to ask  
23 you some questions about your Matsumoto opinions,  
24 which begin on page 20 at paragraph 35 of your  
25 reply declaration, and, actually, I'd like to turn

1 to Section B. 2. of the Matsumoto section beginning  
2 on page 22, which reads "Matsumoto teaches heart  
3 rate zones and heart rate measurements in the same  
4 embodiment."

5 Do you see that?

6 A. I do.

7 Q. Okay. And then if we flip to the next  
8 page of your declaration, in paragraph 39, your  
9 opinion here is that the first and second  
10 embodiments of Matsumoto are not distinct; right?

11 A. Correct.

12 Q. Okay. First, let me just ask when you  
13 refer to the different embodiments or to the two  
14 embodiments in paragraph 39, which -- that's  
15 probably a bad question.

16 What, in your mind, are the two distinct  
17 embodiments of Matsumoto?

18 MS. NGUYEN: Objection. Form.

19 THE WITNESS: There are no distinct embodiments  
20 in Matsumoto, but the term "Embodiment 1" and  
21 "Embodiment 2" has been used at least by Nike, and  
22 so I can use those terms, if you'd like.

23 BY MR. SWISHER:

24 Q. Maybe I can shortcut this so we are on the  
25 same page.

1           When Nike is referring to the two  
2       embodiments, do you understand Nike is talking  
3       about, for example, the device that's depicted in  
4       Figure 3 of Matsumoto as being one embodiment of  
5       the exercise management machine and then the device  
6       depicted in Figure 10 as being the second  
7       embodiment of an exercise management machine?

8           A.     So my understanding is that column 2,  
9       line 16 or so, to column 7, line 12 is what Nike is  
10      calling the first embodiment or Embodiment 1,  
11      I think, and I think this is consistent with what  
12      you said, but I'm going to text instead of figures.

13                 And then column 7, line 36, to the end or  
14      to column 11 is what Nike is referring to as  
15      Embodiment 2.

16           Q.     That's correct. So I think we are on the  
17      same page. I was just a little bit -- in  
18      paragraph 40, you talk also about the running or  
19      jogging implementation, and then there's a bicycle  
20      implementation. I think those are depicted in  
21      Figures 1 and 2 of Matsumoto, very first page  
22      there.

23                 So I just wanted to be on the same page  
24      when we are talking about the two embodiments, it's  
25      the exercise management machines that are described

1 in the text at the places you reference and then  
2 depicted in Figures 3 and 10 and in some other  
3 figures.

4 A. Okay. So I understand, for example, that  
5 Figure 2 is within that contiguous block of Nike's  
6 Embodiment 1. So --

7 Q. Right.

8 A. -- Figure 1 and 2 and up to and part of  
9 Embodiment 1 by Nike's definition.

10 Q. Okay. So I just wanted to focus, though,  
11 on the exercise management machines that are  
12 depicted in Figures 3 and 10 and then also  
13 described in the text, if we can just do that.

14 Okay. Is it your opinion, Dr. Lynch, that  
15 the devices depicted in Figures 3 and 10 of  
16 Matsumoto are the same device?

17 A. They're illustrations of the device with  
18 the same functionality, but they have different  
19 features in the drawings. So these are different  
20 ways to draw the features of those Embodiment 1 and  
21 Embodiment 2.

22 Q. Yeah. So just so I understand, like, is  
23 your opinion just that they are different drawings  
24 or that they are drawings of different devices?

25 MS. NGUYEN: Objection. Form.

1 THE WITNESS: Just as an example, both have an  
2 LCD display; both have buttons 0 to 9; both have,  
3 you know, other buttons. So with that as preface,  
4 can you ask me the question again?

5 BY MR. SWISHER:

6 Q. Yeah. Let me ask you a specific one.  
7 So, for example, let's take a look at  
8 Figure 10.

9 A. Yes.

10 Q. And do you see there are two buttons  
11 labeled 23 and 24 that have shorthand text there,  
12 manual training and automatic training.

13 Do you see those?

14 A. I do see those.

15 Q. Now, does the device in Figure 3 have  
16 those two buttons?

17 MS. NGUYEN: Objection. Form.

18 THE WITNESS: The drawing in Figure 3 does not.  
19 The underlying invention is the same.

20 So just to be clear, when I draft my own  
21 patents, we often draw different figures of the  
22 same invention that don't look exactly the same.

23 BY MR. SWISHER:

24 Q. So what I'm trying to understand, if you  
25 could just focus on my question, does the device

1 depicted in Figure 3 have buttons for manual  
2 training and automatic training?

3 A. Those buttons are not in Figure 3.

4 Q. Is it your opinion that the displays in  
5 Figures 3 and 10 are identical?

6 A. The drawings themselves, nothing is  
7 identical, and that includes the displays, but as  
8 I mentioned before, they all have LCD displays.  
9 They all have buttons 0 through 9. They all have  
10 some auxiliary buttons or switches.

11 Q. I guess what I'm getting at, in  
12 paragraph 39 in your deposition, the second  
13 sentence reads, "According to Dr. Bergeron, the two  
14 embodiments are distinct because the interfaces,  
15 controllers, and circuits of the first embodiment  
16 depicted in Figures 3 through 5 are completely  
17 different from interfaces, controllers, and  
18 circuits of the second embodiment depicted in  
19 Figures 10 and 11."

20 Do you see that?

21 A. I do.

22 Q. So I just wanted to focus on the word  
23 "completely."

24 Is your issue here just that with the  
25 notion that everything in the two devices is

1 completely different?

2 MS. NGUYEN: Objection. Form.

3 THE WITNESS: My reading of this as a POSITA is  
4 that what Nike calls Embodiment 1 and what Nike  
5 calls Embodiment 2 both of those are asking the  
6 user to enter information about their attributes of  
7 physical fitness. Both are then putting them  
8 through a training protocols that learn based on  
9 the previous results and then update the training  
10 protocol.

11 And so, in that sense, these two are very  
12 similar and that a POSITA reading these, it would  
13 be immediately apparent to the POSITA that elements  
14 of one section work with the other section and vice  
15 versa, and what I would say is that these drawings  
16 reinforce that, that these drawings of the  
17 invention are showing very similar elements,  
18 certainly not completely different, and also the  
19 electronics are using similar elements.

20 BY MR. SWISHER:

21 Q. Right.

22 So what I was getting at is you're not  
23 saying that the two devices have 100 percent the  
24 same components; right?

25 I mean, you agree that there are some

1 differences?

2 A. I agree that these drawings are different,  
3 but I don't agree that what the embodiments are  
4 doing are distinct.

5 So both of them, the user enters  
6 information about their physical fitness  
7 attributes, both of them do exercise, both of them  
8 data is collected from that exercise where they are  
9 exercising at multiple exertion levels, both of  
10 them the results of those exercises are used to  
11 determine the next exercise program.

12 So both of them are doing that, and each  
13 embodiment gives -- give different details.

14 Q. Do you understand that the embodiments  
15 have some different features?

16 MS. NGUYEN: Objection. Form.

17 THE WITNESS: As I mentioned, they're not  
18 exactly the same, but a POSITA reading them would  
19 understand that it's the same invention.

20 BY MR. SWISHER:

21 Q. Okay. So even though the second  
22 embodiment discusses a manual mode and automatic --  
23 I'm sorry. Let me strike that.

24 Even though the second embodiment  
25 describes a manual training mode and an auto

1 training mode and those modes are not described for  
2 Embodiment 1, you think they are the same devices?

3 MS. NGUYEN: Objection. Form.

4 THE WITNESS: So what Nike is calling  
5 Embodiment 2 has an auto training mode that is  
6 substantially the same as the auto training mode in  
7 what Nike is calling Embodiment 1 in the sense that  
8 it's updating the exercise program for the next  
9 time based on the results from this time.

10 The manual training mode is different.  
11 That's not discussed in what Nike calls  
12 Embodiment 1.

13 BY MR. SWISHER:

14 Q. Okay. In your opinion, Dr. Lynch, is a  
15 Toyota Camry and a Toyota Corolla not distinct?  
16 Are they not distinct cars?

17 MS. NGUYEN: Objection. Form.

18 THE WITNESS: They are both cars. They are  
19 different models, obviously.

20 BY MR. SWISHER:

21 Q. I want to ask you, Dr. Lynch, about the  
22 second-to-last sentence of paragraph 39 of your  
23 declaration.

24 You state "Dr. Bergeron argues that there  
25 is no suggestion that the two embodiments could

1 interact in any way. I disagree."

2 Do you see that?

3 A. Yes.

4 Q. What do you mean by "interact"?

5 A. Could you give me Dr. Bergeron's --

6 Q. Oh, I don't think I have it. Sorry.

7 I could ask it a different way, if it  
8 would be helpful.

9 Is it your opinion that the devices  
10 depicted in Figures 3 and 10 of Matsumoto can  
11 interact with each other?

12 MS. NGUYEN: Objection. Form.

13 THE WITNESS: I believe that they're  
14 teaching -- at least the auto mode for Embodiment 2  
15 are teaching substantially the same thing with  
16 small differences, but the -- there are many  
17 aspects of the two that could work with the other  
18 one.

19 BY MR. SWISHER:

20 Q. I guess I'm just asking a slightly  
21 different question.

22 Is it your opinion that, for example, the  
23 circuitry that's described and depicted for the  
24 first embodiment can interact with the circuitry  
25 that's described and depicted for the second

1     embodiment?

2           A.     So this term "interact," I'd like to see  
3     in Dr. Bergeron's testimony to answer that  
4     question. I'd like to see this citation to  
5     understand a little bit better your question.

6           Q.     Okay. So you can't answer just looking at  
7     Matsumoto itself whether the two embodiments can  
8     interact with each other?

9           A.     Can you give me a definition of  
10    "interact"?

11           I don't have one here.

12          Q.     Well, I don't know. That's what I was  
13    kind of asking. I'm not sure what you mean by  
14    "interact" in paragraph 39.

15          A.     So just to be clear, I'm replying to  
16    Dr. Bergeron's argument. So it would help me to  
17    see those.

18          Q.     Well, for example, is it your opinion that  
19    the two embodiments in Matsumoto can communicate  
20    with each other?

21          A.     The embodiments are describing the same  
22    invention. So you wouldn't have two of the same  
23    invention talking to each other.

24          Q.     But, like, you don't disagree, though,  
25    that there's different circuitry depicted in

1 Matsumoto for the two embodiments; right?

2 MS. NGUYEN: Objection. Form.

3 THE WITNESS: Are you directing me --

4 BY MR. SWISHER:

5 Q. I mean, for example, Figure 5 and  
6 Figure 11, let's look at those. Now I'm not asking  
7 about components in common. Obviously, they have  
8 CPU, memory, et cetera, but you would agree there  
9 are some different components between the two  
10 depictions in Figures 5 and 11; right?

11 A. The only thing that I see different is  
12 Figure 5 talks about the timer, and Figure 11 blows  
13 out that block and gives us oscillators, dividers,  
14 and counters. So it can time something. So that  
15 timer block in Figure 5 is sort of blown out in  
16 Figure 11 to get six blocks that are all performing  
17 timing functions, but everything else is exactly  
18 the same. So this is just more detail on what the  
19 timer block does in Figure 5.

20 Q. Sock. So your opinion is the timer block  
21 in Figure 5 is the same as the counters,  
22 oscillators, dividers in Figure 11?

23 A. I'm saying the timer block in Figure 5 is  
24 performing a timer function, and the blocks 106 to  
25 109, plus oscillated dividers blocks, of which

1     there are two, are performing timing functions.

2     That's what I'm saying.

3           Q.     Okay. I'm still not sure if I will get an  
4     answer to this but let me ask it one more way.

5                 If there is a device -- well, strike that.

6                 Just follow me in this -- not hypothetical  
7     but in this explanation. Let's look back at  
8     Figures 3 and 10, okay, the two depictions of the  
9     exercise management machine bodies, I think they  
10    are referred to, like the physical structures.

11                Do you see those?

12           A.     I do.

13           Q.     So what I'm asking, I guess, is if there  
14    is a device that was constructed to look like  
15    Figure 3 and another device that was constructed to  
16    look like Figure 10, is it your opinion that  
17    Matsumoto describes how those two devices could  
18    interact with each other?

19           MS. NGUYEN: Objection. Form.

20           THE WITNESS: So, again, I'm not sure what you  
21    mean by "interact," but I'll use your communicate  
22    as an example.

23                 Figure 10 and Figure 3 are both  
24    illustrations of the same invention. So there  
25    would be no reason that two of these would talk to

1 each other. At least I didn't see that discussed  
2 in Matsumoto where you have two such machines and  
3 they are wired up together or something.

4 MS. NGUYEN: Counsel, is it a good time to take  
5 a break?

6 MR. SWISHER: Maybe, like, ten more minutes,  
7 and I'll be at a good stopping point.

8 BY MR. SWISHER:

9 Q. Dr. Lynch, I'm going to hand you what's  
10 been marked as Exhibit 1004. This is the Lubell  
11 reference, L-u-b-e-l-l.

12 All right. All right. And I wanted to  
13 direct you to the section of your reply declaration  
14 discussing Lubell. If we could start in  
15 paragraph 48 which begins on page 28.

16 Dr. Lynch, is it your opinion that Lubell  
17 discloses a maximal exercise test protocol?

18 A. Lubell discloses a protocol that will take  
19 somebody to exhaustion. So I'm calling that  
20 maximal.

21 Q. Okay. I just wanted to ask about that  
22 opinion then. If we can look at Lubell, does  
23 Lubell ever refer to its protocol as a maximal  
24 exercise stress test protocol?

25 A. I'm not aware that it does, but without

1 looking at the whole thing, I can't confirm it.

2 Q. Okay. Isn't it right, actually, that  
3 every time Lubell refers to its protocol, it calls  
4 it a submaximal exercise stress test protocol?

5 A. Again, I can't answer that, but I do know  
6 that at least sometimes it refers to the submaximal  
7 protocol.

8 Q. Okay. So if we can start in the abstract  
9 of Lubell in the first page.

10 A. Oh, front page?

11 Q. First page, the abstract there.

12 A. Uh-huh.

13 Q. So on line 4, Lubell says it's "pacing the  
14 subject through a submaximal stress test protocol."

15 Do you see that?

16 A. I do see that.

17 Q. If we can turn to column 8 at line 29.

18 A. Yes.

19 Q. You agree that Lubell states "The  
20 submaximal exercise test protocol begins at this  
21 point."

22 And then at the end of that paragraph,  
23 Lubell continues to state "This protocol paces the  
24 subject 10 through a prescribed submaximal exercise  
25 program for calculating his fitness index or

1 maximal oxygen uptake VO2max."

2 Do you agree?

3 A. I do see that.

4 Q. So I guess what I'm getting at is why do  
5 you refer to Lubell as disclosing a maximal  
6 exercise test protocol in view of all the  
7 references in Lubell that refer to it as a  
8 submaximal exercise stress test protocol?

9 A. So since I wrote my initial declaration  
10 and had my initial deposition, Nike introduced some  
11 other documents into the case that refer to  
12 exercise protocols that take you to exhaustion, for  
13 example, and contrast those with submaximal  
14 exercise protocols or testing protocols.

15 And so in my reply declaration, I adopted  
16 that language, which honestly makes sense. So  
17 maximal protocol will take somebody to exhaustion.  
18 A submaximal protocol would not.

19 Q. Okay. So is it your opinion that Lubell  
20 just gets it wrong every time they refer to their  
21 own protocol as a submaximal protocol?

22 MS. NGUYEN: Objection. Form.

23 THE WITNESS: It's my opinion in writing my  
24 analysis that using the term "maximal" was the  
25 proper characterization, but I wouldn't go as far

1 as to opine that Lubell gets it wrong.

2 BY MR. SWISHER:

3 Q. Okay. So what I'm getting at here is  
4 let's look at paragraph 48, again, of your  
5 declaration on page 29.

6 So the second half of paragraph 48 -- let  
7 me describe what I'm getting at, and you can tell  
8 me if you agree or disagree. Strike that.

9 You're saying Lubell's protocol is  
10 maximal; right?

11 And then a few lines down, you refer to  
12 Ceci as teaching a submaximal exercise test; right?

13 A. Near the bottom of paragraph 48? Is that  
14 what --

15 Q. Yes.

16 Okay. So all I'm getting at is it seems  
17 to me like you're trying to contrast that there are  
18 two different protected protocols, submaximal and  
19 maximal, and you're saying Lubell teaches maximal  
20 and Ceci teaches submaximal; is that right?

21 A. That's correct, at least two types, but  
22 those are the two types I'm referring to here.

23 Q. And then if you go back to earlier in  
24 paragraph 48 on page 28, about midway down, you  
25 have an opinion that states "Lubell then explicitly

1 suggests other test protocols such as a submaximal  
2 exercise test protocol."

3 Do you see that?

4 A. Yes.

5 Q. And you're citing column 5, line 13, of  
6 Lubell; right?

7 A. Yes.

8 Q. Okay. So do I have it right that the  
9 opinions you're setting forth in your reply  
10 declaration are that Lubell's protocol that it  
11 describes throughout the reference is a maximal  
12 protocol, but there's also a reference in Lubell to  
13 a submaximal exercise test protocol; is that right?

14 MS. NGUYEN: Objection. Form.

15 THE WITNESS: It does refer to other test  
16 protocols that could be used which are submaximal.  
17 BY MR. SWISHER:

18 Q. Right. Okay. So this is what I'm having  
19 trouble understanding: So you agree that you  
20 didn't see a reference in Lubell where it describes  
21 its own protocol as maximal; right?

22 It only refers to it as submaximal.

23 MS. NGUYEN: Objection. Form.

24 THE WITNESS: Sitting here now, I'm not aware  
25 of a place in the patent where it refers to its own

1 protocol as maximal --

2 BY MR. SWISHER:

3 Q. All right. So then --

4 A. -- except in an implied way by taking the  
5 user to exhaustion.

6 Q. Right.

7 So what I'm getting at is I'm trying to  
8 understand then why, in this quote in the middle of  
9 paragraph 48 of your declaration where you say that  
10 "Lubell explicitly suggests other protocols such as  
11 a submaximal exercise test protocol," I'm trying to  
12 understand the basis for your opinion that Lubell  
13 is referring to a different type of protocol there  
14 when it refers to a submaximal protocol where every  
15 other reference in Lubell to its own protocol also  
16 says it's submaximal.

17 Are you following me?

18 A. Uh-huh.

19 Q. So I'm trying to understand why you're --  
20 what the basis is for your opinion that those are  
21 different, that Lubell's protocol, on the one hand,  
22 is different than this reference to a submaximal  
23 exercise test protocol.

24 MS. NGUYEN: Objection. Form.

25 THE WITNESS: Well, it's different because this

1 paragraph is telling us that, as just described, a  
2 protocol, but other suitable submaximal exercise  
3 test protocols could be used. So that's clearly  
4 different than their own protocol.

5 BY MR. SWISHER:

6 Q. Well, what I'm getting at, though, is that  
7 all of the protocols, both the ones that Lubell  
8 describes throughout the reference as its protocol  
9 that's disclosed and then this reference to other  
10 protocols, all of those are referred to as  
11 submaximal in Lubell; right?

12 A. So it refers to its own protocol as  
13 submaximal but does not go into detail about what  
14 other test protocols could be.

15 Q. In the quote that you cite here in  
16 paragraph 48, you say "Lubell then explicitly  
17 suggests other test protocols such as a submaximal  
18 exercise test protocol."

19 So that's also a submaximal protocol;  
20 right?

21 MS. NGUYEN: Objection. Form.

22 THE WITNESS: Sorry. Didn't quite -- I didn't  
23 quite get that question.

24 BY MR. SWISHER:

25 Q. Right.

1           So you just testified that Lubell refers  
2 to its own protocol as submaximal?

3           A.    Yes.

4           Q.    And then in this quote in paragraph 48 of  
5 your declaration, you say, "Lubell then explicitly  
6 suggests other test protocols such as a submaximal  
7 exercise test protocol."

8           So these other protocols that you're  
9 referring to, Lubell also says that's a submaximal  
10 protocol; right?

11          MS. NGUYEN:  Objection.  Form.

12          THE WITNESS:  So is Lubell is basically saying  
13 other protocols can be used, and it's calling its  
14 own protocol submaximal.  And it's saying those  
15 other protocols can be submaximal, but it doesn't  
16 describe any of the other protocols but included in  
17 that set of submaximal protocols a person of  
18 ordinary skill in the art would know are ones that  
19 don't take you to exhaustion.

20                So somebody who, for instance, read the  
21 references that Nike introduced, in reading this  
22 patent, would know that a submaximal exercise test  
23 protocol at least includes exercises that don't  
24 take the user to exhaustion.

25                And as I mentioned in here in

1 paragraph 48, exercise programs or protocols that  
2 take the user to exhaustion may be dangerous for  
3 the user, may be difficult to implement. I think  
4 even Dr. Bergeron acknowledged that there's an  
5 advantage to submaximal tests and that large  
6 numbers of participants can be tested rapidly at  
7 low cost.

8 So a POSITA would know that submaximal  
9 exercise protocols include ones that do not take  
10 you to exhaustion and such a protocol is never  
11 delineated or written about in Lubell.

12 BY MR. SWISHER:

13 Q. Okay. In paragraph 49 of your reply  
14 declaration, if you can turn there, it's on  
15 page 29.

16 All right. You state "Dr. Bergeron argues  
17 that Lubell's main purpose is to estimate V02max.  
18 However, a POSITA reading Lubell would understand  
19 that Lubell's purpose is not to determine V02max."

20 Can you explain what you mean there?

21 MS. NGUYEN: Objection. Form.

22 THE WITNESS: Well, I was just citing to the  
23 patent language.

24 BY MR. SWISHER:

25 Q. Right. So your opinion --

1           A.    I'm sorry.  I'm not finished.

2                    So lines 45 to 51 of column 2 of Lubell  
3 tells us that an object of this invention is to  
4 provide -- sorry -- I didn't quote exactly.

