

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LULULEMON ATHLETICA CANADA INC.  
and LULULEMON USA INC.

Petitioners,

v.

NIKE, INC.,

Patent Owner.

CASE NO.  
IPR2023-00189

REMOTE VIDEO DEPOSITION OF DR. KEVIN LYNCH

JULY 27, 2023

9:04 a.m.

Los Angeles, California

Reported Remotely By:  
Brandi R. Celestino  
CSR No. 13640

lululemon athletica inc. et al. v. Nike, Inc.  
IPR2023-00189  
Patent No. 9,278,256  
Ex. 2006

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7 NIKE, INC., )

8 Patent Owner. )

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14 VIDEO DEPOSITION OF DR. KEVIN LYNCH, TAKEN ON

15 BEHALF OF THE PATENT OWNER NIKE, AT 9:04 A.M.,

16 THURSDAY, JULY 27, 2023, VIA REMOTE VIDEOCONFERENCE,

17 BEFORE BRANDI R. CELESTINO, CSR NO. 13640.

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INDEX TO EXAMINATION

WITNESS: DR. KEVIN LYNCH

EXAMINATION

PAGE

By Ms. Staubach

7

WITNESS INSTRUCTED NOT TO ANSWER

PAGE

LINE

9

18

9

25

23

21

45

10

76

8

78

13

117

2

INDEX TO EXHIBITS

DR. KEVIN LYNCH

Lululemon, Inc. v. Nike, Inc.

Thursday, July 27, 2023

EXHIBITS

MARKED

Exhibit 1	United States Patent 256	25
Exhibit 2	United States Patent 479	55
Exhibit 3	United States Patent 060	95

LOS ANGELES, CALIFORNIA

THURSDAY, JULY 27, 2023, 9:04 A.M.

THE VIDEOGRAPHER: Good morning. We're going on the record. The time is approximately 9:04 a.m. in the Pacific time frame.

This is the video deposition of Dr. Kevin Lynch taken by the patent owner in the matter of Lululemon Athletica Canada Inc. et al. versus Nike Inc. filed in the United States Patent and Trademark Office. Case number is IPR2023-00189. This deposition is being held at 707 Wilshire Boulevard, Suite 6000, Los Angeles, California 90017.

My name is Peter DeFrank. I'm a notary public and a legal video specialist. The court reporter is Brandi Celestino. We're representing Kusar Lexitas located in Long Beach, California. Please note that audio and video recording will continue to take place unless all parties agree to go off the record.

Starting with the noticing attorney, counsels and all present will now state their appearances and affiliations for the record, after which the court reporter will swear in the witness.

MS. STAUBACH: I'm Lindsey Staubach of Arnold

1 & Porter on behalf of patent owner Nike, and with me  
2 is cocounsel Aaron Bowling.

3 MR. McCLELLLEN: My name is Forrest McClellen.  
4 I'm here with my colleague Mehran Arjomand, both from  
5 Morrison & Foerster. We represent petitioner  
6 Lululemon and also for the purposes of this deposition  
7 Dr. Lynch.

8 THE VIDEOGRAPHER: Thank you.

9 At this time will the court reporter please  
10 swear in the witness.

11  
12 DR. KEVIN LYNCH,  
13 having been first duly sworn, was examined and  
14 testified as follows:

15  
16 EXAMINATION

17 BY MS. STAUBACH:

18 Q Thank you for joining us today, Dr. Lynch.  
19 Can you first please state and spell your  
20 name for the record.

21 A Kevin Lynch, K-e-v-i-n, L-y-n-c-h.

22 Q Thank you.

23 I'm going to be asking you a series of  
24 questions today, so I want to go over a few ground  
25 rules first.

1           If you don't understand a question that I  
2       asked, please let me know and I'm happy to repeat or  
3       rephrase. If you don't hear me, also let me know, and  
4       I'm happy to repeat myself. But I will assume that if  
5       you answer me, you did understand my question, and you  
6       answered it to the best of your ability.

7           To make a clear record, please do your best  
8       to answer questions verbally, so no head nodding, if  
9       you can help it. And if you need a break at any  
10      point, please just let us know; otherwise we'll plan  
11      to take regular breaks.

12           And you understand that you're here today to  
13      give deposition testimony in this IPR?

14       A     Yes.

15       Q     Is there any reason today that you can't give  
16      accurate or truthful deposition testimony?

17       A     No.

18       Q     Okay.

19           When were you retained for this case?

20       A     In 2022. I don't remember the exact month.

21       Q     Do you have an estimation?

22       A     I would be speculating.

23       Q     You can't say whether the first half of the  
24      year or the second half?

25       A     I don't know. Sitting here right now, I



1 don't know.

2 Q Okay.

3 Do you remember who reached out to you?

4 A Forrest McClellen, I believe. Most of my  
5 communication was with Forrest.

6 Q Okay.

7 And what was the reason you were told you  
8 were being retained?

9 A First we had -- well, first there was an  
10 email communication --

11 MR. McCLELLEN: Okay. Hold on a second.  
12 Objection. Privilege.

13 Dr. Lynch, you can answer to the extent that  
14 you can provide testimony about -- actually, I'm  
15 sorry. I think this question calls for privileged  
16 information.

17 Dr. Lynch, I instruct you not to answer.

18 (Witness instructed not to answer.)

19 THE WITNESS: Okay.

20 BY MS. STAUBACH:

21 Q Well, I'm asking about before you were  
22 actually retained. What was the reason you were told  
23 you were going to be retained?

24 MR. McCLELLEN: Same objection.

25 (Witness instructed not to answer.)

1 BY MS. STAUBACH:

2 Q How many conversations did you have with  
3 Forrest or any other counsel before you were retained?

4 A I think one, possibly two.

5 Q Are you currently being retained by Lululemon  
6 for any other matters?

7 A Yes. There's one other IPR matter.

8 Q And so