5                    "It is an object of this invention to  
6 provide a heart rate monitor and/or fitness monitor  
7 device which avoids the drawbacks of the previously  
8 proposed devices and automatically calculates an  
9 appropriate fitness parameter (e.g., maximal oxygen  
10 uptake level or V02max) by automatically pacing the  
11 subject through a straightforward training  
12 protocol."

13                   So my reading of column 2 tells me that an  
14 object or the object of this patent is to  
15 automatically calculate a fitness parameter that  
16 would help the subject do an appropriate training  
17 regime.

18                   And that's also in column 1 here where  
19 line 27 to 29 says this invention is going to help  
20 his subject keep his exercise stress level within  
21 what is regarded as the fitness training range.

22                   So that's what I view as the object of  
23 Lubell.

24           Q.    Okay.  And what fitness parameter does  
25 Lubell describe measuring?

1           A.    So most of the specification is devoted to  
2   V02max or variations, and it says that that's one  
3   example.

4           Q.    Okay.  And does it describe any protocols  
5   for calculating any other fitness parameters?

6           A.    I'm not sure if that is your question, but  
7   it uses that fitness parameter, the V02max, that it  
8   calculates to help train the subject, but in terms  
9   of other fitness -- I believe your question was  
10  does it tell the reader how to calculate other  
11  fitness parameters.

12          Q.    Does it describe any -- does -- I'm  
13  sorry --

14                Does Lubell describe any protocols for  
15  calculating any other fitness parameters other than  
16  V02max?

17          A.    No.

18          Q.    Okay.

19          A.    It just says V02max is an example.

20          MR. SWISHER:  Take a break.

21          THE VIDEOGRAPHER:  We'll go off the record.  
22  The time is 11:21 a.m.  This is the end of Media  
23  Unit 2.

24                       (A short break was taken.)

25          THE VIDEOGRAPHER:  We are back on the record at

1 11:32 a.m. This is Media Unit 3.

2 BY MR. SWISHER:

3 Q. All right. Dr. Lynch, I just wanted to  
4 change gears a bit and ask you about some of your  
5 opinions relating to the combinations with the  
6 Gorman and Flach references.

7 To start, I'd like to start with  
8 paragraph 30 of your reply declaration on page 17.

9 And do you see at the bottom of  
10 paragraph 30, you state that "Time-division  
11 multiple access (TDMA) was known and used in both  
12 wired and wireless systems"?

13 A. I do.

14 Q. Okay. And is that your opinion that TDMA  
15 is used in both wired and wireless systems?

16 A. Yes.

17 Q. Are you familiar with the technique that's  
18 just referred to as time-division multiplexing?

19 A. I'm not sure what the distinction is  
20 between the two.

21 Q. Okay. Have you heard of time-division  
22 multiplexing before?

23 A. Well, it's related to TDMA, but I'm not  
24 sure where you draw a bright line between them  
25 sitting here right now.

1 Q. Okay. So you don't know if, for example,  
2 TDMA is used in wireless systems and time-division  
3 multiplexing is a more general technique?

4 MS. NGUYEN: Objection. Form.

5 THE WITNESS: So multiplexing means that you  
6 are -- you know, you are setting time divisions,  
7 and you are sending messages at different -- at  
8 different time slots. So you are multiplexing what  
9 messages get sent, but TDMA is a commonly used  
10 shortening. And it's -- I believe it's at least a  
11 type of time-division multiplex, but I don't know  
12 if one includes the other or if they just  
13 intersect.

14 BY MR. SWISHER:

15 Q. Do you know if -- strike that.

16 Does the Amano reference disclose the use  
17 of multiplexing techniques or components?

18 MS. NGUYEN: Objection. Form.

19 THE WITNESS: So the TDMA methods that you  
20 refer to here that are taught in Flach -- I'm  
21 sorry.

22 So your question was does Amano teach time  
23 division or TDMA or...

24 BY MR. SWISHER:

25 Q. I could repeat the question.

1           Do you know if Amano discloses the use of  
2 multiplexing techniques or components?

3           MS. NGUYEN: Same objection.

4           THE WITNESS: I'm not aware of it sitting here,  
5 but I'd have to read the whole thing with an eye to  
6 that to give a definitive answer.

7 BY MR. SWISHER:

8           Q. Okay. And I'll just ask the same  
9 questions about the other references with that  
10 understanding.

11           Do you know if Matsumoto discloses the use  
12 of multiplexing techniques or components?

13           MS. NGUYEN: Objection. Form.

14           THE WITNESS: So Amano and Matsumoto are both  
15 communicating information between the transmitter  
16 and a receiver, and so my opinions here relate to  
17 the fact that a POSITA would have been familiar  
18 with sending identification messages and using  
19 time-division multiple access for successful  
20 communication when you have more than one  
21 transmitter.

22           So my opinions here are, if I use Flach,  
23 for example, Flach gives me the time-division  
24 multiple access that allows multiple sensors to  
25 communicate with a single receiver.

1           It also gives me wireless, which is not  
2       discussed in Matsumoto, for example. Time division  
3       applies to both wired and wireless.

4           And it also gives me -- talking about  
5       Flach here -- also gives me details how to  
6       implement that are not present in Amano or  
7       Matsumoto.

8           So that's what would motivate a person of  
9       ordinary skill in the art to look towards the  
10      teachings of Flach to do the communication between  
11      multiple sensors and a receiver.

12          So your question was does Matsumoto  
13      disclose components for time-division multiplexing,  
14      I think. Is that your question?

15      BY MR. SWISHER:

16          Q.    I'll repeat the question. If you could  
17      just answer this question.

18          So my question, Dr. Lynch, was do you know  
19      if Matsumoto discloses the use of multiplexing  
20      technique or components?

21          MS. NGUYEN: Same objection.

22          THE WITNESS: So Matsumoto is disclosing  
23      multiple sensors talking to a common receiver, but  
24      I am not aware, sitting here now, that Matsumoto  
25      discloses time multiplexing components or

1 techniques.

2 BY MR. SWISHER:

3 Q. Okay.

4 A. But, again, without looking at it with an  
5 eye towards that, I can't say definitively.

6 Q. Dr. Lynch, do you know if Lubell discloses  
7 the use of multiplexing techniques or components?

8 MS. NGUYEN: Objection. Form.

9 THE WITNESS: I think same answer as before.  
10 Sitting here, I'm not aware that it does, but  
11 Lubell also has multiple sensors communicating with  
12 the receiver and so would benefit from successful  
13 time-division multiplexing or multiple access.

14 BY MR. SWISHER:

15 Q. Okay. So I want to ask you some specific  
16 questions about Amano here, and I think that  
17 section applies to all of the Bates references.

18 But in your declaration you mention a few  
19 sort of problems that Gorman and Flach teach  
20 solutions to. One of these problems is the need to  
21 distinguish between multiple sensors sending  
22 signals on the same wired communication signal  
23 path.

24 Do you agree with that?

25 A. I'm sorry. Do you want to point me to

1     someplace in my declaration?

2           Q.     Yes, so like in paragraph 31. One of your  
3     opinions -- starting in the last line on page 17 of  
4     paragraph 31, you state "Dr. Bergeron specifically  
5     argues that with wire devices, there is no need to  
6     distinguish between multiple transmitters  
7     communicating with the same receiver. This is not  
8     true. When there are multiple transmitters such as  
9     sensors sharing a wired communication bus TDMA, can  
10    be used to assign different time slots, et cetera."

11                So it sounds to me like you're saying one  
12    of the problems that's addressed by the Gorman and  
13    Flach reference is this need to distinguish between  
14    multiple signal -- sorry -- strike that -- between  
15    multiple sensors sending signals on the same  
16    communication path.

17                Would you agree with that?

18           MS. NGUYEN: Objection to form.

19           THE WITNESS: So I understand this to be an  
20    obviousness argument and why we would be motivated  
21    to combine, and I understand that a person of  
22    ordinary skill would know about TDMA methods  
23    generally and would know that they could combine  
24    these prior art elements to work in a way that's  
25    well understood and beneficial.

1 BY MR. SWISHER:

2 Q. Yeah. I think I'm just asking a slightly  
3 different question. So maybe I can reword it.

4 What I'm asking is -- well, what I'm  
5 asking about, I should say, are some of your  
6 opinions about the issues that Gorman and Flach  
7 address, in your opinion.

8 So, for example, one of the issues you  
9 opine those references address is this need to  
10 distinguish between sensors sending signals on the  
11 same path. Do you follow me on that?

12 A. Yes.

13 Q. Okay. All right. So then what I'm  
14 asking -- let me strike that.

15 What I would like to ask, Dr. Lynch, is  
16 are you aware of whether Amano discloses having a  
17 problem of needing to distinguish between multiple  
18 sensors sending signals on the same communication  
19 path?

20 MS. NGUYEN: Objection. Form.

21 THE WITNESS: I don't think Amano discloses a  
22 problem. They -- Amano merely says that this  
23 information needs to be communicated, and then you  
24 would look to the prior art to see how to  
25 accomplish that communication.

1           And so my opinion here is if two  
2 transmitters are sharing a common bus, TDMA was a  
3 well known and common way to do it, and that is  
4 something that Flach teaches us about.

5 BY MR. SWISHER:

6           Q.    Okay. So related to that, is it your  
7 opinion that the devices disclosed in Amano are  
8 inoperable without adding additional features?

9           MS. NGUYEN: Objection. Form.

10          THE WITNESS: So I know I said this before in  
11 the last deposition, but I understand "inoperable"  
12 to be a legal term that I don't really know the  
13 definition of. So I'm not going to provide an  
14 opinion on that.

15 BY MR. SWISHER:

16          Q.    Yeah, I can cut us off here. I didn't  
17 mean it in a legal sense.

18                I'm just asking do you -- is it your  
19 opinion that the devices in Amano need additional  
20 features in order to function that aren't disclosed  
21 in Amano?

22          A.    So, again, you know, I think I said this  
23 in the last deposition, the same thing, is that the  
24 Amano is focusing on methods, devices, protocols  
25 for estimating V02max and training somebody, and so

1     that's where the focus of the disclosure is.  
2     But it also needs to perform this kind of  
3     communication, and it does not give real estate in  
4     the specification to that because that's not the  
5     novel thing that Amano is disclosing.

6             Instead, it would lead you to look to  
7     prior art to see how it implements the details and,  
8     for example, Flach is addressing those details.

9             So I didn't find fault with Amano, but  
10    necessarily, it doesn't tell me how the silicon  
11    wafers are being etched, for example, and that has  
12    to happen too, but that's not the focus of the  
13    patent.

14            Q.    Later in paragraph 31, on page 18 of your  
15    declaration, near the end of paragraph 31, you  
16    opine that "Amano discloses multiple sensors on a  
17    finger belt, a pulse wave sensor, and a body motion  
18    sensor, sharing a cable to a wristwatch."

19                   Do you see that?

20            A.    Yes.

21            Q.    Okay. So is it your opinion that Amano  
22    discloses multiple sensors communicating over the  
23    same signal path?

24            MS. NGUYEN: Objection. Form.

25            THE WITNESS: Amano doesn't say explicitly, but

1     that's a common way to send multiple signals is to  
2     have them share a bus.

3     BY MR. SWISHER:

4         Q.     Okay. And on -- in Amano, if I could ask  
5     you to turn to Figure 16, and you see the  
6     connection between the finger sensor 15 and the  
7     wristwatch 14?

8         A.     Yes.

9         Q.     Okay. And is it your opinion that there's  
10    a single wire connecting the sensor to the watch?

11         MS. NGUYEN: Objection. Form.

12         THE WITNESS: It's my opinion that there's a  
13    single cable attaching the sensor to the watch --  
14    sensor belt, I should say.

15     BY MR. SWISHER:

16         Q.     Now, does it look like Figure 16 depicts  
17    two wires connecting finger sensor 15 to watch 14?

18         A.     So I know that this cable is drawn  
19    differently in different figures. I am not aware  
20    that there's any significance to the way that it's  
21    drawn differently in different figures. So that's  
22    Figure 16. I'll just take a moment here and look.

23         Q.     You can look at Figure 5, too.

24         A.     Please give me a moment.

25                 So Figure 40 would be another one.

1           So Figure 16, Figure 40, so those are two  
2 examples. There's others, but if I could just use  
3 those two.

4           So looking at that cable connecting the  
5 finger belt to the watch, just the cable, not  
6 anything else, it appears to me the major  
7 difference is that some portion of the hand is  
8 obscured in Figure 40 by the cable in a way that  
9 it's not in Figure 16.

10          Q.    Yeah. So I'm just asking in Figure 16 and  
11 Figure 40, do you see two wires connecting the  
12 finger sensor to the wristwatch portion?

13          A.    Well, as I said, I'm not sure of the  
14 significance of that, but it's not clear, but it  
15 could be three, it could be two wires, it could be  
16 something else.

17          Q.    Okay. Dr. Lynch, do you know if Amano  
18 discloses any problem of noise existing on its  
19 wired communication signal path?

20          MS. NGUYEN: Objection. Form.

21          THE WITNESS: I'm not aware, sitting here, if  
22 noise is discussed. If you could give me a moment.

23                In my declaration in paragraph 33,  
24 I mention that wired devices can face problems with  
25 noise, and Nike's expert also agrees with that. So

1 noise is not restricted to wired or wireless  
2 communication.

3 I am not aware that Amano specifically  
4 worries about noise, but, again, Amano does not get  
5 into the details of communication which is why we  
6 would look to the prior art, a POSITA would look to  
7 the prior art.

8 BY MR. SWISHER:

9 Q. Okay. I'd like to turn to the Matsumoto  
10 reference again for a minute. That's Exhibit 1003.

11 Does the Matsumoto reference disclose  
12 having a problem of needing to distinguish between  
13 multiple sensors sending signals on the same  
14 communication path?

15 MS. NGUYEN: Objection. Form.

16 THE WITNESS: So, again, my analysis  
17 combination was not based on looking for problems  
18 that are disclosed in the art but rather the lack  
19 of details that need to be filled in by the prior  
20 art. So I'm not aware that Matsumoto talks about  
21 noise.

22 BY MR. SWISHER:

23 Q. Okay. That actually anticipated my next  
24 question. I was going to ask if it talks about  
25 noise, but you just answered.

1           But I'll repeat my other question which  
2 was, Dr. Lynch, are you aware whether Matsumoto  
3 discloses having a problem of needing to  
4 distinguish between multiple sensors sending  
5 signals on the same communication path?

6           MS. NGUYEN: Same objection.

7           THE WITNESS: Same as before, I don't see that  
8 it discloses a problem, but it also doesn't  
9 disclose details of communication.

10          BY MR. SWISHER:

11           Q.    Okay. And I'd like to direct you to  
12 paragraph 46 of your reply declaration. That's  
13 Exhibit 1018.

14                   Okay. The first sentence of paragraph 46  
15 reads "Matsumoto's device includes multiple sensors  
16 (a pulse sensor 15 and rotation sensors 12 and 13  
17 ('external circuits')) that communicate with a  
18 controller 100 along a shared cable as shown in  
19 Figures 5 and 11."

20                   So I just wanted to ask you about those.  
21 I didn't see a cable in Figures 5 or 11. So I just  
22 wanted to ask what cable you were talking about  
23 there.

24           MS. NGUYEN: Objection. Form.

25           THE WITNESS: So "cable" may not be a good

1 choice of word but the same communication line in  
2 the block diagram. So the external circuits are  
3 the pulse sensor and the rotation sensors, and in  
4 both Figures 5 and 11, there's a single  
5 bidirectional arrow that is communicating with a  
6 block called IO that then communicates with the  
7 CPU.

8 BY MR. SWISHER:

9 Q. Okay. Let me ask you about -- I want to  
10 direct you to Figure 1 of Matsumoto, Dr. Lynch, if  
11 you could take a look at that.

12 A. Yes.

13 Q. All right. Do you see that there's a  
14 cable labeled 16 -- strike that.

15 Do you see, I guess, a cable or a wire --  
16 let's say it's a wire because that's what Matsumoto  
17 refers to it as. Do you see there's a wire labeled  
18 Item 16 that connects the sensor labeled 15 to the  
19 device labeled 17?

20 A. I do.

21 Q. Okay. And do you see that there's a  
22 separate wire labeled 14 that connects the sensors  
23 labeled 12 and 11 on the bicycle wheel to the same  
24 device labeled 17?

25 A. I do.

1           Q.    Okay.  So do you understand the Matsumoto  
2   is disclosing separate cables for connecting the  
3   pulse sensor and the rotation sensors to the  
4   device?

5           MS. NGUYEN:  Objection.  Form.

6           THE WITNESS:  I believe Matsumoto is teaching,  
7   in Figure 1, separate wires or cables that connect  
8   the rotation sensor and the pulse sensor to  
9   17 which is -- give me a moment, please -- which is  
10  the exercise machine body per column 2, line 31,  
11  and so once those wires enter the exercise machine  
12  body, then I would turn to Figure 5 to see what's  
13  happening to them, and it looks like they both go  
14  to IO, the block 105 IO.  They are combined into a  
15  single signal path according to Figure 5 and  
16  similarly for Figure 11.

17  BY MR. SWISHER:

18          Q.    So is it your opinion, Dr. Lynch, that the  
19  Matsumoto device Item 17 that you just referenced  
20  wouldn't be able to disclose -- I'm sorry -- would  
21  not be able to distinguish between the signals  
22  being sent from the pulse sensor and the rotation  
23  sensors without using encoding?

24          MS. NGUYEN:  Objection.  Form.

25          THE WITNESS:  So my opinion, as shown --

1 focused on Figure 5, is that the external circuits  
2 come into the IO block, and then the IO block is  
3 communicating along some sort of communication path  
4 with the CPU, and depending on how those are  
5 implemented, then it might need to distinguish  
6 between which sensor is sending information.

7 BY MR. SWISHER:

8 Q. Okay. So it wouldn't be required for the  
9 Matsumoto device to use encoding, for example?

10 A. Encoding.

11 MS. NGUYEN: Objection. Form.

12 THE WITNESS: I think everything uses encoding  
13 when there's communication involved. So --

14 BY MR. SWISHER:

15 Q. Yeah. I'm referring to the combinations  
16 with Flach and Gorman is what I'm getting at.

17 So what I'm asking is would it be  
18 necessary for Matsumoto to use an encoding  
19 technique in order to distinguish between the  
20 signal being received from the two different  
21 Matsumoto sensors?

22 MS. NGUYEN: Objection. Form.

23 THE WITNESS: So communication is generally  
24 encoded regardless if it's distinguishing between  
25 two sensors. So when you send signals across a

1 wire, typically, you package it into bits and send  
2 a packet of information in some way, and that's an  
3 encoding, and so that applies to most digital  
4 communications.

5 So I'm not sure I understood or got your  
6 question, but encoding is generally happening if  
7 digital devices are talking to each other.

8 BY MR. SWISHER:

9 Q. So you're saying the device in Matsumoto  
10 would already be using encoding without looking to  
11 Gorman and Flach for such teachings?

12 MS. NGUYEN: Objection. Form.

13 THE WITNESS: So as an example, in Figure 5  
14 here, these arrows inside block 100, for example,  
15 are representing encoded information that are being  
16 sent back and forth digitally between devices. So,  
17 in general, you're encoding information.

18 BY MR. SWISHER:

19 Q. Okay.

20 A. It's not very restrictive on  
21 communication.

22 Q. Is it your opinion that Matsumoto would  
23 necessarily need to use identification information  
24 in its signal processes in order to distinguish  
25 between the signal sent by its different sensors?

1 MS. NGUYEN: Objection. Form.

2 THE WITNESS: It would not necessarily need to  
3 do that, but that was a common and well-known way  
4 to do communication.

5 BY MR. SWISHER:

6 Q. Okay. And is it your opinion that  
7 Matsumoto would necessarily need to use time  
8 channels in order to distinguish signals sent by  
9 its different sensors?

10 MS. NGUYEN: Objection. Form.

11 THE WITNESS: It would not necessarily have to,  
12 but, again, that was a very common and successful  
13 way to communicate information between multiple  
14 transmitters and a receiver.

15 BY MR. SWISHER:

16 Q. Okay. I was going to ask the same  
17 questions about Amano, which I forgot to earlier.  
18 So that's is it your opinion that Amano would  
19 necessarily need to use identification information  
20 in its signal processes in order to distinguish  
21 between signals sent by different sensors?

22 MS. NGUYEN: Objection. Form.

23 THE WITNESS: So, again, Figure 16 and  
24 Figure 40 and the text are not completely clear on  
25 how many wires are in this cable, and that could

1 provide some evidence, but if there are three  
2 wires, for example, as it looks like in Figure 16,  
3 then a common way to do communication between, in  
4 this case, two sensors and another device would be  
5 to have a power line, a ground line, and a signal  
6 line.

7 So looking at this figure, it seems like  
8 there's a good bet that they are sharing a wired  
9 communication channel -- so power, ground,  
10 communication.

11 BY MR. SWISHER:

12 Q. So let me just repeat the question because  
13 I don't think that answered it. Sorry.

14 Is it your opinion that Amano would  
15 necessarily need to use identification information  
16 in its signal processes in order to distinguish  
17 between signals sent by different sensors?

18 MS. NGUYEN: Same objection.

19 THE WITNESS: So Figure 16 suggests that Amano  
20 would benefit from either time-division multiple  
21 access or having the sensor ID associated with  
22 messages from the sensor or both. So the  
23 suggestion is there, but you wouldn't necessarily  
24 have to use both.

25

1 BY MR. SWISHER:

2 Q. Okay. I just wanted to ask you a few more  
3 questions about Lubell, and that's Exhibit 1004.

4 Does Lubell disclose the problem of  
5 needing to distinguish between multiple sensors  
6 sending signals on the same communication path?

7 A. Again, it does not disclose the problem,  
8 but it also does not provide details of  
9 communication, and one would look to Gorman and  
10 Flach to provide those details.

11 Q. So is it your opinion that the devices  
12 disclosed in Lubell wouldn't work without adding  
13 features such as those described in Gorman and  
14 Flach?

15 MS. NGUYEN: Objection. Form.

16 THE WITNESS: I would give the same answer as  
17 before, which is to say that Lubell is not  
18 deficient in its description, but it doesn't give  
19 the details of the communication method because  
20 that's not the innovation being disclosed here. So  
21 it needs to rely on prior art for implementation,  
22 which does not mean it's deficient or broken or  
23 doesn't work. It just means that this can't  
24 contain everything including all of the prior art  
25 that one needs to implement a complex electrical

1 device.

2 BY MR. SWISHER:

3 Q. Okay. And does Lubell disclose the  
4 problem of noise on its wired communication signal  
5 path?

6 MS. NGUYEN: Objection. Form.

7 THE WITNESS: So I believe it's the same answer  
8 as before. Lubell does not provide details on the  
9 communication method, and so, therefore, it does  
10 not go into details about possible noise issues,  
11 and so one would look to prior art for that piece  
12 of it.

13 So for all of these it's not necessarily  
14 that there's a problem disclosed, an explicit  
15 problem disclosed, in the specification, but rather  
16 a person of ordinary skill who knows about  
17 communication would be motivated to combine with  
18 the teachings here to get a device with predictable  
19 behavior.

20 BY MR. SWISHER:

21 Q. All right. I'd like to direct you to  
22 paragraph 56 of your reply declaration,  
23 Exhibit 1018.

24 And I'd like to refer you to the final  
25 sentence of paragraph 56, which reads, "Lubell has

1 multiple sensors (heart rate sensor 12, bicycle  
2 sensor 65) that communicate with the device 11."

3 Do you see that?

4 A. I do.

5 Q. So is it your opinion that Lubell has  
6 multiple sensors communicating over a shared wired  
7 signal path?

8 MS. NGUYEN: Objection. Form.

9 THE WITNESS: It does not say that explicitly.

10 BY MR. SWISHER:

11 Q. Okay. All right. And if I could direct  
12 you to column 5 starting at line 48 of Lubell,  
13 Exhibit 1004. Lubell states "A recessed socket 23  
14 is provided on a back panel of the device 11 to  
15 receive a jack from the heart beat sensor 12.  
16 While not shown here, the device 11 also has a  
17 similar socket to accept another jack from a  
18 bicycle, sensor not shown, to be described later."

19 Do you see that?

20 A. I do.

21 Q. Okay. So do you understand Lubell  
22 discloses the use of separate wires to connect a  
23 heart beat sensor and the bicycle sensor to the  
24 device?

25 MS. NGUYEN: Objection. Form.

1 THE WITNESS: I see connecting to a lower panel  
2 of the device in that quotation that you read.

3 BY MR. SWISHER:

4 Q. Okay. So you agree that Lubell discloses  
5 the use of separate wires to connect its heart beat  
6 sensor and its bicycle sensor to the device?

7 MS. NGUYEN: Same objection.

8 THE WITNESS: Yes. So, again, 11 is the  
9 housing, and it refers to a panel on the housing of  
10 the device.

11 BY MR. SWISHER:

12 Q. Is it your opinion that Lubell would  
13 necessarily need to use identification information  
14 in its signal processes in order to distinguish  
15 between the signal sent by its two sensors?

16 MS. NGUYEN: Objection. Form.

17 THE WITNESS: Again, it would not necessarily  
18 need to, but that would be one way to accomplish  
19 successful communication as was well known in the  
20 art.

21 BY MR. SWISHER:

22 Q. Is it your opinion that Lubell would  
23 necessarily need to use time channels in its signal  
24 processes in order to distinguish between the  
25 signals sent by its two sensors?

1 MS. NGUYEN: Objection. Form.

2 THE WITNESS: Same answer as before. It would  
3 not necessarily need to, but that would be one way  
4 to accomplish successful communication as was well  
5 known in the art, and the details of communication  
6 are not discussed in Lubell.

7 MR. SWISHER: Okay. I have no further  
8 questions at this time.

9 MS. NGUYEN: Take a break.

10 THE VIDEOGRAPHER: We'll go off the record.  
11 The time is 12:08 p.m.

12 (A short break was taken.)

13 THE VIDEOGRAPHER: We are back on the record at  
14 12:51 p.m.

15 MS. NGUYEN: We have no questions.

16 MR. SWISHER: I have no questions either.

17 THE VIDEOGRAPHER: Then we are going off the  
18 record. The time is 12:51 p.m., and this concludes  
19 today's testimony given by Dr. Kevin M. Lynch. The  
20 total number of media units used was three and will  
21 be retained by Veritext.

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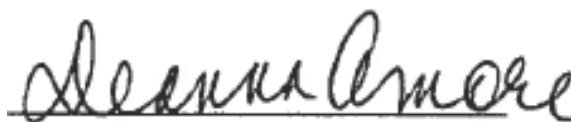
C E R T I F I C A T E

I, DEANNA AMORE, a Shorthand Reporter and  
notary public, within and for the State of  
Illinois, County of DuPage, do hereby certify:

That KEVIN M. LYNCH, PH.D., the witness  
whose examination is hereinbefore set forth, was  
first duly sworn by me and that this transcript of  
said testimony is a true record of the testimony  
given by said witness.

I further certify that I am not related to  
any of the parties to this action by blood or  
marriage, and that I am in no way interested in the  
outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my  
hand this 22nd day of February 2024.



Deanna M. Amore, CRR, RPR, CSR

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February 23, 2024

To: Jean Nguyen, Esq.

Case Name: Lululemon Athletica Canada Inc., Et Al. v. Nike Inc.

Veritext Reference Number: 6473366

Witness: Kevin M. Lynch , Ph.D.                      Deposition Date: 2/22/2024

Dear Sir/Madam:

Enclosed please find a deposition transcript. Please have the witness review the transcript and note any changes or corrections on the included errata sheet, indicating the page, line number, change, and the reason for the change. Have the witness' signature notarized and forward the completed page(s) back to us at the Production address shown above, or email to [production-midwest@veritext.com](mailto:production-midwest@veritext.com).

If the errata is not returned within thirty days of your receipt of this letter, the reading and signing will be deemed waived.

Sincerely,  
Production Department

NO NOTARY REQUIRED IN CA

DEPOSITION REVIEW  
CERTIFICATION OF WITNESS

ASSIGNMENT REFERENCE NO: 6473366

CASE NAME: Lululemon Athletica Canada Inc., Et Al. v. Nike Inc.

DATE OF DEPOSITION: 2/22/2024

WITNESS' NAME: Kevin M. Lynch , Ph.D.

In accordance with the Rules of Civil Procedure, I have read the entire transcript of my testimony or it has been read to me.

I have made no changes to the testimony as transcribed by the court reporter.

\_\_\_\_\_  
Date Kevin M. Lynch , Ph.D.

Sworn to and subscribed before me, a Notary Public in and for the State and County, the referenced witness did personally appear and acknowledge that:

They have read the transcript;

They signed the foregoing Sworn Statement; and

Their execution of this Statement is of their free act and deed.

I have affixed my name and official seal

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Commission Expiration Date

DEPOSITION REVIEW  
CERTIFICATION OF WITNESS

ASSIGNMENT REFERENCE NO: 6473366

CASE NAME: Lululemon Athletica Canada Inc., Et Al. v. Nike Inc.

DATE OF DEPOSITION: 2/22/2024

WITNESS' NAME: Kevin M. Lynch , Ph.D.

In accordance with the Rules of Civil Procedure, I have read the entire transcript of my testimony or it has been read to me.

I have listed my changes on the attached Errata Sheet, listing page and line numbers as well as the reason(s) for the change(s).

I request that these changes be entered as part of the record of my testimony.

I have executed the Errata Sheet, as well as this Certificate, and request and authorize that both be appended to the transcript of my testimony and be incorporated therein.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Kevin M. Lynch , Ph.D.

Sworn to and subscribed before me, a Notary Public in and for the State and County, the referenced witness did personally appear and acknowledge that:

They have read the transcript;

They have listed all of their corrections in the appended Errata Sheet;

They signed the foregoing Sworn Statement; and

Their execution of this Statement is of their free act and deed.

I have affixed my name and official seal this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Commission Expiration Date

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\_\_\_\_\_  
Date Kevin M. Lynch , Ph.D.  
SUBSCRIBED AND SWORN TO BEFORE ME THIS \_\_\_\_\_  
DAY OF \_\_\_\_\_, 20\_\_\_\_\_ .

\_\_\_\_\_  
Notary Public

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Commission Expiration Date

|                                    |                      |                        |                       |
|------------------------------------|----------------------|------------------------|-----------------------|
| <b>&amp;</b>                       | <b>1003</b> 3:12     | 110:1,15               | 73:5 74:14            |
| <b>&amp;</b> 2:4,7,11 4:18<br>5:10 | 65:19 100:10         | <b>12384</b> 113:19    | 87:2,13 88:23         |
| <b>0</b>                           | <b>1004</b> 3:13     | <b>12:08</b> 112:11    | 103:10                |
| <b>0</b> 69:2 70:9                 | 78:10 108:3          | <b>12:51</b> 112:14    | <b>2/22/2024</b>      |
| <b>084-003999</b>                  | 110:13               | 112:18                 | 114:8 115:3           |
| 1:25                               | <b>1014</b> 3:14     | <b>13</b> 61:14 82:5   | 116:3                 |
| <b>1</b>                           | 37:11,13             | 101:16                 | <b>20</b> 56:22 61:13 |
| <b>1</b> 4:10 33:10                | <b>1018</b> 3:6 6:17 | <b>14</b> 50:6 98:7,17 | 65:24 115:16          |
| 49:21 55:23                        | 6:18 7:11,14         | 102:22                 | 116:22 117:22         |
| 56:1,4,10,13                       | 8:6,21 9:11          | <b>15</b> 58:21 98:6   | <b>2009</b> 3:15      |
| 59:25 60:1                         | 10:1 39:10           | 98:17 101:16           | 39:13 42:16           |
| 61:17 62:19                        | 101:13 109:23        | 102:18                 | 43:3                  |
| 63:25 64:5,9                       | <b>105</b> 103:14    | <b>16</b> 50:11,16     | <b>2010</b> 48:18     |
| 66:20 67:10,21                     | <b>106</b> 76:24     | 51:21 56:15,16         | <b>2023-00349</b> 1:3 |
| 68:6,8,9,20                        | <b>109</b> 76:25     | 56:23 57:2,7           | <b>2023-00438</b>     |
| 71:4 73:2,7,12                     | <b>10:11</b> 49:20   | 57:13,16,21            | 4:16                  |
| 87:18 102:10                       | <b>10:22</b> 49:24   | 59:6,12,20             | <b>2024</b> 1:17 4:2  |
| 103:7                              | <b>10th</b> 2:12     | 60:5,9 67:9            | 113:17 114:4          |
| <b>1.11.2024</b> 3:6               | <b>11</b> 39:8 40:17 | 98:5,16,22             | <b>216-523-1313</b>   |
| <b>1.2.2</b> 52:17                 | 41:12,13 42:22       | 99:1,9,10              | 114:3                 |
| <b>10</b> 33:10 54:2               | 43:1,3 52:2          | 102:14,18              | <b>22</b> 1:17 4:2    |
| 67:6 68:2,12                       | 54:10 67:14          | 106:23 107:2           | 66:2                  |
| 68:15 69:8                         | 70:19 76:6,10        | 107:19                 | <b>22nd</b> 113:17    |
| 70:5,19 74:10                      | 76:12,16,22          | <b>17</b> 53:9 89:8    | <b>23</b> 69:11       |
| 77:8,16,23                         | 101:19,21            | 94:3 102:19,24         | 110:13 114:4          |
| 79:24                              | 102:4,23             | 103:9,19               | <b>24</b> 69:11       |
| <b>100</b> 71:23                   | 103:16 110:2         | <b>18</b> 97:14        | <b>250</b> 2:8        |
| 101:18 105:14                      | 110:14,16            | <b>1820</b> 114:2      | <b>27</b> 54:16 60:15 |
| <b>1001</b> 3:10 7:1,2             | 111:8                | <b>19</b> 54:11 56:20  | 60:17 87:19           |
| <b>10019</b> 2:8                   | <b>1100</b> 114:1    | 57:3 59:1,8,10         | <b>28</b> 78:15 81:24 |
| <b>1002</b> 3:11 50:8              | <b>11:21</b> 88:22   | 60:25 62:9             | <b>29</b> 79:17 81:5  |
| 55:5,6,9 60:25                     | <b>11:32</b> 89:1    | <b>2</b>               | 86:15 87:19           |
|                                    | <b>12</b> 45:22 47:5 | <b>2</b> 49:24 66:1,21 |                       |
|                                    | 48:17 67:9           | 67:8,15,21             |                       |
|                                    | 101:16 102:23        | 68:5,8,21 71:5         |                       |

|                        |                        |                       |                       |
|------------------------|------------------------|-----------------------|-----------------------|
| <b>3</b>               | <b>45</b> 87:2         | 55:25                 | <b>able</b> 14:21     |
| <b>3</b> 67:4 68:2,12  | <b>46</b> 101:12,14    | <b>64</b> 59:9        | 17:25 31:9,14         |
| 68:15 69:15,18         | <b>48</b> 78:15 81:4,6 | <b>6473366</b> 114:7  | 32:13 49:16           |
| 70:1,3,5,16            | 81:13,24 83:9          | 115:2 116:2           | 62:17 64:6,24         |
| 74:10 77:8,15          | 84:16 85:4             | 117:2                 | 103:20,21             |
| 77:23 89:1             | 86:1 110:12            | <b>65</b> 3:12 110:2  | <b>above</b> 54:17    |
| <b>30</b> 89:8,10      | <b>49</b> 60:25 86:13  | <b>7</b>              | 114:17                |
| <b>31</b> 94:2,4 97:14 | <b>5</b>               | <b>7</b> 3:10 8:21,23 | <b>abstract</b> 79:8  |
| 97:15 103:10           | <b>5</b> 3:4 7:14,22   | 39:23 61:14           | 79:11                 |
| <b>33</b> 99:23        | 42:18 55:5,17          | 67:9,13               | <b>accept</b> 110:17  |
| <b>35</b> 65:24        | 55:22 56:10            | <b>70</b> 1:20 4:18   | <b>access</b> 61:7    |
| <b>36</b> 67:13        | 57:13,16,22            | <b>707</b> 2:5        | 89:11 91:19,24        |
| <b>37</b> 3:14         | 58:18 59:17,22         | <b>78</b> 3:13        | 93:13 107:21          |
| <b>38</b> 56:23        | 60:4,9 70:16           | <b>8</b>              | <b>accomplish</b>     |
| <b>39</b> 66:8,14      | 76:5,10,12,15          | <b>8</b> 10:1,4 11:7  | 95:25 111:18          |
| 70:12 73:22            | 76:19,21,23            | 12:5 37:15            | 112:4                 |
| 75:14                  | 82:5 98:23             | 55:11,13,16,22        | <b>accordance</b>     |
| <b>4</b>               | 101:19,21              | 56:6 79:17            | 115:5 116:5           |
| <b>4</b> 57:4,8,11,11  | 102:4 103:12           | <b>8,620,413</b> 7:3  | <b>account</b> 8:9    |
| 57:11 61:10            | 103:15 104:1           | <b>9</b>              | 14:16,22 21:24        |
| 62:4,5,17 63:3         | 105:13 110:12          | <b>9</b> 50:12 55:9   | 22:21,23 23:1         |
| 63:4,14,22,23          | <b>50</b> 3:11 60:25   | 58:21 59:1            | 23:4,7,11,17          |
| 64:2,7,8,10,14         | <b>51</b> 87:2         | 69:2 70:9             | 24:10,12,14,20        |
| 64:25 65:3,7,9         | <b>511</b> 58:19,22,23 | <b>9,259,615</b> 1:4  | 24:23 25:2            |
| 79:13                  | 59:5                   | <b>90017</b> 2:5      | 34:5,6,10,15          |
| <b>40</b> 67:18 98:25  | <b>512</b> 58:19 59:1  | <b>94111</b> 2:13     | 35:2,7                |
| 99:1,8,11              | 59:2,5                 | <b>9:11</b> 1:18 4:2  | <b>achieve</b> 43:13  |
| 106:24                 | <b>54</b> 55:12        | <b>a</b>              | 44:1                  |
| <b>413</b> 7:4,18 9:19 | <b>55th</b> 2:8        | <b>a.m.</b> 1:18 4:2  | <b>achieves</b> 15:15 |
| 10:5 11:8              | <b>56</b> 109:22,25    | 49:20,24 88:22        | 44:5                  |
| 30:14                  | <b>6</b>               | 89:1                  | <b>acknowledge</b>    |
| <b>42</b> 3:15         | <b>6</b> 3:6 8:6 9:11  | <b>ability</b> 15:15  | 115:11 116:16         |
| <b>4200</b> 1:20       | 11:24 12:3             | 47:15                 | <b>acknowledged</b>   |
| <b>44114</b> 114:2     | 21:9 55:6,25           |                       | 86:4                  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>acknowledging</b><br>43:18<br><b>act</b> 115:14<br>116:20<br><b>action</b> 4:25<br>37:14 113:12<br><b>active</b> 43:5<br><b>activity</b> 15:16<br>47:15<br><b>actually</b> 11:6<br>55:11,24 65:25<br>79:2 100:23<br><b>adaptive</b> 8:24<br>23:9,10,17,25<br>24:3,4 26:14<br>35:23,24 36:20<br>37:3,20,24<br>38:8 40:8,12<br>40:21 41:16<br><b>add</b> 27:21<br><b>added</b> 14:19,20<br>26:10,15<br><b>adding</b> 96:8<br>108:12<br><b>additional</b> 96:8<br>96:19<br><b>address</b> 95:7,9<br>114:15<br><b>addressed</b><br>21:16 94:12<br><b>addressing</b><br>97:8<br><b>adds</b> 22:4<br><b>adopted</b> 80:15 | <b>adults</b> 49:6<br><b>advance</b> 60:20<br>64:15<br><b>advantage</b> 86:5<br><b>affiliations</b> 5:7<br><b>affixed</b> 115:15<br>116:21<br><b>ago</b> 21:8<br><b>agree</b> 4:8 9:18<br>10:11,15 12:20<br>18:19 19:12,16<br>20:6,18 21:3<br>22:13 24:22<br>25:22 27:1<br>29:7 31:18<br>34:16 37:18<br>42:21 48:25<br>55:21 56:11<br>57:7 65:14,15<br>71:25 72:2,3<br>76:8 79:19<br>80:2 81:8<br>82:19 93:24<br>94:17 111:4<br><b>agrees</b> 99:25<br><b>ahead</b> 6:15<br>50:7<br><b>al</b> 114:6 115:3<br>116:3<br><b>allow</b> 63:20<br><b>allows</b> 65:17<br>91:24<br><b>alternative</b><br>36:15 | <b>amano</b> 50:4,9<br>50:20,20 51:12<br>51:24 52:2,3<br>52:23,24 53:23<br>54:1,15 55:4<br>55:16,23 56:4<br>56:15 57:5,8<br>59:9 60:17<br>61:13,17,24<br>90:16,22 91:1<br>91:14 92:6<br>93:16 95:16,21<br>95:22 96:7,19<br>96:21,24 97:5<br>97:9,16,21,25<br>98:4 99:17<br>100:3,4 106:17<br>106:18 107:14<br>107:19<br><b>amano's</b> 50:17<br>53:17,22 54:21<br><b>amore</b> 1:25<br>4:22 113:3,21<br><b>amount</b> 19:18<br>20:20<br><b>analysis</b> 13:8<br>14:20 22:7<br>23:20 25:9<br>80:24 100:16<br><b>analyzing</b><br>26:22<br><b>angeles</b> 2:5<br><b>answer</b> 14:24<br>15:3,12 16:8<br>17:13,18 18:5 | 18:7 19:6,10<br>19:22 20:8,15<br>20:16 21:2,18<br>26:3 27:4<br>63:19 75:3,6<br>77:4 79:5 91:6<br>92:17 93:9<br>108:16 109:7<br>112:2<br><b>answered</b><br>18:23 20:9<br>100:25 107:13<br><b>anticipated</b><br>100:23<br><b>apologies</b> 53:21<br><b>apologize</b> 55:11<br><b>apparent</b> 61:21<br>62:12 71:13<br><b>apparently</b><br>21:25 22:24<br>32:10<br><b>appeal</b> 1:2 4:14<br><b>appear</b> 59:5<br>115:11 116:15<br><b>appearance</b> 5:4<br><b>appearances</b><br>2:1 5:6<br><b>appeared</b> 2:1<br><b>appearing</b><br>24:10<br><b>appears</b> 54:24<br>55:6 56:15<br>99:6<br><b>appended</b><br>116:11,18 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>applicant</b> 37:14<br>37:18<br><b>applies</b> 22:8<br>92:3 93:17<br>105:3<br><b>applying</b> 25:5<br><b>appreciate</b> 11:5<br>15:2 27:3 37:9<br><b>appropriate</b><br>87:9,16<br><b>argues</b> 73:24<br>86:16 94:5<br><b>argument</b><br>75:16 94:20<br><b>arjomand</b> 2:4<br>5:15<br><b>arms</b> 38:16<br><b>arnold</b> 2:11<br>4:18 5:10<br><b>arnoldporter....</b><br>2:13<br><b>arrow</b> 102:5<br><b>arrows</b> 105:14<br><b>art</b> 26:22 30:15<br>46:2,12 85:18<br>92:9 94:24<br>95:24 97:7<br>100:6,7,18,20<br>108:21,24<br>109:11 111:20<br>112:5<br><b>ascribe</b> 42:11<br><b>aside</b> 22:16<br>25:22 26:6 | <b>asked</b> 15:6 18:7<br>19:6 20:7<br>27:10 47:17<br><b>asking</b> 7:9 15:5<br>16:10,14,19<br>27:8 40:10<br>44:15 51:11,20<br>52:3 65:14<br>71:5 74:20<br>75:13 76:6<br>77:13 95:2,4,5<br>95:14 96:18<br>99:10 104:17<br><b>aspects</b> 74:17<br><b>asserted</b> 46:2<br>46:12<br><b>assessed</b> 8:10<br><b>assign</b> 94:10<br><b>assignment</b><br>115:2 116:2<br>117:2<br><b>associated</b><br>33:15 107:21<br><b>assume</b> 6:7<br><b>athletica</b> 1:6<br>4:12 114:6<br>115:3 116:3<br><b>attached</b> 116:7<br><b>attaching</b> 98:13<br><b>attorney</b> 5:8<br><b>attribute</b> 13:3,9<br>13:13,17 15:7<br>15:18,21 16:21<br>17:6 19:22,25<br>23:15 31:12 | 44:6 47:7<br>48:13 49:15,16<br><b>attributes</b><br>11:11,19 12:6<br>12:11,15 13:11<br>15:14,16 16:6<br>16:7,23 17:7,8<br>17:21,21 18:2<br>18:10,16,25<br>20:1,3,25<br>23:13,14,19<br>25:8 26:24<br>28:14 29:3,21<br>31:3,5,8,19<br>32:1,15,21,25<br>33:14,16 34:2<br>34:7,12,12<br>35:2,3,9 36:25<br>44:4,12 46:11<br>46:14 47:14<br>49:15 71:6<br>72:7<br><b>audio</b> 4:7<br><b>authorize</b><br>116:11<br><b>auto</b> 72:25 73:5<br>73:6 74:14<br><b>automatic</b><br>69:12 70:2<br>72:22<br><b>automatically</b><br>87:8,10,15<br><b>auxiliary</b> 70:10<br><b>ave</b> 114:1 | <b>avoids</b> 87:7<br><b>aware</b> 65:16,17<br>78:25 82:24<br>91:4 92:24<br>93:10 95:16<br>98:19 99:21<br>100:3,20 101:2<br><b>b</b><br><b>b</b> 31:10 44:7<br>66:1 78:11<br><b>back</b> 21:7<br>49:23 57:3,12<br>59:12 62:14<br>77:7 81:23<br>88:25 105:16<br>110:14 112:13<br>114:15<br><b>bad</b> 32:14<br>66:15<br><b>based</b> 7:19 9:20<br>10:7,16 11:9<br>13:25 14:6,15<br>16:15 21:23<br>22:25 23:2,3,6<br>23:10,16,20,21<br>23:23,24 24:1<br>24:9,12,17,18<br>24:23 25:2,9<br>26:13 32:20,23<br>33:22 34:8<br>35:23 36:4,20<br>37:2,19 38:5,8<br>38:18 39:1,3,4<br>40:19 41:15<br>44:8 45:14 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 71:8 73:9<br>100:17<br><b>basic</b> 44:16<br><b>basically</b> 85:12<br><b>basing</b> 63:10<br><b>basis</b> 27:2<br>83:12,20<br><b>bates</b> 93:17<br><b>beat</b> 110:15,23<br>111:5<br><b>began</b> 11:3<br><b>beginning</b> 5:7<br>66:1<br><b>begins</b> 51:13<br>54:16 78:15<br>79:20<br><b>behalf</b> 2:3,10<br>5:10,13<br><b>behavior</b><br>109:19<br><b>believe</b> 12:14<br>36:5,10,18,19<br>74:13 88:9<br>90:10 103:6<br>109:7<br><b>belt</b> 97:17<br>98:14 99:5<br><b>beneficial</b><br>94:25<br><b>benefit</b> 93:12<br>107:20<br><b>bergeron</b> 70:13<br>73:24 86:4,16<br>94:4 | <b>bergeron's</b><br>74:5 75:3,16<br><b>best</b> 39:7<br><b>bet</b> 107:8<br><b>better</b> 31:6,8,9<br>31:12,14 75:5<br><b>bicycle</b> 67:19<br>102:23 110:1<br>110:18,23<br>111:6<br><b>bidirectional</b><br>102:5<br><b>biggest</b> 25:17<br><b>bit</b> 35:19,19<br>50:3 67:17<br>75:5 89:4<br><b>bits</b> 105:1<br><b>block</b> 68:5<br>76:13,15,19,20<br>76:23 102:2,6<br>103:14 104:2,2<br>105:14<br><b>blocks</b> 76:16,24<br>76:25<br><b>blood</b> 113:12<br><b>blown</b> 76:15<br><b>blows</b> 76:12<br><b>board</b> 1:2 4:14<br><b>bodies</b> 77:9<br><b>body</b> 32:12<br>47:12,21,23,25<br>48:1,4,8,10,13<br>48:19,20,21,25<br>49:1,3,12,16<br>52:11,14,15,18 | 97:17 103:10<br>103:12<br><b>bottom</b> 81:13<br>89:9<br><b>boulevard</b> 2:5<br><b>brain</b> 62:23<br><b>break</b> 35:10<br>42:14 45:20<br>49:18,22 78:5<br>88:20,24 112:9<br>112:12<br><b>breathing</b><br>10:23 11:2,12<br>11:17 12:7,23<br>19:18,21 20:12<br>20:20<br><b>bright</b> 89:24<br><b>broken</b> 108:22<br><b>bunch</b> 38:14<br><b>bus</b> 94:9 96:2<br>98:2<br><b>button</b> 58:23<br>59:2,4,13,16<br><b>buttons</b> 57:21<br>57:25 64:12<br>69:2,3,10,16<br>70:1,3,9,10<br><b>buy</b> 38:24 | 101:21,22,25<br>102:14,15<br>106:25<br><b>cables</b> 103:2,7<br><b>calculate</b> 49:12<br>49:16 51:6,8<br>52:19 53:3<br>61:6 64:24<br>65:9 87:15<br>88:10<br><b>calculated</b><br>50:22 51:15<br>52:7 62:18<br><b>calculates</b><br>50:20 51:12<br>52:4,23 87:8<br>88:8<br><b>calculating</b><br>48:21 64:21<br>79:25 88:5,15<br><b>calculation</b><br>49:4,6 50:17<br>52:9,9 53:1<br>54:7,12 55:1<br>60:6,14<br><b>california</b> 2:5<br>2:13<br><b>called</b> 5:20<br>43:19 60:1<br>61:16,17 102:6<br><b>calling</b> 67:10<br>73:4,7 78:19<br>85:13<br><b>calls</b> 71:4,5<br>73:11 79:3 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>camry</b> 73:15<br><b>canada</b> 1:7<br>4:12 114:6<br>115:3 116:3<br><b>capability</b><br>63:14<br><b>capable</b> 63:4,7<br>63:12<br><b>cardiorespira...</b><br>8:12 9:20 10:7<br>10:17,22 11:10<br>11:16,20<br><b>cars</b> 73:16,18<br><b>case</b> 4:16 31:11<br>41:2 80:11<br>107:4 114:6<br>115:3 116:3<br><b>caspersen</b><br>13:10 15:10<br>16:5 27:20<br>39:13 41:12<br>42:16,19,25<br>43:2,9,11,17<br>44:11,17,18,22<br>45:11 48:3,5<br><b>categories</b> 44:9<br><b>categorization</b><br>44:13<br><b>categorize</b><br>43:12,25<br><b>ceci</b> 81:12,20<br><b>center</b> 2:12<br><b>central</b> 1:18<br><b>certain</b> 16:3<br>43:13 44:1 | <b>certainly</b> 63:7<br>71:18<br><b>certificate</b><br>116:11<br><b>certification</b><br>115:1 116:1<br><b>certify</b> 113:5,11<br><b>cetera</b> 76:8<br>94:10<br><b>change</b> 14:16<br>21:25 22:1<br>23:24 36:15<br>42:7 46:23<br>49:8 64:23<br>89:4 114:13,14<br>116:8 117:3<br><b>changed</b> 14:15<br>36:6,14<br><b>changes</b> 14:14<br>21:23 22:25<br>114:12 115:7<br>116:7,9<br><b>changing</b> 24:9<br>25:2 26:12<br><b>channel</b> 107:9<br><b>channels</b> 106:8<br>111:23<br><b>characteristics</b><br>16:3<br><b>characterizati...</b><br>80:25<br><b>characterize</b><br>13:2<br><b>chest</b> 38:15 | <b>chicago</b> 1:21<br>4:19<br><b>choice</b> 102:1<br><b>choose</b> 34:4<br><b>chosen</b> 33:16<br><b>chronology</b><br>54:11<br><b>circuitry</b> 74:23<br>74:24 75:25<br><b>circuits</b> 70:15<br>70:18 101:17<br>102:2 104:1<br><b>citation</b> 75:4<br><b>cite</b> 64:18 84:15<br><b>cited</b> 37:16<br>42:22<br><b>citing</b> 82:5<br>86:22<br><b>civil</b> 115:5<br>116:5<br><b>claim</b> 7:9,18<br>8:1 13:21,23<br>14:5,8 15:23<br>21:22 22:6,15<br>23:22 24:7,19<br>25:5 26:10<br>27:9,15,19,23<br>28:21 31:22<br>32:20 34:16<br>36:7,12,13,16<br>39:23 41:1,6<br>42:6,11 44:23<br>45:1 46:5,6,8<br>46:16,20,22,23<br>46:24 | <b>claims</b> 36:2<br><b>clarified</b> 36:5<br><b>clarify</b> 13:19<br>36:19<br><b>clear</b> 25:3 33:5<br>40:17 54:6<br>62:15 69:20<br>75:15 99:14<br>106:24<br><b>clearly</b> 84:3<br><b>cleveland</b> 114:2<br><b>closer</b> 30:14<br><b>colby</b> 2:15 4:20<br><b>collapse</b> 33:17<br><b>colleague</b> 5:14<br><b>collected</b> 72:8<br><b>collection</b> 31:4<br>31:19 32:1,8<br><b>colloquial</b><br>30:23<br><b>column</b> 52:2<br>55:9,11,13,16<br>55:21,22,25,25<br>56:6,19,22<br>57:3 58:21<br>59:1,8,10<br>60:25 61:13<br>62:9 67:8,9,13<br>67:14 79:17<br>82:5 87:2,13<br>87:18 103:10<br>110:12<br><b>combination</b><br>100:17 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>combinations</b><br>89:5 104:15<br><b>combine</b> 94:21<br>94:23 109:17<br><b>combined</b><br>103:14<br><b>come</b> 34:11<br>44:5,12 104:2<br><b>comes</b> 55:1<br><b>commission</b><br>115:19 116:25<br>117:25<br><b>common</b> 76:7<br>92:23 96:2,3<br>98:1 106:3,12<br>107:3<br><b>commonly</b> 90:9<br><b>communicate</b><br>75:19 77:21<br>91:25 101:17<br>106:13 110:2<br><b>communicated</b><br>95:23<br><b>communicates</b><br>102:6<br><b>communicating</b><br>91:15 93:11<br>94:7 97:22<br>102:5 104:3<br>110:6<br><b>communication</b><br>91:20 92:10<br>93:22 94:9,16<br>95:18,25 97:3<br>99:19 100:2,5 | 100:14 101:5,9<br>102:1 104:3,13<br>104:23 105:21<br>106:4 107:3,9<br>107:10 108:6,9<br>108:19 109:4,9<br>109:17 111:19<br>112:4,5<br><b>communicati...</b><br>105:4<br><b>comparing</b><br>27:8<br><b>complete</b> 13:20<br>14:12 21:20<br>22:3 25:18<br><b>completed</b><br>114:15<br><b>completely</b><br>70:16,23 71:1<br>71:18 106:24<br><b>complex</b><br>108:25<br><b>component</b><br>48:5,7,9 49:3<br><b>components</b><br>57:20 63:15,19<br>63:20 64:5,23<br>71:24 76:7,9<br>90:17 91:2,12<br>92:13,20,25<br>93:7<br><b>composition</b><br>47:12,21,23,25<br>48:2,4,8,10,13<br>48:19 49:1 | <b>concept</b> 16:2<br>20:2 33:18<br><b>concerns</b> 25:22<br><b>concludes</b><br>112:18<br><b>condition</b> 8:10<br>8:11 12:1<br>25:14 27:17,22<br>27:25 28:8,12<br>28:17 31:10<br><b>confirm</b> 9:18<br>11:14 50:19<br>53:16 57:1<br>79:1<br><b>connect</b> 103:7<br>110:22 111:5<br><b>connecting</b><br>98:10,17 99:4<br>99:11 103:2<br>111:1<br><b>connection</b><br>98:6<br><b>connects</b> 60:18<br>102:18,22<br><b>consider</b> 13:12<br><b>considered</b><br>30:21 34:14<br>35:4<br><b>consistent</b> 13:9<br>67:11<br><b>constructed</b><br>77:14,15<br><b>construction</b><br>7:10 8:1,16,17<br>8:22 9:4,13 | 11:25 12:1<br>13:20 14:8,22<br>14:23,23 21:10<br>21:13 22:6,9<br>22:19,23 23:8<br>24:6,11,15,20<br>25:6,6,15 27:9<br>27:17,25 34:5<br>35:20 36:14<br>39:6,19,24<br>40:7,12,15<br>41:4,14 44:18<br>45:2 46:5,7,8<br>46:16,20,23<br><b>constructions</b><br>40:2<br><b>contain</b> 108:24<br><b>context</b> 16:10<br>16:19 37:6<br>39:21 40:3<br>41:8 45:3<br><b>contiguous</b><br>68:5<br><b>continue</b> 4:7<br>27:2 59:22<br>60:2<br><b>continues</b> 55:2<br>64:1 79:23<br><b>contrast</b> 80:13<br>81:17<br><b>controller</b><br>101:18<br><b>controllers</b><br>70:15,17 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>conversations</b> 4:5<br><b>copy</b> 6:13,21 42:24<br><b>corolla</b> 73:15<br><b>correct</b> 11:13 19:14 32:3 50:18 52:25 53:25 54:23 57:6 62:2 64:12 66:11 67:16 81:21<br><b>corrections</b> 114:12 116:17<br><b>cost</b> 86:7<br><b>counsel</b> 2:1 5:5 26:3 35:10 78:4<br><b>counters</b> 76:14 76:21<br><b>county</b> 113:5 115:10 116:15<br><b>couple</b> 10:19,20 45:19 55:3<br><b>court</b> 4:22 115:7<br><b>cpu</b> 76:8 102:7 104:4<br><b>create</b> 44:7<br><b>criteria</b> 8:11 10:21 11:15 12:2,2,11,14 13:3,7,11,15,16 13:22 15:7 32:2 | <b>criterion</b> 13:3,8<br><b>cross</b> 3:4 5:22<br><b>crr</b> 1:25 113:21<br><b>csr</b> 1:25 113:21<br><b>custom</b> 38:14<br><b>customary</b> 36:8 40:2 42:12<br><b>cut</b> 28:22 96:16<br><b>d</b><br><b>d</b> 3:1<br><b>dangerous</b> 86:2<br><b>data</b> 62:5,17 72:8<br><b>date</b> 114:8 115:3,9,19 116:3,13,25 117:20,25<br><b>day</b> 113:17 115:16 116:22 117:22<br><b>days</b> 114:18<br><b>deanna</b> 1:25 4:22 113:3,21<br><b>dear</b> 114:10<br><b>declaration</b> 3:7 6:9,10,15 7:11 10:1 14:21 21:9 22:8 26:22 37:17 39:9 40:18 42:23 43:4 50:5,11 54:10 54:16 60:15 65:25 66:8 73:23 78:13 | 80:9,15 81:5 82:10 83:9 85:5 86:14 89:8 93:18 94:1 97:15 99:23 101:12 109:22<br><b>deed</b> 115:14 116:20<br><b>deemed</b> 114:19<br><b>deficient</b> 108:18,22<br><b>define</b> 63:11<br><b>defined</b> 18:24 27:20<br><b>defines</b> 15:12 15:13<br><b>definition</b> 23:15 42:2 44:3,6,8 68:9 75:9 96:13<br><b>definitions</b> 43:14 44:2 45:15<br><b>definitive</b> 91:6<br><b>definitively</b> 93:5<br><b>degrees</b> 43:5,18 43:22<br><b>delineated</b> 86:11<br><b>department</b> 114:22<br><b>depend</b> 34:1,2 35:1 | <b>depending</b> 104:4<br><b>depends</b> 23:12 23:18 25:7 26:23 32:24,25 36:24<br><b>depict</b> 57:16 60:9<br><b>depicted</b> 57:25 59:5 67:3,6,20 68:2,12,15 70:1,16,18 74:10,23,25 75:25<br><b>depicting</b> 60:10<br><b>depictions</b> 76:10 77:8<br><b>depicts</b> 98:16<br><b>deposition</b> 1:14 4:11,17 6:2 16:1 70:12 80:10 96:11,23 114:8,11 115:1 115:3 116:1,3<br><b>describe</b> 30:4 30:12 63:22 81:7 85:16 87:25 88:4,12 88:14<br><b>described</b> 56:10,12 61:25 62:4 63:13 64:4,10,24 67:25 68:13 73:1 74:23,25 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 84:1 108:13<br>110:18<br><b>describes</b> 9:19<br>10:6,16 11:8<br>16:21 72:25<br>77:17 82:11,20<br>84:8<br><b>describing</b><br>10:25 30:23<br>46:10 75:21<br><b>description</b><br>108:18<br><b>detail</b> 76:18<br>84:13<br><b>details</b> 15:3<br>72:13 92:5<br>97:7,8 100:5<br>100:19 101:9<br>108:8,10,19<br>109:8,10 112:5<br><b>detect</b> 52:16<br><b>detected</b> 53:3<br>54:3<br><b>detection</b> 52:1<br><b>detects</b> 51:24<br>52:24 53:18,23<br><b>determine</b><br>32:17 72:11<br>86:19<br><b>determines</b><br>54:2<br><b>device</b> 34:21<br>57:16,19 58:13<br>58:16 59:5,19<br>60:9 61:5,7 | 62:4,10,16,18<br>63:4,13,16,23<br>64:5,6,8,20,24<br>65:4,9 67:3,5<br>68:16,17 69:15<br>69:25 77:5,14<br>77:15 87:7<br>101:15 102:19<br>102:24 103:4<br>103:19 104:9<br>105:9 107:4<br>109:1,18 110:2<br>110:14,16,24<br>111:2,6,10<br><b>devices</b> 57:25<br>58:3 68:15,24<br>70:25 71:23<br>73:2 74:9<br>77:17 87:8<br>94:5 96:7,19<br>96:24 99:24<br>105:7,16<br>108:11<br><b>devoted</b> 88:1<br><b>diagram</b> 102:2<br><b>difference</b><br>12:11 27:14<br>28:7,11 99:7<br><b>differences</b><br>58:12 72:1<br>74:16<br><b>different</b> 14:13<br>18:15 31:4,5<br>41:3,5 44:9<br>47:18 54:14 | 56:14 57:20,24<br>58:3,15 59:19<br>60:11 65:6<br>66:13 68:18,19<br>68:23,24 69:21<br>70:17 71:1,18<br>72:2,13,15<br>73:10,19 74:7<br>74:21 75:25<br>76:9,11 81:18<br>83:13,21,22,25<br>84:4 90:7,8<br>94:10 95:3<br>98:19,21<br>104:20 105:25<br>106:9,21<br>107:17<br><b>differently</b> 41:1<br>98:19,21<br><b>difficult</b> 86:3<br><b>digital</b> 105:3,7<br><b>digitally</b> 105:16<br><b>dimensional</b><br>16:2 20:2<br>33:13,18,18<br><b>dimensions</b><br>28:16<br><b>direct</b> 50:10<br>78:13 101:11<br>102:10 109:21<br>110:11<br><b>directing</b> 76:3<br><b>directly</b> 13:23<br><b>disagree</b> 9:12<br>21:9,14 22:22 | 25:13 74:1<br>75:24 81:8<br><b>disagreed</b><br>22:12<br><b>disagreement</b><br>9:17 24:13<br>25:25 34:24<br><b>disagreements</b><br>22:18<br><b>disclose</b> 38:3<br>65:3,7 90:16<br>92:13 100:11<br>101:9 103:20<br>108:4,7 109:3<br><b>disclosed</b> 84:9<br>96:7,20 100:18<br>108:12,20<br>109:14,15<br><b>discloses</b> 78:17<br>78:18 91:1,11<br>92:19,25 93:6<br>95:16,21 97:16<br>97:22 99:18<br>101:3,8 110:22<br>111:4<br><b>disclosing</b> 80:5<br>92:22 97:5<br>103:2<br><b>disclosure</b> 62:3<br>63:3 97:1<br><b>discrete</b> 33:17<br><b>discussed</b> 57:8<br>59:21 73:11<br>78:1 92:2<br>99:22 112:6 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>discusses</b> 72:22<br><b>discussing</b> 42:3<br>55:22 78:14<br><b>discussion</b><br>61:16<br><b>display</b> 50:17<br>54:8,12 58:3<br>69:2<br><b>displays</b> 70:4,7<br>70:8<br><b>disputed</b> 7:25<br>13:21,23 15:23<br>16:11,14<br><b>distinct</b> 54:22<br>66:10,16,19<br>70:14 72:4<br>73:15,16<br><b>distinction</b><br>89:19<br><b>distinctly</b> 35:5<br><b>distinguish</b><br>93:21 94:6,13<br>95:10,17<br>100:12 101:4<br>103:21 104:5<br>104:19 105:24<br>106:8,20<br>107:16 108:5<br>111:14,24<br><b>distinguishing</b><br>104:24<br><b>dividers</b> 76:13<br>76:22,25<br><b>division</b> 89:10<br>89:18,21 90:2 | 90:11,23 91:19<br>91:23 92:2,13<br>93:13 107:20<br><b>divisions</b> 90:6<br><b>documents</b><br>80:11<br><b>doing</b> 33:23<br>60:6 72:4,12<br><b>dr</b> 4:11 5:14<br>6:10 7:8 15:2<br>27:4 29:9<br>35:18 38:11<br>39:17 45:21<br>47:20 50:2,10<br>54:20 57:15<br>65:22 68:14<br>70:13 73:14,21<br>73:24 74:5<br>75:3,16 78:9<br>78:16 86:4,16<br>89:3 92:18<br>93:6 94:4<br>95:15 99:17<br>101:2 102:10<br>103:18 112:19<br><b>draft</b> 69:20<br><b>draw</b> 68:20<br>69:21 89:24<br><b>drawbacks</b><br>87:7<br><b>drawing</b> 69:18<br><b>drawings</b> 68:19<br>68:23,24 70:6<br>71:15,16 72:2 | <b>drawn</b> 98:18<br>98:21<br><b>drop</b> 22:15<br><b>duly</b> 5:20 113:8<br><b>dupage</b> 113:5<br><b>e</b><br><b>e</b> 3:1 78:11<br>113:1,1<br><b>e.g.</b> 87:9<br><b>earlier</b> 17:7<br>21:18 57:13<br>60:6 61:16<br>63:25 64:11<br>81:23 106:17<br><b>easier</b> 9:9 41:2<br>51:2,19<br><b>easy</b> 10:25<br><b>effectively</b><br>61:18<br><b>efficient</b> 27:6<br>28:23<br><b>efficiently</b> 27:6<br><b>effort</b> 46:24<br><b>eighth</b> 54:21<br><b>either</b> 13:3<br>107:20 112:16<br><b>electrical</b><br>108:25<br><b>electronics</b><br>71:19<br><b>element</b> 14:8<br>41:6<br><b>elements</b> 71:13<br>71:17,19 94:24 | <b>elevates</b> 11:2<br><b>email</b> 114:17<br><b>embarcadero</b><br>2:12<br><b>embodiment</b><br>54:25 55:1,23<br>56:1,10,13<br>57:4,8,11,11<br>59:25 60:1,18<br>60:19,21 61:6<br>61:7,10,17,24<br>62:4,5,6,17,19<br>63:3,4,14,22,23<br>63:25 64:2,5,7<br>64:8,9,10,14,25<br>65:3,7,9 66:4<br>66:20,21 67:4<br>67:7,10,10,15<br>68:6,9,20,21<br>70:15,18 71:4<br>71:5 72:13,22<br>72:24 73:2,5,7<br>73:12 74:14,24<br>75:1<br><b>embodiments</b><br>54:21,22 64:17<br>66:10,13,14,17<br>66:19 67:2,24<br>70:14 72:3,14<br>73:25 75:7,19<br>75:21 76:1<br><b>enclosed</b><br>114:11<br><b>encoded</b> 104:24<br>105:15 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>encoding</b><br>103:23 104:9<br>104:10,12,18<br>105:3,6,10,17<br><b>endurance</b> 8:12<br>9:21 10:8,17<br>10:22 11:10,16<br>11:20<br><b>engineer</b> 29:13<br><b>enter</b> 61:11,15<br>65:17 71:6<br>103:11<br><b>entered</b> 116:9<br><b>enters</b> 72:5<br><b>entire</b> 115:5<br>116:5<br><b>entitled</b> 56:12<br>57:10<br><b>equated</b> 28:17<br><b>equation</b> 53:4<br><b>equivalent</b><br>24:23,25 39:24<br><b>errata</b> 114:13<br>114:18 116:7<br>116:10,18<br>117:1<br><b>esq</b> 114:5<br><b>estate</b> 97:3<br><b>estimate</b> 62:11<br>86:17<br><b>estimated</b><br>48:20 61:16<br><b>estimates</b> 60:20<br>64:15 | <b>estimating</b> 63:5<br>63:8 96:25<br><b>estimation</b><br>59:21<br><b>et</b> 76:8 94:10<br>114:6 115:3<br>116:3<br><b>etched</b> 97:11<br><b>evidence</b> 10:5<br>26:11 45:7,10<br>45:23 46:9<br>107:1<br><b>exactly</b> 16:10<br>24:5 58:8,10<br>69:22 72:18<br>76:17 87:4<br><b>examination</b><br>3:2,4 5:22<br>113:7<br><b>examined</b> 5:21<br><b>example</b> 10:14<br>10:18 14:14<br>27:21 29:6,10<br>29:25 30:2<br>31:2 33:5 34:4<br>46:9 60:5 67:3<br>68:4 69:1,7<br>74:22 75:18<br>76:5 77:22<br>80:13 88:3,19<br>90:1 91:23<br>92:2 95:8 97:8<br>97:11 104:9<br>105:13,14<br>107:2 | <b>examples</b> 10:21<br>99:2<br><b>excellent</b> 30:24<br><b>except</b> 83:4<br><b>executed</b><br>116:10<br><b>execution</b><br>115:14 116:19<br><b>exemplarily</b><br>10:6<br><b>exercise</b> 37:23<br>38:4 50:20,22<br>51:6,8,12,14<br>52:4,6,10,13,19<br>52:20,23 53:1<br>53:4,7,17,22<br>54:6,12 67:5,7<br>67:25 68:11<br>72:7,8,11 73:8<br>77:9 78:17,24<br>79:4,20,24<br>80:6,8,12,14<br>81:12 82:2,13<br>83:11,23 84:2<br>84:18 85:7,22<br>86:1,9 87:20<br>103:10,11<br><b>exercises</b> 72:10<br>85:23<br><b>exercising</b> 11:4<br>12:23 72:9<br><b>exertion</b> 7:19<br>8:8,24 9:20<br>10:7,16 11:1,9<br>13:24 14:3,4,6 | 16:12,15 23:8<br>23:12,22 32:22<br>32:24 33:21<br>35:1 36:24<br>38:5,5 40:7,12<br>40:19,20 41:14<br>41:16 72:9<br><b>exhaustion</b><br>78:19 80:12,17<br>83:5 85:19,24<br>86:2,10<br><b>exhibit</b> 3:6,10<br>3:11,12,13,14<br>3:15 6:17,18<br>7:1,2,11,14 8:6<br>8:21 9:11 10:1<br>37:11,13 39:10<br>39:13 42:16<br>43:3 48:18,19<br>50:8 55:5,6,9<br>60:25 65:19<br>78:10 100:10<br>101:13 108:3<br>109:23 110:13<br><b>exhibits</b> 3:5,9<br><b>existing</b> 99:18<br><b>expert</b> 14:17<br>22:1 25:3<br>99:25<br><b>expiration</b><br>115:19 116:25<br>117:25<br><b>explain</b> 21:13<br>86:20 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>explained</b><br>15:25 20:23<br>60:21 64:16<br><b>explaining</b><br>40:18 63:3<br><b>explanation</b><br>33:6 77:7<br><b>explicit</b> 109:14<br><b>explicitly</b> 45:4<br>60:18 81:25<br>83:10 84:16<br>85:5 97:25<br>110:9<br><b>explore</b> 11:23<br><b>external</b> 55:13<br>56:5 101:17<br>102:2 104:1<br><b>extrinsic</b> 45:10<br>45:22<br><b>eye</b> 91:5 93:5 | 96:8,20 108:13<br><b>february</b> 1:17<br>4:2 113:17<br>114:4<br><b>figure</b> 54:9<br>55:5,17,22<br>56:10,14,15,23<br>57:2,7,13,13,21<br>57:22 58:18<br>59:6,12,14,17<br>59:20,22 60:2<br>60:4,5 67:4,6<br>68:5,8 69:8,15<br>69:18 70:1,3<br>76:5,6,12,12,15<br>76:16,19,21,22<br>76:23 77:15,16<br>77:23,23 98:5<br>98:16,22,23,25<br>99:1,1,8,9,10<br>99:11 102:10<br>103:7,12,15,16<br>104:1 105:13<br>106:23,24<br>107:2,7,19<br><b>figures</b> 57:12<br>57:16,24 60:9<br>67:12,21 68:2<br>68:3,12,15<br>69:21 70:5,16<br>70:19 74:10<br>76:10 77:8<br>98:19,21<br>101:19,21<br>102:4 | <b>file</b> 26:12 36:17<br>37:11 39:22<br>40:1,24 41:8<br>45:3<br><b>filed</b> 4:13<br><b>filled</b> 100:19<br><b>final</b> 41:13<br>109:24<br><b>finally</b> 8:19<br><b>financially</b> 4:25<br><b>find</b> 8:19 39:7<br>56:19 97:9<br>114:11<br><b>fine</b> 6:22 26:5<br>27:3<br><b>finger</b> 97:17<br>98:6,17 99:5<br>99:12<br><b>finish</b> 26:20<br><b>finished</b> 87:1<br><b>first</b> 3:9 5:20<br>9:17 10:3 11:6<br>15:25 22:20<br>24:1 31:8<br>35:21 37:22<br>45:23 47:5<br>53:3,19,23<br>54:21,25 55:1<br>60:18,21 61:5<br>61:5 62:5<br>64:16 66:9,12<br>67:10,21 70:15<br>74:24 79:9,11<br>101:14 113:8 | <b>fit</b> 43:5 46:24<br><b>fitness</b> 7:20<br>8:10,11,25<br>12:1,17 13:25<br>14:7 15:13,18<br>15:21,22 16:1<br>16:16,22,24<br>17:6,7,20 18:1<br>18:10,17,24<br>19:22 20:2,25<br>23:9,13,14,19<br>23:23,25 24:1<br>24:5 25:8,14<br>26:13,14,25<br>27:15,16,19,20<br>28:8,9,12,12,14<br>28:20,25 29:2<br>29:8,10,20<br>30:22 31:3,15<br>31:18,22,25<br>32:1,5,14,14,18<br>32:21,23 33:1<br>33:2,9,23 34:3<br>34:7,9,17 35:2<br>35:3,8 36:25<br>37:25 38:6<br>39:18 40:8,13<br>40:20,21,22<br>41:15,17,18<br>42:2 43:4,19<br>43:19 44:12<br>45:5 47:8 48:5<br>71:7 72:6<br>79:25 87:6,9<br>87:15,21,24 |
| <b>f</b>                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>f</b> 113:1<br><b>face</b> 99:24<br><b>faceted</b> 16:1<br><b>fact</b> 91:17<br><b>fair</b> 8:3 12:19<br>13:2 43:17<br><b>faithful</b> 22:5<br>24:6 36:10,16<br><b>familiar</b> 29:15<br>89:17 91:17<br><b>far</b> 16:17 80:25<br><b>fault</b> 97:9<br><b>features</b> 68:19<br>68:20 72:15                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 88:5,7,9,11,15<br><b>five</b> 48:6 57:21<br><b>flach</b> 89:6<br>90:20 91:22,23<br>92:5,10 93:19<br>94:13 95:6<br>96:4 97:8<br>104:16 105:11<br>108:10,14<br><b>flip</b> 55:5,9,24<br>56:14,19 59:12<br>66:7<br><b>floor</b> 2:12<br><b>focus</b> 15:4<br>25:23 68:10<br>69:25 70:22<br>97:1,12<br><b>focused</b> 27:12<br>104:1<br><b>focusing</b> 28:23<br>96:24<br><b>foerster</b> 2:4,7<br>5:13<br><b>follow</b> 21:16<br>28:2 30:2 33:6<br>40:6 77:6<br>95:11<br><b>following</b> 83:17<br><b>follows</b> 5:21<br><b>foot</b> 17:2,16<br>18:20 19:13,17<br>20:19<br><b>foregoing</b><br>115:13 116:18 | <b>forget</b> 20:12<br><b>forgetting</b><br>24:18<br><b>forgot</b> 106:17<br><b>form</b> 9:22<br>11:18 12:13<br>13:4,18 15:9<br>15:24 17:4<br>18:22 19:20<br>21:4,17 24:16<br>25:16 26:2<br>28:3 29:1,12<br>30:5 31:1 32:7<br>33:11 34:19<br>35:6 36:22<br>37:5,21 38:20<br>39:20 40:16<br>41:24 43:20<br>44:24 45:13<br>46:18 47:1<br>48:11 49:13<br>50:23 51:16<br>52:8 56:2<br>57:17 58:5,14<br>61:9 62:20<br>63:6,17 64:13<br>65:10 66:18<br>68:25 69:17<br>71:2 72:16<br>73:3,17 74:12<br>76:2 77:19<br>80:22 82:14,23<br>83:24 84:21<br>85:11 86:21<br>90:4,18 91:13 | 93:8 94:18<br>95:20 96:9<br>97:24 98:11<br>99:20 100:15<br>101:24 103:5<br>103:24 104:11<br>104:22 105:12<br>106:1,10,22<br>108:15 109:6<br>110:8,25<br>111:16 112:1<br><b>formulate</b><br>46:22<br><b>forth</b> 9:13<br>21:10 53:8<br>82:9 105:16<br>113:7<br><b>forward</b> 114:15<br><b>four</b> 57:21<br><b>fourth</b> 54:21,25<br>60:16,18,19<br>61:7,24<br><b>francisco</b> 2:13<br><b>free</b> 115:14<br>116:20<br><b>front</b> 6:14<br>15:13 79:10<br><b>full</b> 6:5 37:22<br>47:5<br><b>function</b> 44:8<br>76:24 96:20<br><b>functionality</b><br>68:18<br><b>functionally</b><br>60:12 | <b>functions</b> 76:17<br>77:1<br><b>further</b> 112:7<br>113:11<br><b>future</b> 19:24                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>g</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>gears</b> 35:18<br>50:3 89:4<br><b>general</b> 90:3<br>105:17<br><b>generally</b> 94:23<br>104:23 105:6<br><b>getting</b> 28:6<br>32:4 36:3<br>48:15 70:11<br>71:22 80:4<br>81:3,7,16 83:7<br>84:6 104:16<br><b>give</b> 6:5,23<br>10:19,20 15:2<br>20:16 29:6,10<br>31:2 51:17<br>61:12 72:13<br>74:5 75:9 91:6<br>97:3 98:24<br>99:22 103:9<br>108:16,18<br><b>given</b> 30:4,11<br>42:25 45:15<br>112:19 113:10<br><b>gives</b> 10:13<br>72:13 76:13<br>91:23 92:1,4,5<br><b>go</b> 4:8 6:14<br>8:20 33:23 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 38:13,23 43:22<br>49:19 50:7<br>55:12 56:15<br>62:13 80:25<br>81:23 84:13<br>88:21 103:13<br>109:10 112:10<br><b>goes</b> 38:1 49:5<br><b>going</b> 4:1 6:14<br>6:16,25 7:24<br>8:2 9:16,25<br>37:10,17 42:15<br>43:10 44:7<br>54:14 56:20<br>65:18,22 67:12<br>78:9 87:19<br>96:13 100:24<br>106:16 112:17<br><b>good</b> 4:1 5:24<br>5:25 30:17,24<br>32:10,11,13,15<br>32:15 49:17<br>78:4,7 101:25<br>107:8<br><b>gorman</b> 89:6<br>93:19 94:12<br>95:6 104:16<br>105:11 108:9<br>108:13<br><b>grammar</b> 24:18<br>25:21 26:6<br><b>grammatical</b><br>14:9 21:21<br>22:4,13 | <b>grammatically</b><br>24:8<br><b>great</b> 7:7<br><b>greater</b> 11:3<br>43:5,18,21<br><b>ground</b> 107:5,9<br><b>guess</b> 36:3 40:6<br>40:11 48:15<br>65:15 70:11<br>74:20 77:13<br>80:4 102:15<br><b>h</b><br><b>half</b> 81:6<br><b>hand</b> 6:16<br>42:15 78:9<br>83:21 99:7<br>113:17<br><b>happen</b> 97:12<br><b>happened</b><br>38:25<br><b>happening</b> 54:8<br>103:13 105:6<br><b>happens</b> 52:5<br><b>happy</b> 27:1<br><b>head</b> 40:9<br><b>heard</b> 30:16,20<br>89:21<br><b>heart</b> 10:23<br>11:2,11,17<br>12:6,20 13:2<br>17:2,5,9,17,22<br>17:25 18:11,12<br>18:14,15,21<br>19:1,3,14<br>20:12,13 65:4 | 65:8 66:2,3<br>87:6 110:1,15<br>110:23 111:5<br><b>height</b> 13:12,15<br>15:7,16,17,20<br>16:6,20,23<br>17:1,8,16,21,24<br>18:10,13,13,15<br>18:20,25 19:2<br>19:13,17 20:10<br>20:11,19 48:20<br>48:22 49:7,11<br><b>help</b> 15:11 27:5<br>27:12 55:24<br>75:16 87:16,19<br>88:8<br><b>helpful</b> 74:8<br><b>helps</b> 26:21<br><b>hereinbefore</b><br>113:7<br><b>hereunto</b><br>113:16<br><b>high</b> 32:12 33:8<br>56:4<br><b>highlighted</b><br>42:19,24<br><b>history</b> 24:4<br>26:12 36:1,11<br>36:17 37:11<br>39:22 40:1,25<br>41:8 45:3<br><b>hold</b> 56:20<br><b>honestly</b> 80:16<br><b>hour</b> 19:19<br>20:21 | <b>housing</b> 111:9<br>111:9<br><b>huh</b> 79:12<br>83:18<br><b>hypothetical</b><br>38:12 77:6<br><b>i</b><br><b>idea</b> 24:3<br><b>identical</b> 70:5,7<br><b>identification</b><br>6:19 91:18<br>105:23 106:19<br>107:15 111:13<br><b>illinois</b> 1:21<br>4:19 113:5<br><b>illustrations</b><br>57:18,19 68:17<br>77:24<br><b>immediately</b><br>61:20 71:13<br><b>implement</b> 64:6<br>86:3 92:6<br>108:25<br><b>implementati...</b><br>67:19,20<br>108:21<br><b>implemented</b><br>104:5<br><b>implements</b><br>97:7<br><b>implied</b> 83:4<br><b>imply</b> 18:3<br><b>import</b> 61:21<br>62:17 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>imports</b> 62:5<br><b>inch</b> 17:2,16<br>18:20 19:13,17<br>20:20<br><b>include</b> 10:22<br>11:16 86:9<br><b>included</b> 85:16<br>114:13<br><b>includes</b> 21:22<br>70:7 85:23<br>90:12 101:15<br><b>including</b> 5:5<br>108:24<br><b>incorporated</b><br>116:12<br><b>incorrect</b> 24:8<br><b>increase</b> 53:8<br>53:17,22 54:3<br>54:7,13<br><b>index</b> 32:12<br>48:21,25 49:4<br>49:12,16 79:25<br><b>indicating</b><br>114:13<br><b>indirect</b> 64:18<br><b>individual</b> 8:9<br>23:17 25:13<br><b>information</b><br>61:8,11 71:6<br>72:6 91:15<br>95:23 104:6<br>105:2,15,17,23<br>106:13,19<br>107:15 111:13 | <b>initial</b> 80:9,10<br><b>innovation</b><br>108:20<br><b>inoperable</b><br>96:8,11<br><b>input</b> 61:25<br>64:11 65:8<br><b>inputs</b> 65:4<br><b>inside</b> 105:14<br><b>instance</b> 42:5<br>85:20<br><b>instantiations</b><br>60:12<br><b>intend</b> 42:7<br><b>intended</b> 42:10<br><b>intensity</b> 50:21<br>50:22 51:7,9<br>51:13,14 52:4<br>52:6,10,13,19<br>52:20,23 53:1<br>53:5,7,17,22<br>54:6,13<br><b>interact</b> 74:1,4<br>74:11,24 75:2<br>75:8,10,14<br>77:18,21<br><b>interested</b> 4:25<br>113:13<br><b>interfaces</b><br>59:20 70:14,17<br><b>interrupts</b> 54:9<br><b>intersect</b> 90:13<br><b>intrinsic</b> 10:5<br>26:11 45:6<br>46:9 | <b>introduce</b> 6:15<br>6:25 37:10<br>50:7 65:18<br><b>introduced</b><br>15:11 16:4<br>80:10 85:21<br><b>introduces</b><br>13:21<br><b>invention</b> 60:11<br>69:19,22 71:17<br>72:19 75:22,23<br>77:24 87:3,5<br>87:19<br><b>involve</b> 33:3<br><b>involved</b><br>104:13<br><b>involves</b> 20:3<br><b>io</b> 102:6 103:14<br>103:14 104:2,2<br><b>ipr</b> 1:3 4:16 6:9<br>7:2 46:2<br><b>issue</b> 7:2 16:11<br>16:15 25:21<br>36:4 70:24<br><b>issues</b> 22:13<br>95:6,8 109:10<br><b>item</b> 58:22 59:1<br>102:18 103:19<br><b>items</b> 58:18 | <b>jogging</b> 67:19<br><b>jonathan</b> 2:11<br>5:9<br><b>jonathan.swi...</b><br>2:13                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>k</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>kaye</b> 2:11 4:18<br>5:10<br><b>keep</b> 49:9 87:20<br><b>kevin</b> 1:15 3:3<br>3:7 4:11 5:14<br>5:19 6:10<br>112:19 113:6<br>114:8 115:4,9<br>116:4,13<br>117:20<br><b>key</b> 24:3 36:1<br><b>kind</b> 33:3 35:12<br>44:15 57:14<br>75:13 97:2<br><b>knew</b> 49:11,14<br><b>know</b> 7:15<br>14:13,19,19<br>17:24,24 18:12<br>18:13,13,14<br>19:23,25 20:1<br>20:10 21:24<br>23:4 33:7<br>38:15 42:20<br>44:18 46:12<br>49:11 50:12<br>53:2 54:18<br>62:21 64:20<br>65:11 69:3<br>75:12 79:5 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>j</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>jack</b> 110:15,17<br><b>jean</b> 2:7 5:12<br>6:23 114:5<br><b>jnguyen</b> 2:9                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 85:18,22 86:8<br>90:1,6,11,15<br>91:1,11 92:18<br>93:6 94:22,23<br>96:10,12,22<br>98:18 99:17<br><b>known</b> 52:15<br>89:11 96:3<br>106:3 111:19<br>112:5<br><b>knows</b> 109:16                                                                                                                                                                                                       | <b>lays</b> 50:16<br><b>lcd</b> 69:2 70:8<br><b>lead</b> 97:6<br><b>learn</b> 71:8<br><b>leave</b> 35:13<br><b>legal</b> 2:15 4:21<br>96:12,17 114:1<br>117:1<br><b>legs</b> 38:16<br><b>length</b> 52:11,14<br>52:15<br><b>lesser</b> 43:5,18<br>43:22<br><b>letter</b> 114:19<br><b>level</b> 7:19,19<br>8:8,24 9:20<br>10:7,16,25<br>11:9 13:24,25<br>14:3,4,6,6<br>16:12,15,16,21<br>23:7,8,12,16,22<br>23:23,24 26:13<br>27:14 28:1,8<br>28:11,20,24,24<br>29:3,7,10,24<br>30:4,6,22,23<br>32:5,5,18,22,23<br>32:24 33:2,9<br>33:21,22 34:17<br>35:1,8 36:24<br>38:5,6 39:17<br>39:18,25 40:7<br>40:12,13,14,19<br>40:19,21,22<br>41:14,15,16,18 | 42:6,8 44:17<br>45:5 47:8 56:4<br>87:10,20<br><b>levels</b> 38:5 43:9<br>43:13,19 44:1<br>44:19,22 45:11<br>45:14 72:9<br><b>life</b> 49:7<br><b>lifting</b> 32:10<br><b>line</b> 19:24<br>51:21 55:12<br>56:23 58:21<br>59:1,9 60:16<br>67:9,9,13<br>79:13,17 82:5<br>87:19 89:24<br>94:3 102:1<br>103:10 107:5,5<br>107:6 110:12<br>114:13 116:7<br>117:3<br><b>lines</b> 60:25<br>61:14 81:11<br>87:2<br><b>list</b> 29:23<br><b>listed</b> 60:1<br>116:7,17<br><b>listen</b> 20:15<br><b>listing</b> 116:7<br><b>little</b> 7:12 30:14<br>35:19 67:17<br>75:5<br><b>llp</b> 4:18<br><b>location</b> 4:17 | <b>longer</b> 35:14<br><b>look</b> 7:13,13<br>39:7 48:3 55:4<br>56:22 57:3,14<br>69:7,22 76:6<br>77:7,14,16<br>78:22 81:4<br>92:9 95:24<br>97:6 98:16,22<br>98:23 100:6,6<br>102:11 108:9<br>109:11<br><b>looking</b> 44:6<br>57:12 58:11<br>75:6 79:1 93:4<br>99:4 100:17<br>105:10 107:7<br><b>looks</b> 58:6<br>103:13 107:2<br><b>los</b> 2:5<br><b>lot</b> 13:21 14:18<br>22:4 26:9<br><b>low</b> 33:7 86:7<br><b>lower</b> 111:1<br><b>lubell</b> 38:3<br>78:10,14,16,18<br>78:22,23 79:3<br>79:9,13,19,23<br>80:5,7,19 81:1<br>81:19,25 82:6<br>82:12,20 83:10<br>83:12,15 84:7<br>84:11,16 85:1<br>85:5,9,12<br>86:11,18 87:2 |
| <b>l</b>                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>l</b> 78:11,11,11<br><b>label</b> 30:3<br><b>labeled</b> 54:25<br>58:19 59:13,16<br>63:25 69:11<br>102:14,17,18<br>102:19,22,23<br>102:24<br><b>lack</b> 100:18<br><b>language</b> 13:22<br>13:24 14:18<br>21:22 22:5,15<br>24:7,19 25:5<br>26:10,15 27:9<br>27:23 28:21<br>32:20 34:16<br>36:7,13,16<br>39:23 41:1,5,6<br>42:6,11 44:23<br>45:1 80:16<br>86:23<br><b>large</b> 86:5 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 87:23,25 88:14<br>93:6,11 108:3<br>108:4,12,17<br>109:3,8,25<br>110:5,12,13,21<br>111:4,12,22<br>112:6<br><b>lubell's</b> 37:23<br>81:9 82:10<br>83:21 86:17,19<br><b>lululemon</b> 1:6,8<br>4:12,13 5:13<br>114:6 115:3<br>116:3<br><b>lululemon's</b> 9:4<br>14:23<br><b>lynch</b> 1:15 3:3<br>3:8 4:11 5:14<br>5:19,24 6:10<br>7:8 15:2 27:4<br>29:9 35:18<br>38:11 39:17<br>45:21 47:20<br>50:2,10 54:20<br>57:15 65:22<br>68:14 73:14,21<br>78:9,16 89:3<br>92:18 93:6<br>95:15 99:17<br>101:2 102:10<br>103:18 112:19<br>113:6 114:8<br>115:4,9 116:4<br>116:13 117:20 | <b>m</b><br><b>m</b> 1:15 3:3,7<br>4:11 5:19 50:9<br>65:21,21<br>112:19 113:6<br>113:21 114:8<br>115:4,9 116:4<br>116:13 117:20<br><b>machine</b> 67:5,7<br>77:9 103:10,11<br><b>machines</b> 67:25<br>68:11 78:2<br><b>madam</b> 114:10<br><b>made</b> 21:25<br>22:2 38:17<br>115:7<br><b>madison</b> 1:20<br>4:18<br><b>main</b> 35:25<br>86:17<br><b>major</b> 57:20<br>99:6<br><b>majority</b> 49:7<br><b>make</b> 9:9 14:8<br>21:21 22:4,14<br>26:1 28:23<br>29:14 33:5<br>34:23 46:24<br>51:19 56:9<br><b>makes</b> 80:16<br><b>management</b><br>67:5,7,25<br>68:11 77:9<br><b>manual</b> 69:12<br>70:1 72:22,25 | 73:10<br><b>manufacturing</b><br>39:2<br><b>map</b> 13:23<br><b>marjomand</b> 2:6<br><b>marked</b> 3:9<br>6:17,19 7:1<br>42:15,24 50:8<br>65:19 78:10<br><b>marriage</b><br>113:13<br><b>mass</b> 32:12<br>48:21,25 49:3<br>49:12,16<br><b>material</b> 51:7<br>64:2<br><b>matsumoto</b><br>45:24 46:1,4,6<br>46:9,15,25<br>65:20,23 66:1<br>66:2,10,17,20<br>67:4,21 68:16<br>74:10 75:7,19<br>76:1 77:17<br>78:2 91:11,14<br>92:2,7,12,19,22<br>92:24 100:9,11<br>100:20 101:2<br>102:10,16<br>103:1,6,19<br>104:9,18,21<br>105:9,22 106:7<br><b>matsumoto's</b><br>61:5 101:15 | <b>matter</b> 4:12<br>113:14<br><b>maximal</b> 78:17<br>78:20,23 80:1<br>80:5,17,24<br>81:10,19,19<br>82:11,21 83:1<br>87:9<br><b>mean</b> 19:2 20:1<br>23:11,18 25:6<br>28:15 32:5<br>36:23 59:19<br>62:21 63:11<br>71:25 74:4<br>75:13 76:5<br>77:21 86:20<br>96:17 108:22<br><b>meaning</b> 8:8<br>9:12 13:16<br>23:3,4 24:13<br>25:23,25 29:22<br>36:9,10,18,21<br>37:4 40:3<br>41:23 42:7,12<br>45:2 46:23<br><b>means</b> 53:8,17<br>53:23 54:7,13<br>90:5 108:23<br><b>meant</b> 28:19<br>55:11<br><b>measurable</b><br>12:16,21,24<br>15:17,17 16:6<br>17:8,20 18:2<br>20:3,3 23:13 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 23:15 28:15<br>29:3,21 34:12<br>35:9 46:10<br>47:7,14,22<br>48:6,12 49:5<br><b>measurables</b><br>13:9 29:4 30:7<br>46:13<br><b>measure</b> 47:12<br>47:21,25 48:9<br>49:1 63:20<br><b>measured</b><br>11:10 16:2<br>38:14<br><b>measurements</b><br>28:16 38:15,17<br>38:19 39:1,4<br>65:4,8 66:3<br><b>measures</b> 29:22<br>48:1 63:16<br><b>measuring</b><br>48:20 49:9<br>63:23 87:25<br><b>media</b> 4:10<br>49:20,24 88:22<br>89:1 112:20<br><b>medium</b> 33:8<br><b>mehran</b> 2:4<br>5:15<br><b>members</b> 43:12<br>43:25<br><b>memory</b> 62:22<br>62:23 76:8<br><b>mention</b> 26:8<br>93:18 99:24 | <b>mentioned</b> 17:6<br>18:3 22:11,21<br>22:24 28:13<br>32:19 35:24<br>70:8 72:17<br>85:25<br><b>merely</b> 95:22<br><b>messages</b> 90:7<br>90:9 91:18<br>107:22<br><b>method</b> 64:4,8<br>64:18 108:19<br>109:9<br><b>methods</b> 60:20<br>64:16,18 90:19<br>94:22 96:24<br><b>microphones</b><br>4:3<br><b>middle</b> 8:23<br>35:12 83:8<br><b>midway</b> 56:22<br>60:16 81:24<br><b>midwest</b><br>114:17 117:1<br><b>miles</b> 19:19<br>20:21<br><b>mind</b> 27:14<br>29:6 30:21<br>32:6 66:16<br><b>minute</b> 42:14<br>61:12 100:10<br><b>minutes</b> 35:15<br>78:6<br><b>mode</b> 72:22,25<br>73:1,5,6,10 | 74:14<br><b>models</b> 73:19<br><b>modes</b> 73:1<br><b>modification</b><br>36:9 62:22<br><b>modify</b> 62:16<br><b>mofo.com</b> 2:6,9<br><b>moment</b> 98:22<br>98:24 99:22<br>103:9<br><b>monitor</b> 87:6,6<br><b>morning</b> 4:1<br>5:24,25 6:2<br><b>morrison</b> 2:4,7<br>5:12<br><b>motion</b> 97:17<br><b>motivate</b> 92:8<br><b>motivated</b><br>94:20 109:17<br><b>multi</b> 16:1,2<br>20:2 33:13,18<br><b>multiple</b> 18:2,9<br>28:16 64:3<br>72:9 89:11<br>91:19,24,24<br>92:11,23 93:11<br>93:13,21 94:6<br>94:8,14,15<br>95:17 97:16,22<br>98:1 100:13<br>101:4,15<br>106:13 107:20<br>108:5 110:1,6<br><b>multiplex</b><br>90:11 | <b>multiplexing</b><br>89:18,22 90:3<br>90:5,8,17 91:2<br>91:12 92:13,19<br>92:25 93:7,13<br><b>multiply</b> 52:18<br><b>mute</b> 4:6                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>n</b>                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>n</b> 3:1 50:9<br><b>name</b> 4:20 30:3<br>30:12 114:6<br>115:3,4,15<br>116:3,4,21<br><b>named</b> 20:4<br><b>near</b> 81:13<br>97:15<br><b>necessarily</b><br>20:11,25 97:10<br>105:23 106:2,7<br>106:11,19<br>107:15,23<br>109:13 111:13<br>111:17,23<br>112:3<br><b>necessary</b><br>43:12,24<br>104:18<br><b>need</b> 15:17 26:7<br>38:16 44:11,19<br>64:1 93:20<br>94:5,13 95:9<br>96:19 100:19<br>104:5 105:23<br>106:2,7,19<br>107:15 111:13 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 111:18,23<br>112:3<br><b>needed</b> 36:5<br><b>needing</b> 95:17<br>100:12 101:3<br>108:5<br><b>needs</b> 53:2<br>64:23 95:23<br>97:2 108:21,25<br><b>never</b> 86:10<br><b>new</b> 2:8,8 13:21<br>22:5<br><b>nguyen</b> 2:7<br>5:12,12 9:22<br>11:18 12:13<br>13:4,18 15:9<br>15:24 17:4<br>18:22 19:9,20<br>20:22 21:4,17<br>24:16 25:16<br>26:2 28:3 29:1<br>29:12 30:5<br>31:1 32:7<br>33:11 34:19<br>35:6,10,14,16<br>36:22 37:5,21<br>38:20 39:20<br>40:16 41:24<br>43:20 44:24<br>45:13 46:18<br>47:1 48:11<br>49:13 50:23<br>51:16 52:8<br>56:2 57:17<br>58:5,14 61:9 | 62:20 63:6,17<br>64:13 65:10<br>66:18 68:25<br>69:17 71:2<br>72:16 73:3,17<br>74:12 76:2<br>77:19 78:4<br>80:22 82:14,23<br>83:24 84:21<br>85:11 86:21<br>90:4,18 91:3<br>91:13 92:21<br>93:8 94:18<br>95:20 96:9<br>97:24 98:11<br>99:20 100:15<br>101:6,24 103:5<br>103:24 104:11<br>104:22 105:12<br>106:1,10,22<br>107:18 108:15<br>109:6 110:8,25<br>111:7,16 112:1<br>112:9,15 114:5<br><b>nike</b> 1:11 4:13<br>5:11 15:11<br>36:2,14 41:3<br>66:21 67:1,2,9<br>67:14 71:4,4<br>73:4,7,11<br>80:10 85:21<br>114:6 115:3<br>116:3<br><b>nike's</b> 8:7,15<br>9:12 11:25,25 | 13:19 14:7,22<br>21:10,13 22:19<br>22:23 24:10,14<br>24:18,20 25:5<br>25:14 27:9,17<br>27:24 34:4<br>68:5,9 99:25<br><b>nodding</b> 40:9<br><b>noise</b> 99:18,22<br>99:25 100:1,4<br>100:21,25<br>109:4,10<br><b>nonresponsive</b><br>14:25<br><b>notarized</b><br>114:14<br><b>notary</b> 113:4<br>114:25 115:10<br>115:18 116:15<br>116:23 117:23<br><b>note</b> 4:3 114:12<br><b>notes</b> 56:21<br><b>noticing</b> 5:8<br><b>notifying</b> 53:8<br>53:17,23 54:7<br>54:13<br><b>notion</b> 70:25<br><b>novel</b> 97:5<br><b>number</b> 56:4<br>112:20 114:7<br>114:13<br><b>numbers</b> 56:3<br>56:21 57:25<br>58:19 86:6<br>116:7 | <b>numerical</b> 33:8<br><b>o</b><br><b>o</b> 50:9 65:21,21<br><b>oath</b> 6:1<br><b>object</b> 87:3,5<br>87:14,14,22<br><b>objection</b> 9:22<br>11:18 12:13<br>13:4,18 15:9<br>15:24 17:4<br>18:22 19:9,20<br>20:22 21:4,17<br>24:16 25:16<br>26:2 28:3 29:1<br>29:12 30:5<br>31:1 32:7<br>33:11 34:19<br>35:6 36:22<br>37:5,21 38:20<br>39:20 40:16<br>41:24 43:20<br>44:24 45:13<br>46:18 47:1<br>48:11 49:13<br>50:23 51:16<br>52:8 56:2<br>57:17 58:5,14<br>61:9 62:20<br>63:6,17 64:13<br>65:10 66:18<br>68:25 69:17<br>71:2 72:16<br>73:3,17 74:12<br>76:2 77:19<br>80:22 82:14,23 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                        |                 |                        |                      |
|------------------------|-----------------|------------------------|----------------------|
| 83:24 84:21            | 11:14,22 12:19  | 81:3,16 82:8           | 70:4 73:14           |
| 85:11 86:21            | 13:1,12 15:20   | 82:18 86:13            | 74:9,22 75:18        |
| 90:4,18 91:3           | 16:19,25 17:12  | 87:24 88:4,18          | 76:20 77:16          |
| 91:13 92:21            | 18:19 19:5      | 89:14,21 90:1          | 78:16,22 80:19       |
| 93:8 94:18             | 20:6,14,17      | 91:8 93:3,15           | 80:23 81:25          |
| 95:20 96:9             | 21:2 22:11      | 95:13 96:6             | 83:12,20 86:25       |
| 97:24 98:11            | 25:12,20 26:18  | 97:21 98:4,9           | 89:14 95:7           |
| 99:20 100:15           | 27:11,24 28:6   | 99:17 100:9,23         | 96:1,7,14,19         |
| 101:6,24 103:5         | 30:2,19 32:4    | 101:11,14              | 97:21 98:9,12        |
| 103:24 104:11          | 34:13,23 35:18  | 102:9,21 103:1         | 103:18,25            |
| 104:22 105:12          | 36:12,19 37:9   | 104:8 105:19           | 105:22 106:6         |
| 106:1,10,22            | 38:11,23 39:5   | 106:6,16 108:2         | 106:18 107:14        |
| 107:18 108:15          | 39:12,16,24     | 109:3 110:11           | 108:11 110:5         |
| 109:6 110:8,25         | 41:21 42:5,13   | 110:21 111:4           | 111:12,22            |
| 111:7,16 112:1         | 43:2 44:6,15    | 112:7                  | <b>opinions</b> 7:10 |
| <b>objections</b> 5:2  | 45:17,19 46:1   | <b>once</b> 52:5       | 9:10 46:5,16         |
| <b>obscured</b> 99:8   | 46:4,15 47:4    | 103:11                 | 65:23 82:9           |
| <b>obviously</b>       | 47:17,24 48:4   | <b>ones</b> 84:7 85:18 | 89:5 91:16,22        |
| 73:19 76:7             | 48:25 49:17     | 86:9                   | 94:3 95:6            |
| <b>obviousness</b>     | 50:15,19 51:24  | <b>operate</b> 44:4,11 | <b>options</b> 62:9  |
| 94:20                  | 52:3 53:6,12    | <b>operational</b>     | <b>order</b> 96:20   |
| <b>occur</b> 51:13     | 53:16 54:20     | 43:14 44:2,3           | 104:19 105:24        |
| <b>occurs</b> 52:24    | 55:3,8,10,15    | 45:15                  | 106:8,20             |
| <b>offered</b> 36:14   | 56:8,17,18      | <b>opine</b> 81:1 95:9 | 107:16 111:14        |
| <b>offers</b> 64:3     | 57:1,7,24       | 97:16                  | 111:24               |
| <b>office</b> 1:1 4:15 | 58:18,21,25     | <b>opined</b> 28:11    | <b>ordinary</b> 8:8  |
| 37:14,15               | 59:4,8,12,16,24 | 28:18                  | 23:21 36:8           |
| <b>official</b> 115:15 | 60:8,24 61:3    | <b>opinion</b> 11:15   | 40:2 41:7            |
| 116:21                 | 61:24 62:3      | 12:10 15:7,20          | 42:12 58:11          |
| <b>oh</b> 74:6 79:10   | 65:2,18,18      | 16:20 17:1,15          | 61:19 62:10,16       |
| <b>ohio</b> 114:2      | 66:7,12 68:4    | 27:10 37:3             | 85:18 92:9           |
| <b>okay</b> 6:4,7,13   | 68:10,14 72:21  | 41:22 47:11,20         | 94:22 109:16         |
| 7:8,17,24 8:5          | 73:14 75:6      | 54:20 57:15            | <b>original</b> 22:6 |
| 8:19,20 9:3,8,9        | 77:3,8 78:21    | 60:8 63:10             | 23:22 24:7,19        |
| 9:25 10:15             | 79:2,8 80:19    | 66:9 68:14,23          | 25:5 26:10           |

|                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 27:22 36:12<br>39:23 42:11<br><b>oscillated</b> 76:25<br><b>oscillators</b><br>76:13,22<br><b>outcome</b> 5:1<br>113:14<br><b>overcoming</b><br>36:2<br><b>own</b> 13:8 23:8<br>60:20 69:20<br>80:21 82:21,25<br>83:15 84:4,12<br>85:2,14<br><b>owner</b> 1:12<br>2:10 5:11<br><b>oxygen</b> 80:1<br>87:9 | 81:5,24 86:15<br>89:8 94:3<br>97:14 114:13<br>114:15 116:7<br>117:3<br><b>panel</b> 110:14<br>111:1,9<br><b>paper</b> 45:18<br><b>paragraph</b><br>7:14,17,22 8:5<br>8:6,20,21,21,23<br>9:11 10:1,4,25<br>11:7,24 12:3,5<br>21:9 37:22<br>39:8,12,23<br>40:17 41:12,13<br>42:22 43:1,3<br>45:21,22 47:5<br>47:6 48:17<br>50:6,11,16<br>51:21 53:9<br>54:11,16 55:15<br>58:25 60:15,17<br>65:24 66:8,14<br>67:18 70:12<br>73:22 75:14<br>78:15 79:22<br>81:4,6,13,24<br>83:9 84:1,16<br>85:4 86:1,13<br>89:8,10 94:2,4<br>97:14,15 99:23<br>101:12,14<br>109:22,25 | <b>paragraphs</b><br>21:16 37:16<br>38:7,8<br><b>parallel</b> 54:9<br><b>parameter</b> 87:9<br>87:15,24 88:7<br><b>parameters</b><br>88:5,11,15<br><b>part</b> 10:19<br>23:12,18 25:7<br>26:24 45:18<br>48:17 68:8<br>116:9<br><b>participants</b><br>2:1 86:6<br><b>particular</b> 8:10<br>25:14 27:16<br>28:1,8 45:11<br><b>particularly</b><br>42:1<br><b>parties</b> 4:8<br>113:12<br><b>party</b> 4:24<br><b>past</b> 24:21<br>26:21 48:16<br><b>patent</b> 1:1,2,4<br>1:12 2:10 4:14<br>4:15 5:11 7:2,3<br>7:4,18 9:19<br>10:5 11:8 24:2<br>26:12 30:14<br>35:25 36:8,11<br>36:18 37:6,15<br>39:22 40:3<br>41:8 42:1 45:4 | 52:2,17 60:7<br>82:25 85:22<br>86:23 87:14<br>97:13<br><b>patents</b> 69:21<br><b>path</b> 93:23<br>94:16 95:11,19<br>97:23 99:19<br>100:14 101:5<br>103:15 104:3<br>108:6 109:5<br>110:7<br><b>people</b> 17:1,15<br>18:14,19 19:1<br>19:12,16 20:10<br>20:19,23 30:20<br>31:4 44:9<br><b>percent</b> 54:2<br>71:23<br><b>perform</b> 15:15<br>59:20 97:2<br><b>performed</b><br>14:20<br><b>performing</b><br>76:16,24 77:1<br><b>person</b> 15:14<br>18:24 31:7,7,8<br>31:9,10,12,13<br>31:14,15 32:2<br>32:13 33:22<br>34:20 35:3<br>41:7 43:4<br>58:10 61:19<br>62:9,16 85:17<br>92:8 94:21 |
| <b>p</b>                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>p.m.</b> 112:11,14<br>112:18<br><b>paces</b> 79:23<br><b>pacing</b> 79:13<br>87:10<br><b>package</b> 105:1<br><b>packet</b> 105:2<br><b>page</b> 3:9 37:15<br>42:18 47:4<br>50:12 53:9<br>54:10 55:6,12<br>55:25 56:9,16<br>65:24 66:2,8<br>66:25 67:17,21<br>67:23 78:15<br>79:9,10,11                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 109:16<br><b>person's</b> 12:16<br>12:23 31:25<br>33:22 47:14<br><b>personally</b><br>115:11 116:15<br><b>petitioner</b> 2:3<br>5:13<br><b>petitioners</b> 1:9<br><b>ph.d.</b> 1:15 3:3,8<br>5:19 6:10<br>113:6 114:8<br>115:4,9 116:4<br>116:13 117:20<br><b>phone</b> 114:3<br><b>phones</b> 4:6<br><b>phrase</b> 9:5<br>21:23 22:20<br>23:5 24:4<br>25:24 28:1<br>36:1 40:1<br>42:25 43:2<br>48:4,17 63:15<br><b>phrases</b> 12:12<br>37:2,19 39:22<br>41:22<br><b>physical</b> 7:19<br>8:10,25 11:11<br>12:6,16 13:25<br>14:7 15:13,16<br>15:18,21,22<br>16:1,16,21,24<br>17:6,7,20 18:1<br>18:10,17,24<br>19:22 20:2,25 | 23:9,13,14,19<br>23:23,24 24:1<br>24:5 25:8,14<br>26:13,14,25<br>27:15,16,18,20<br>28:9,11,12,14<br>28:20,25 29:2<br>29:7,10,20<br>30:22 31:3,15<br>31:18,22,25,25<br>32:5,14,14,18<br>32:21,23 33:1<br>33:2,9,23 34:3<br>34:6,8,12,17<br>35:2,3,8 36:25<br>37:25 38:6<br>39:18 40:8,13<br>40:20,21,22<br>41:15,17,18<br>42:2 44:12<br>45:5 46:10<br>47:7,8,15<br>60:11 71:7<br>72:6 77:10<br><b>pick</b> 4:4<br><b>pictures</b> 58:9<br>58:11<br><b>piece</b> 109:11<br><b>pitch</b> 50:21<br>51:14,25 52:1<br>52:6,11,14,16<br>52:18,25 53:2<br>53:2,18,24<br>54:2,3 | <b>place</b> 4:8 39:7,8<br>65:5,11 82:25<br><b>places</b> 68:1<br><b>plain</b> 8:7 23:21<br>44:22 45:1<br><b>please</b> 4:3,6 5:3<br>5:17 26:3 27:4<br>98:24 103:9<br>114:11,11<br><b>plop</b> 14:7<br><b>plopped</b> 21:22<br><b>plurality</b> 38:4<br><b>plus</b> 76:25<br><b>point</b> 14:9,11<br>24:24 40:4<br>42:14 62:8<br>65:5,12 78:7<br>79:21 93:25<br><b>pointed</b> 57:13<br><b>pointedly</b> 35:22<br><b>points</b> 24:21<br><b>poor</b> 30:19,24<br><b>population</b><br>43:12,25<br><b>porter</b> 2:11<br>4:18 5:10<br><b>portion</b> 10:24<br>37:12 42:19<br>48:19 99:7,12<br><b>posita</b> 36:17<br>40:4 41:25<br>47:6 59:18<br>71:3,12,13<br>72:18 86:8,18<br>91:17 100:6 | <b>posita's</b> 45:2<br><b>possible</b> 61:21<br>109:10<br><b>possibly</b> 44:7<br><b>power</b> 107:5,9<br><b>predetermined</b><br>37:24<br><b>predictable</b><br>109:18<br><b>preface</b> 69:3<br><b>prescribed</b><br>79:24<br><b>present</b> 2:15<br>5:5 92:6<br><b>pressing</b> 59:9<br>62:1 64:11<br><b>prevent</b> 60:5<br><b>previous</b> 71:9<br><b>previously</b> 3:9<br>7:1 87:7<br><b>prior</b> 46:2,12<br>94:24 95:24<br>97:7 100:6,7<br>100:19 108:21<br>108:24 109:11<br><b>private</b> 4:4<br><b>probably</b> 66:15<br><b>problem</b> 26:7<br>36:4 95:17,22<br>99:18 100:12<br>101:3,8 108:4<br>108:7 109:4,14<br>109:15<br><b>problems</b> 93:19<br>93:20 94:12 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 99:24 100:17<br><b>procedure</b><br>115:5 116:5<br><b>proceeding</b> 5:3<br><b>process</b> 53:18<br>53:23<br><b>processes</b> 54:8<br>105:24 106:20<br>107:16 111:14<br>111:24<br><b>processing</b><br>50:17 54:8,12<br><b>product</b> 52:10<br>52:13<br><b>production</b><br>114:15,17,22<br><b>program</b> 72:11<br>73:8 79:25<br><b>programs</b> 86:1<br><b>prompt</b> 38:3<br><b>proper</b> 80:25<br><b>proposed</b> 8:7<br>8:15,22 9:4<br>11:25 12:1<br>22:6,19 24:20<br>25:15 27:9,24<br>34:5 35:20<br>36:9 39:6,19<br>46:22 87:8<br><b>prosecution</b><br>24:4 36:1,11<br><b>protected</b><br>81:18<br><b>protocol</b> 37:24<br>71:10 78:17,18 | 78:23,24 79:3<br>79:4,7,14,20,23<br>80:6,8,17,18,21<br>80:21 81:9<br>82:2,10,12,13<br>82:21 83:1,11<br>83:13,14,15,21<br>83:23 84:2,4,8<br>84:12,18,19<br>85:2,7,10,14,23<br>86:10 87:12<br><b>protocols</b> 71:8<br>80:12,14,14<br>81:18 82:1,16<br>83:10 84:3,7<br>84:10,14,17<br>85:6,8,13,15,16<br>85:17 86:1,9<br>88:4,14 96:24<br><b>provide</b> 87:4,6<br>96:13 107:1<br>108:8,10 109:8<br><b>provided</b> 36:15<br>41:3 110:14<br><b>providing</b><br>40:25<br><b>public</b> 113:4<br>115:10,18<br>116:15,23<br>117:23<br><b>pulling</b> 40:24<br><b>pulse</b> 97:17<br>101:16 102:3<br>103:3,8,22 | <b>purchasing</b><br>39:3<br><b>purpose</b> 86:17<br>86:19<br><b>put</b> 29:23 30:3<br>30:12 33:4,4<br>33:10 44:8<br>53:4 55:8<br>56:18<br><b>putting</b> 71:7                                                                                                                                                                                                                                          | 93:16 106:17<br>108:3 112:8,15<br>112:16<br><b>quick</b> 35:11<br>42:13<br><b>quickly</b> 37:10<br><b>quite</b> 84:22,23<br><b>quotation</b><br>111:2<br><b>quote</b> 7:21<br>42:21,21 48:18<br>83:8 84:15<br>85:4 87:4<br><b>quoted</b> 8:2 43:1<br>43:3,23 48:17                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>q</b>                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>question</b> 11:22<br>15:4,6,12 16:8<br>17:12,13 18:7<br>19:6,10 20:6,8<br>20:9,14,15,18<br>21:2 27:8,12<br>35:21 37:17<br>42:13 44:16<br>47:18 50:25<br>57:15 65:6<br>66:15 69:4,25<br>74:21 75:4,5<br>84:23 88:6,9<br>90:22,25 92:12<br>92:14,16,17,18<br>95:3 100:24<br>101:1 105:6<br>107:12<br><b>questions</b> 7:9<br>9:10,16 15:3,5<br>19:24 27:5<br>39:6 45:19<br>50:3,4 54:15<br>65:23 91:9 |                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                         | <b>r</b>                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                         | <b>r</b> 113:1<br><b>rack</b> 38:24<br><b>raises</b> 11:22<br><b>range</b> 87:21<br><b>ranking</b> 33:3<br><b>rapidly</b> 86:6<br><b>rate</b> 10:23 11:2<br>11:11,17 12:7<br>12:20 13:2<br>17:3,5,9,17,22<br>17:25 18:11,12<br>18:14,21 19:1<br>19:3,14 20:12<br>20:13 65:4,8<br>66:3,3 87:6<br>110:1<br><b>rates</b> 18:16<br><b>rather</b> 100:18<br>109:15 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>read</b> 8:17 9:6<br>10:20 12:12<br>23:6,7 41:19<br>42:1,20 43:10<br>48:18 56:20<br>59:18 60:17<br>61:12 62:22<br>85:20 91:5<br>111:2 115:5,6<br>115:12 116:5,6<br>116:17<br><b>reader</b> 88:10<br><b>reading</b> 23:16<br>36:17 41:7<br>61:20 71:3,12<br>72:18 85:21<br>86:18 87:13<br>114:19<br><b>reads</b> 7:18 8:8<br>8:24 40:7<br>41:13 47:6<br>66:2 70:13<br>101:15 109:25<br><b>real</b> 97:3<br><b>really</b> 25:9 49:7<br>96:12<br><b>realm</b> 30:15<br><b>reason</b> 6:4<br>14:16 18:6<br>19:6 24:9 25:1<br>25:17 27:21<br>40:23 77:25<br>114:14 116:8<br>117:3 | <b>reasons</b> 9:13<br>21:10<br><b>recall</b> 11:24<br><b>receipt</b> 114:18<br><b>receive</b> 110:15<br><b>received</b><br>104:20<br><b>receiver</b> 91:16<br>91:25 92:11,23<br>93:12 94:7<br>106:14<br><b>recently</b> 6:8,11<br><b>recessed</b><br>110:13<br><b>recite</b> 8:22 10:4<br><b>recited</b> 15:22<br>28:20<br><b>recites</b> 11:25<br>51:6<br><b>record</b> 4:2,9<br>5:7 6:16 49:19<br>49:23 50:7<br>65:19 88:21,25<br>112:10,13,18<br>113:9 116:9<br><b>recorded</b> 4:10<br><b>recording</b> 4:7<br><b>refer</b> 7:3,24<br>8:15 9:3 12:5<br>15:10 30:22<br>39:12 41:12<br>51:2 66:13<br>78:23 80:5,7<br>80:11,20 81:11<br>82:15 90:20 | 109:24<br><b>reference</b> 13:10<br>15:11 16:5<br>39:13 42:16<br>45:22,23,24<br>46:25 50:4,9<br>55:4,17 56:23<br>61:13 65:20<br>68:1 78:11<br>82:11,12,20<br>83:15,22 84:8<br>84:9 90:16<br>94:13 100:10<br>100:11 114:7<br>115:2 116:2<br><b>referenced</b><br>103:19 115:11<br>116:15<br><b>references</b> 7:17<br>43:9 46:2 80:7<br>85:21 89:6<br>91:9 93:17<br>95:9<br><b>referred</b> 3:9<br>58:22 59:2<br>77:10 84:10<br>89:18<br><b>referring</b> 9:5<br>10:3 11:6<br>12:15 28:24<br>34:18 37:12<br>38:7 55:17,22<br>56:5 60:24<br>67:1,14 81:22<br>83:13 85:9 | 104:15<br><b>refers</b> 12:1 16:5<br>29:2,4,24<br>31:19 32:1,8<br>34:17 44:22<br>45:11 48:18<br>55:25 59:9<br>79:3,6 82:22<br>82:25 83:14<br>84:12 85:1<br>102:17 111:9<br><b>reflect</b> 40:22<br>41:17<br><b>regarded</b> 87:21<br><b>regardless</b><br>104:24<br><b>regime</b> 87:17<br><b>reinforce</b> 71:16<br><b>rejection</b> 36:2<br><b>relate</b> 10:21<br>11:15 91:16<br><b>related</b> 4:24<br>11:20 47:7<br>50:16 89:23<br>96:6 113:11<br><b>relates</b> 15:15<br>47:14,22<br><b>relating</b> 89:5<br><b>relevant</b> 15:21<br><b>rely</b> 46:4,6,15<br>46:19 108:21<br><b>relying</b> 44:16<br><b>remember</b> 6:11<br>20:13 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>remotely</b> 2:1<br>5:6<br><b>remove</b> 39:17<br>40:14 44:17<br><b>removed</b> 39:25<br><b>removing</b> 42:5<br>42:8<br><b>repeat</b> 18:8<br>20:14 90:25<br>92:16 101:1<br>107:12<br><b>replace</b> 35:23<br><b>replaced</b> 23:5<br><b>replacing</b> 14:2<br>22:25<br><b>reply</b> 3:6 6:8,9<br>39:9 40:18<br>42:22 50:5,11<br>60:15 65:25<br>78:13 80:15<br>82:9 86:13<br>89:8 101:12<br>109:22<br><b>replying</b> 75:15<br><b>report</b> 43:23<br><b>reported</b> 1:24<br><b>reporter</b> 4:22<br>5:17 113:3<br>115:7<br><b>representations</b><br>58:16<br><b>representing</b><br>4:20 105:15<br><b>request</b> 116:9<br>116:11 | <b>required</b> 104:8<br>114:25<br><b>respect</b> 10:5<br>59:21<br><b>responses</b><br>37:14<br><b>responsive</b><br>17:19<br><b>rest</b> 64:1<br><b>restatement</b><br>42:10<br><b>resting</b> 17:2,5,9<br>17:17,22,25<br>18:11,12,14,15<br>18:21,25 19:2<br>19:14<br><b>restricted</b><br>100:1<br><b>restrictive</b><br>105:20<br><b>result</b> 62:12<br><b>results</b> 71:9<br>72:10 73:9<br><b>retained</b><br>112:21<br><b>returned</b><br>114:18<br><b>review</b> 114:12<br>115:1 116:1<br><b>reword</b> 95:3<br><b>rewrite</b> 25:18<br>25:21<br><b>rewriting</b> 13:20<br>14:12 21:20<br>22:3 | <b>rid</b> 45:5<br><b>right</b> 5:24 6:7<br>9:21 10:12,17<br>10:23 11:5,12<br>11:17 12:21,24<br>13:6 15:23<br>18:4,21 21:3,7<br>29:23 30:9<br>31:17,20,23<br>32:2 34:18,23<br>35:4 37:20<br>39:8 40:8<br>41:19,23 43:6<br>43:9 44:20,23<br>45:9,12,24<br>46:2,17 47:25<br>48:10 49:1,4<br>50:2,10,17,22<br>51:25 52:7,22<br>53:19,24 54:4<br>54:5,17 55:23<br>57:5,9 58:1<br>61:1,3 62:1,6<br>64:9 65:22<br>66:10 68:7<br>71:21,24 76:1<br>76:10 78:12,12<br>79:2 81:10,12<br>81:20 82:6,8<br>82:13,18,21<br>83:3,6 84:11<br>84:20,25 85:10<br>86:16,25 89:3<br>89:25 95:13<br>102:13 109:21 | 110:11<br><b>ross</b> 2:15 4:20<br><b>rotation</b> 101:16<br>102:3 103:3,8<br>103:22<br><b>rpr</b> 1:25 113:21<br><b>rules</b> 115:5<br>116:5<br><b>running</b> 19:18<br>20:21 32:11<br>50:21 51:13,25<br>52:5,25 53:18<br>53:24 67:18                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>s</b>                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>s</b> 59:10,13,16<br>65:21 114:15<br>116:8,8 117:3<br><b>s1b</b> 53:19<br><b>sa2</b> 51:21,24<br>52:1,16,25<br><b>sa3</b> 51:4,6,12<br>51:20 52:24<br><b>san</b> 2:13<br><b>saw</b> 32:9<br><b>saying</b> 13:1<br>26:9 40:10<br>41:11,21 44:10<br>62:15 71:23<br>76:23 77:2<br>81:9,19 85:12<br>85:14 94:11<br>105:9<br><b>says</b> 10:12<br>13:24 31:22<br>37:23 38:1 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 43:4,11,24<br>44:6 51:8<br>54:25 55:13<br>63:24 64:10,14<br>79:13 83:16<br>85:9 87:19<br>88:2,19 95:22<br><b>sb1</b> 53:13,20,21<br>53:24 54:3<br><b>sb2</b> 53:13 54:1<br><b>scalar</b> 33:15<br><b>scale</b> 29:15<br>31:13 33:8,10<br><b>scenario</b> 61:4<br><b>scholer</b> 2:11<br>4:18 5:10<br><b>seal</b> 115:15<br>116:21<br><b>second</b> 21:8<br>40:14 42:5,8<br>43:22 51:17<br>56:20 66:9<br>67:6 70:12,18<br>72:21,24 73:22<br>74:25 81:6<br><b>section</b> 9:10<br>50:5 52:17<br>54:17,24 56:3<br>56:4,11,12<br>57:4,8,10,11<br>60:1,3 61:17<br>63:25 66:1,1<br>71:14,14 78:13<br>93:17 | <b>see</b> 7:21 8:13<br>9:1,14 10:9<br>12:3,8 20:15<br>21:15,15 27:21<br>27:24 28:7<br>37:15 39:14<br>43:15 47:9<br>48:23 51:4,8<br>51:22 53:10,14<br>55:13,18 56:1<br>56:23,24 57:3<br>57:21 58:12,18<br>58:22 59:1,9<br>59:13 60:4,22<br>66:5 69:10,13<br>69:14 70:20<br>74:2 75:2,4,17<br>76:11 77:11<br>78:1 79:15,16<br>80:3 82:3,20<br>89:9 95:24<br>97:7,19 98:5<br>99:11 101:7,21<br>102:13,15,17<br>102:21 103:12<br>110:3,19 111:1<br><b>seems</b> 14:2<br>81:16 107:7<br><b>send</b> 98:1<br>104:25 105:1<br><b>sending</b> 90:7<br>91:18 93:21<br>94:15 95:10,18<br>100:13 101:4<br>104:6 108:6 | <b>sense</b> 14:9<br>21:21 22:4,14<br>26:1 71:11<br>73:7 80:16<br>96:17<br><b>sensitive</b> 4:4<br><b>sensor</b> 97:17,18<br>98:6,10,13,14<br>98:17 99:12<br>101:16 102:3<br>102:18 103:3,8<br>103:8,22 104:6<br>107:21,22<br>110:1,2,15,18<br>110:23,23<br>111:6,6<br><b>sensors</b> 91:24<br>92:11,23 93:11<br>93:21 94:9,15<br>95:10,18 97:16<br>97:22 100:13<br>101:4,15,16<br>102:3,22 103:3<br>103:23 104:21<br>104:25 105:25<br>106:9,21 107:4<br>107:17 108:5<br>110:1,6 111:15<br>111:25<br><b>sent</b> 90:9<br>103:22 105:16<br>105:25 106:8<br>106:21 107:17<br>111:15,25 | <b>sentence</b> 10:4<br>10:20 11:7<br>41:13 43:8,22<br>44:10 47:5<br>70:13 73:22<br>101:14 109:25<br><b>separate</b><br>102:22 103:2,7<br>110:22 111:5<br><b>separately</b> 35:4<br><b>set</b> 9:13 15:14<br>16:23 17:7,20<br>21:10 22:15<br>25:22 26:6<br>28:14,15 29:20<br>30:11 31:3<br>33:21 44:4<br>47:13 53:8<br>55:20 56:9<br>59:10 85:17<br>113:7,16<br><b>sets</b> 33:17<br><b>setting</b> 7:12<br>9:19 10:6,16<br>11:9 82:9 90:6<br><b>several</b> 11:15<br><b>shape</b> 30:17,19<br>30:24,24,25<br>31:10<br><b>share</b> 98:2<br><b>shared</b> 101:18<br>110:6<br><b>sharing</b> 94:9<br>96:2 97:18<br>107:8 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>sheet</b> 114:13<br>116:7,10,18<br>117:1<br><b>short</b> 32:11<br>49:22 88:24<br>112:12<br><b>shortcut</b> 66:24<br><b>shortening</b><br>90:10<br><b>shorthand</b> 9:8<br>30:10 69:11<br>113:3<br><b>show</b> 54:11<br><b>showing</b> 71:17<br><b>shown</b> 101:18<br>103:25 110:16<br>110:18 114:16<br><b>side</b> 57:14,14<br><b>signal</b> 93:22<br>94:14 97:23<br>99:19 103:15<br>104:20 105:24<br>105:25 106:20<br>107:5,16 109:4<br>110:7 111:14<br>111:15,23<br><b>signals</b> 93:22<br>94:15 95:10,18<br>98:1 100:13<br>101:5 103:21<br>104:25 106:8<br>106:21 107:17<br>108:6 111:25<br><b>signature</b><br>113:19 114:14 | <b>signed</b> 115:13<br>116:18<br><b>significance</b><br>98:20 99:14<br><b>significant</b><br>58:12<br><b>signing</b> 114:19<br><b>silicon</b> 97:10<br><b>similar</b> 71:12<br>71:17,19<br>110:17<br><b>similarly</b> 53:6<br>103:16<br><b>simpler</b> 24:7<br><b>sincerely</b><br>114:21<br><b>single</b> 33:13<br>91:25 98:10,13<br>102:4 103:15<br><b>sir</b> 114:10<br><b>sitting</b> 82:24<br>89:25 91:4<br>92:24 93:10<br>99:21<br><b>six</b> 17:1,16<br>18:20 19:13,17<br>19:18 20:19,21<br>20:24 76:16<br><b>size</b> 38:25<br><b>sized</b> 58:9<br><b>sizes</b> 58:4<br><b>skill</b> 41:7 58:11<br>61:20 62:10,16<br>85:18 92:9<br>94:22 109:16 | <b>slightly</b> 11:1,3<br>40:25 47:17<br>57:19 59:19<br>60:11 65:6<br>74:20 95:2<br><b>slots</b> 90:8 94:10<br><b>small</b> 74:16<br><b>sock</b> 76:20<br><b>socket</b> 110:13<br>110:17<br><b>software</b> 64:21<br>64:22<br><b>solutions</b> 4:21<br>93:20 114:1<br>117:1<br><b>somebody</b> 32:9<br>41:2 78:19<br>80:17 85:20<br>96:25<br><b>someone's</b><br>49:11<br><b>someplace</b> 94:1<br><b>sorry</b> 7:13<br>16:12 24:19<br>28:22 29:13<br>38:2 48:3<br>52:11 61:11<br>72:23 74:6<br>84:22 87:1,4<br>88:13 90:21<br>93:25 94:14<br>103:20 107:13<br><b>sort</b> 22:17<br>30:23 76:15<br>93:19 104:3 | <b>sound</b> 8:3<br><b>sounds</b> 13:1<br>94:11<br><b>sources</b> 62:8<br><b>specific</b> 31:25<br>34:18 69:6<br>93:15<br><b>specifically</b><br>94:4 100:3<br><b>specification</b><br>9:19 10:6,12<br>10:13,15 55:16<br>88:1 97:4<br>109:15<br><b>spectrum</b> 33:14<br>33:19<br><b>squared</b> 48:22<br><b>standard</b> 38:25<br><b>start</b> 7:8 16:13<br>17:14 47:19<br>52:12 78:14<br>79:8 89:7,7<br><b>started</b> 21:8<br><b>starting</b> 94:3<br>110:12<br><b>starts</b> 50:5<br>55:17<br><b>state</b> 5:3,6 9:11<br>11:8 20:7<br>60:17 73:24<br>79:23 86:16<br>89:10 94:4<br>113:4 115:10<br>116:15 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>statement</b> 8:6<br>115:13,14<br>116:19,19<br><b>states</b> 1:1 4:15<br>79:19 81:25<br>110:13<br><b>stating</b> 48:19<br>60:19<br><b>stenographic...</b><br>1:24<br><b>step</b> 51:4,6,12<br>51:12,20,21,24<br>52:1,4,16,24,25<br>53:13,13,19,24<br>54:1<br><b>steps</b> 50:16,20<br>51:3 53:7,13<br><b>stop</b> 25:20 30:1<br><b>stopping</b> 78:7<br><b>store</b> 38:13,24<br><b>stored</b> 62:13<br><b>straightforward</b><br>87:11<br><b>street</b> 1:20 2:8<br>4:19<br><b>stress</b> 78:24<br>79:4,14 80:8<br>87:20<br><b>stride</b> 52:11,14<br>52:14,18<br><b>strides</b> 32:11<br><b>strike</b> 14:24<br>16:12 30:13<br>31:21 40:11<br>47:18 65:2 | 72:23 77:5<br>81:8 90:15<br>94:14 95:14<br>102:14<br><b>structure</b> 55:13<br>56:5<br><b>structures</b><br>77:10<br><b>subject</b> 79:14<br>79:24 87:11,16<br>87:20 88:8<br><b>submaximal</b><br>79:4,6,14,20,24<br>80:8,13,18,21<br>81:12,18,20<br>82:1,13,16,22<br>83:11,14,16,22<br>84:2,11,13,17<br>84:19 85:2,6,9<br>85:14,15,17,22<br>86:5,8<br><b>submitted</b> 6:8<br><b>submitting</b><br>6:11<br><b>subscribed</b><br>115:10 116:14<br>117:21<br><b>subsequent</b><br>10:24<br><b>substantially</b><br>73:6 74:15<br><b>substantive</b><br>22:18 25:23<br><b>successful</b><br>91:19 93:12 | 106:12 111:19<br>112:4<br><b>successive</b> 38:4<br>38:8<br><b>suggest</b> 38:3<br><b>suggestion</b><br>73:25 107:23<br><b>suggests</b> 82:1<br>83:10 84:17<br>85:6 107:19<br><b>suit</b> 38:14,18<br>38:18,24 39:1<br>39:2<br><b>suitable</b> 84:2<br><b>suite</b> 1:20<br>114:2<br><b>superior</b> 114:1<br><b>supplemental</b><br>6:8 7:10 39:9<br><b>supplies</b> 8:7<br><b>supported</b><br>26:15,16 45:6<br><b>supports</b> 46:20<br><b>sure</b> 9:7 29:14<br>29:19 33:6<br>34:23 40:6<br>56:9 75:13<br>77:3,20 88:6<br>89:19,24 99:13<br>105:5<br><b>suspect</b> 13:10<br><b>swear</b> 5:17<br><b>swisher</b> 2:11<br>3:4 5:9,9,23<br>6:20,23,24 | 9:24 11:21<br>12:18 13:5<br>14:24 15:1,19<br>16:9 17:11<br>19:4,11 20:5<br>21:1,6 22:10<br>25:11,19 26:5<br>26:17 28:5<br>29:5,16 30:8<br>31:16 32:16<br>33:20 34:22<br>35:11,15,17<br>37:1,8 38:10<br>38:22 40:5<br>41:10 42:4<br>44:14 45:8,16<br>46:21 47:3<br>48:14 49:17<br>50:1 51:1,18<br>52:21 56:7<br>57:23 58:7,17<br>61:23 63:1,9<br>63:21 65:1,13<br>66:23 69:5,23<br>71:20 72:20<br>73:13,20 74:19<br>76:4 78:6,8<br>81:2 82:17<br>83:2 84:5,24<br>86:12,24 88:20<br>89:2 90:14,24<br>91:7 92:15<br>93:2,14 95:1<br>96:5,15 98:3<br>98:15 100:8,22 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 101:10 102:8<br>103:17 104:7<br>104:14 105:8<br>105:18 106:5<br>106:15 107:11<br>108:1 109:2,20<br>110:10 111:3<br>111:11,21<br>112:7,16<br><b>switch</b> 35:18<br>50:2 58:23<br>59:2,10,13<br><b>switches</b> 59:4<br>61:15,18 62:1<br>70:10<br><b>sworn</b> 5:21<br>113:8 115:10<br>115:13 116:14<br>116:18 117:21<br><b>systems</b> 89:12<br>89:15 90:2 | 86:2,9 88:20<br>98:22 102:11<br>112:9<br><b>taken</b> 4:11<br>34:14 49:22<br>88:24 112:12<br><b>takes</b> 8:9 14:4<br>14:15 21:23<br>22:21,22,25<br>23:3,7,10,16<br>24:10,12,14,19<br>24:23 25:2<br>34:5,10<br><b>talk</b> 8:2 18:1<br>22:20 25:24<br>67:18 77:25<br><b>talking</b> 7:4,25<br>8:16 18:1 21:8<br>24:21 31:24<br>32:22,24 34:20<br>34:25 35:9<br>42:17 48:16<br>57:2 60:13<br>67:2,24 75:23<br>92:4,23 101:22<br>105:7<br><b>talks</b> 45:14<br>61:14 76:12<br>100:20,24<br><b>tall</b> 17:2,16<br>18:20 19:13,17<br>20:20<br><b>taught</b> 60:6<br>90:20 | <b>tdma</b> 89:11,14<br>89:23 90:2,9<br>90:19,23 94:9<br>94:22 96:2<br><b>teach</b> 38:3<br>90:22 93:19<br><b>teaches</b> 61:10<br>66:2 81:19,20<br>96:4<br><b>teaching</b> 55:2<br>63:24 74:14,15<br>81:12 103:6<br><b>teachings</b> 92:10<br>105:11 109:18<br><b>technique</b><br>89:17 90:3<br>92:20 104:19<br><b>techniques</b><br>90:17 91:2,12<br>93:1,7<br><b>tell</b> 18:6,9 81:7<br>88:10 97:10<br><b>telling</b> 84:1<br><b>tells</b> 44:18 87:3<br>87:13<br><b>ten</b> 35:15 78:6<br><b>term</b> 7:18,25,25<br>8:2,23 13:21<br>14:5 15:23<br>16:11,14 23:22<br>27:15,19 31:22<br>42:6,7 46:24<br>46:24 66:20<br>75:2 80:24<br>96:12 | <b>terms</b> 30:23,24<br>38:9 66:22<br>88:8<br><b>test</b> 37:23<br>78:17,24 79:4<br>79:14,20 80:6<br>80:8 81:12<br>82:1,2,13,15<br>83:11,23 84:3<br>84:14,17,18<br>85:6,7,22<br><b>tested</b> 86:6<br><b>testified</b> 5:21<br>85:1<br><b>testimony</b> 6:5<br>75:3 112:19<br>113:9,9 115:6<br>115:7 116:6,9<br>116:12<br><b>testing</b> 80:14<br><b>tests</b> 86:5<br><b>text</b> 21:20<br>54:24 64:14<br>67:12 68:1,13<br>69:11 106:24<br><b>thank</b> 5:16<br><b>thanks</b> 11:5<br><b>thing</b> 14:11<br>35:25 74:15<br>76:11 79:1<br>91:5 96:23<br>97:5<br><b>things</b> 9:9<br>12:15 14:4<br>22:11 34:10 |
| <b>t</b>                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>t</b> 65:21,21<br>113:1,1<br><b>table</b> 7:12<br>50:15 53:12<br>55:20<br><b>tailor</b> 38:17<br><b>take</b> 4:8 7:13<br>7:13 14:5 34:6<br>35:1,7,10<br>38:17 42:14<br>45:20 69:7<br>78:4,18 80:12<br>80:17 85:19,24                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 35:12 38:16<br>46:13 51:19<br>55:4<br><b>think</b> 6:13<br>17:18 18:5,5<br>18:23 20:9<br>21:18 22:5<br>27:5 28:19<br>29:21 31:14<br>36:13,15 37:11<br>39:7 41:11<br>44:19 45:1<br>47:17 49:17<br>55:6 58:13,15<br>59:18 60:10<br>67:11,11,16,20<br>73:2 74:6 77:9<br>86:3 92:14<br>93:9,16 95:2<br>95:21 96:22<br>104:12 107:13<br><b>third</b> 64:16<br><b>thirty</b> 114:18<br><b>three</b> 2:12 20:4<br>99:15 107:1<br>112:20<br><b>thumb</b> 55:8<br>56:18<br><b>time</b> 4:6 5:3<br>16:4 25:4<br>26:20 44:25<br>49:18,20 73:9<br>73:9 76:14<br>78:4 79:3<br>80:20 88:22 | 89:10,18,21<br>90:2,6,8,11,22<br>91:19,23 92:2<br>92:13,25 93:13<br>94:10 106:7<br>107:20 111:23<br>112:8,11,18<br><b>timer</b> 76:12,15<br>76:19,20,23,24<br><b>timing</b> 76:17<br>77:1<br><b>title</b> 24:1 26:11<br>35:25 54:17<br><b>titled</b> 6:9 57:4<br><b>today</b> 6:5 27:7<br><b>today's</b> 112:19<br><b>together</b> 78:3<br><b>took</b> 32:11<br>38:14<br><b>top</b> 55:25<br><b>total</b> 30:4<br>112:20<br><b>touched</b> 35:21<br><b>towards</b> 92:9<br>93:5<br><b>toyota</b> 73:15,15<br><b>trademark</b> 1:1<br>4:15<br><b>train</b> 88:8<br><b>training</b> 62:11<br>69:12,12 70:2<br>70:2 71:8,9<br>72:25 73:1,5,6<br>73:10 87:11,16<br>87:21 96:25 | <b>transcribed</b><br>115:7<br><b>transcript</b><br>113:8 114:11<br>114:12 115:5<br>115:12 116:5<br>116:11,17<br><b>transmitter</b><br>91:15,21<br><b>transmitters</b><br>94:6,8 96:2<br>106:14<br><b>trial</b> 1:2 4:14<br><b>trouble</b> 82:19<br><b>true</b> 94:8 113:9<br><b>truthful</b> 6:5<br><b>try</b> 9:8 15:4<br>17:18<br><b>trying</b> 11:14<br>13:8,11 23:2<br>27:6,13 33:4<br>44:21 45:4,5<br>56:8 69:24<br>81:17 83:7,11<br>83:19<br><b>turn</b> 9:25 37:15<br>39:8 42:18<br>54:15 58:21<br>59:8 65:25<br>79:17 86:14<br>98:5 100:9<br>103:12<br><b>turning</b> 21:7<br><b>two</b> 12:12 18:3<br>18:14,16 19:1 | 20:10 24:2,24<br>31:4,4 38:7,8<br>39:22 41:22<br>53:12 54:8<br>57:12 58:9,11<br>58:18 59:4<br>66:13,16 67:1<br>67:24 69:10,16<br>70:13,25 71:11<br>71:23 73:25<br>74:17 75:7,19<br>75:22 76:1,9<br>77:1,8,17,25<br>78:2 81:18,21<br>81:22 89:20<br>96:1 98:17<br>99:1,3,11,15<br>104:20,25<br>107:4 111:15<br>111:25<br><b>type</b> 61:19,22<br>62:14,24 64:22<br>83:13 90:11<br><b>types</b> 81:21,22<br><b>typically</b> 105:1<br><b>u</b><br><b>u</b> 65:21 78:11<br><b>u.s.</b> 7:3<br><b>uh</b> 79:12 83:18<br><b>unclear</b> 14:16<br><b>under</b> 6:1 60:1<br><b>underlying</b><br>69:19<br><b>understand</b> 6:1<br>6:7 7:4 8:1,16 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9:5 14:13 19:5<br>21:24 22:1<br>23:1 25:21<br>41:2,9 47:6<br>50:24 51:20<br>67:2 68:4,22<br>69:24 72:14,19<br>75:5 83:8,12<br>83:19 86:18<br>94:19,21 96:11<br>103:1 110:21<br><b>understandable</b><br>24:8<br><b>understanding</b><br>23:21 26:23<br>36:21 67:8<br>82:19 91:10<br><b>understood</b><br>94:25 105:5<br><b>unit</b> 4:10 49:21<br>49:24 88:23<br>89:1<br><b>united</b> 1:1 4:15<br><b>units</b> 112:20<br><b>unknown</b> 24:9<br><b>update</b> 71:9<br><b>updating</b> 73:8<br><b>uptake</b> 80:1<br>87:10<br><b>usa</b> 1:8 4:13<br><b>use</b> 6:22 13:7,8<br>22:22 24:14<br>25:13 29:18<br>39:25 45:6<br>59:20,25 61:5 | 62:12 63:24<br>64:2 66:22<br>77:21 90:16<br>91:1,11,22<br>92:19 93:7<br>99:2 104:9,18<br>105:23 106:7<br>106:19 107:15<br>107:24 110:22<br>111:5,13,23<br><b>used</b> 12:12 24:5<br>27:19 32:19<br>40:23 41:5<br>43:14 44:2<br>66:21 72:10<br>82:16 84:3<br>85:13 89:11,15<br>90:2,9 94:10<br>112:20<br><b>user</b> 7:20 11:3<br>14:1,7 16:16<br>16:22,24 23:23<br>23:25 26:13<br>27:15 29:3,8<br>29:11 30:4,11<br>30:22 31:19,23<br>31:24 32:23<br>34:18,18 35:4<br>35:5,8 37:25<br>38:4,6 39:18<br>40:13,20 41:15<br>44:4 47:8<br>50:21 51:13,25<br>52:5,25 53:18<br>53:24 60:19 | 61:4,11,14,18<br>61:22,25 62:14<br>64:11,15 65:2<br>65:3,7,17 71:6<br>72:5 83:5<br>85:24 86:2,3<br><b>user's</b> 8:9,25<br>11:2,10,11,16<br>12:6,6 15:22<br>23:9,17,25<br>24:5 25:13<br>26:14,24 27:16<br>28:7 32:17<br>33:1 34:3,8<br>35:9 36:25<br>40:8,21,22<br>41:17,17 62:23<br><b>users</b> 31:4<br><b>uses</b> 27:25<br>37:19 48:5<br>61:18 64:8<br>88:7 104:12<br><b>using</b> 12:2<br>14:12 29:14<br>34:21 38:9<br>46:13 52:1<br>60:20 61:15<br>62:10 64:4,15<br>71:19 80:24<br>91:18 103:23<br>105:10<br><b>v</b><br><b>v</b> 114:6 115:3<br>116:3 | <b>value</b> 33:15<br>62:22 64:1<br><b>values</b> 29:4,25<br>30:11 31:5,6<br>32:9<br><b>variations</b> 88:2<br><b>vast</b> 49:6<br><b>vector</b> 29:15,22<br>29:24,25 30:3<br>30:6,11,12<br>32:9<br><b>vectors</b> 31:6<br><b>veritext</b> 4:21,23<br>112:21 114:1,7<br>117:1<br><b>veritext.com.</b><br>114:17<br><b>versa</b> 17:25<br>71:15<br><b>version</b> 41:1<br><b>versus</b> 4:13<br>13:16<br><b>vice</b> 17:25<br>71:14<br><b>video</b> 1:14 4:7<br>4:10<br><b>videographer</b><br>2:15 4:1,22<br>5:16 49:19,23<br>88:21,25<br>112:10,13,17<br><b>view</b> 40:4 80:6<br>87:22<br><b>viewpoint</b><br>41:25 45:3 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>vo2max</b> 54:25<br>59:21 60:2,6<br>60:14,20 61:6<br>61:7,15,19,25<br>62:8,11 63:5,8<br>63:16,20,23<br>64:2,11,15,19<br>64:21,24 65:9<br>65:17 80:1<br>86:17,19 87:10<br>88:2,7,16,19<br>96:25<br><b>vs</b> 1:10                                                                                                                                                    | 101:20,22<br>108:2<br><b>watch</b> 98:10,13<br>98:17 99:5<br><b>wave</b> 97:17<br><b>way</b> 25:4 36:6<br>62:7 74:1,7<br>77:4 83:4<br>94:24 96:3<br>98:1,20 99:8<br>105:2 106:3,13<br>107:3 111:18<br>112:3 113:13<br><b>ways</b> 64:3,4,19<br>68:20<br><b>we've</b> 35:21<br>42:2,17<br><b>weight</b> 47:6,11<br>47:13,20,22,24<br>48:6,8,9,12,21<br>48:22 49:3,5,8<br>49:11,14 52:11<br>52:14,15,18<br><b>weights</b> 32:10<br><b>west</b> 1:20 2:8<br>4:18<br><b>wheel</b> 102:23<br><b>whereof</b> 113:16<br><b>whispering</b> 4:4<br><b>wilshire</b> 2:5<br><b>wire</b> 94:5 98:10<br>102:15,16,17<br>102:22 105:1<br><b>wired</b> 78:3<br>89:12,15 92:3 | 93:22 94:9<br>99:19,24 100:1<br>107:8 109:4<br>110:6<br><b>wireless</b> 89:12<br>89:15 90:2<br>92:1,3 100:1<br><b>wires</b> 98:17<br>99:11,15 103:7<br>103:11 106:25<br>107:2 110:22<br>111:5<br><b>wishes</b> 26:4<br><b>witness</b> 3:2<br>5:18,20 9:23<br>11:19 12:14<br>13:19 15:10,25<br>17:5 18:23<br>19:10,21 20:23<br>21:5,18 24:17<br>25:17 26:3,6<br>28:4 29:2,13<br>30:6 31:2 32:8<br>33:12 34:20<br>35:7 36:23<br>37:6,22 38:21<br>39:21 40:9,17<br>41:25 43:21<br>44:25 45:14<br>46:19 47:2<br>48:12 49:14<br>50:24 51:17<br>52:9 56:3<br>57:18 58:6,15<br>61:10 62:21 | 63:7,18 64:14<br>65:11 66:19<br>69:1,18 71:3<br>72:17 73:4,18<br>74:13 76:3<br>77:20 80:23<br>82:15,24 83:25<br>84:22 85:12<br>86:22 90:5,19<br>91:4,14 92:22<br>93:9 94:19<br>95:21 96:10<br>97:25 98:12<br>99:21 100:16<br>101:7,25 103:6<br>103:25 104:12<br>104:23 105:13<br>106:2,11,23<br>107:19 108:16<br>109:7 110:9<br>111:1,8,17<br>112:2 113:6,10<br>113:16 114:8<br>114:11 115:1,4<br>115:11 116:1,4<br>116:15<br><b>witness'</b> 114:14<br><b>word</b> 12:2 13:7<br>13:9 27:22,25<br>39:17 44:17<br>70:22 102:1<br><b>wording</b> 40:23<br><b>words</b> 14:13<br>23:2 24:2 26:9<br>29:14,15 45:6 |
| <b>w</b>                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>wafers</b> 97:11<br><b>waist</b> 38:16<br><b>waived</b> 114:19<br><b>want</b> 9:9,17<br>18:8 20:7<br>22:17 26:5<br>28:22 29:14,23<br>34:23 39:5<br>49:9 50:2 55:3<br>56:15 61:3<br>63:15 73:21<br>93:15,25 102:9<br><b>wanted</b> 11:22<br>14:9,11 21:12<br>30:10 33:21<br>35:19 39:16<br>43:8 50:19<br>53:6,16 55:20<br>57:1 67:23<br>68:10 70:22<br>78:12,21 89:3 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

|                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>work</b> 71:14<br>74:17 94:24<br>108:12,23<br><b>worries</b> 100:4<br><b>wristwatch</b><br>97:18 98:7<br>99:12<br><b>writing</b> 41:4<br>80:23<br><b>written</b> 36:8<br>41:1 62:7<br>86:11<br><b>wrong</b> 56:21<br>80:20 81:1<br><b>wrote</b> 80:9 |
| <b>x</b>                                                                                                                                                                                                                                                |
| <b>x</b> 3:1                                                                                                                                                                                                                                            |
| <b>y</b>                                                                                                                                                                                                                                                |
| <b>yeah</b> 35:7,16<br>51:2 68:22<br>69:6 95:2<br>96:16 99:10<br>104:15<br><b>york</b> 2:8,8                                                                                                                                                            |
| <b>z</b>                                                                                                                                                                                                                                                |
| <b>zones</b> 66:3                                                                                                                                                                                                                                       |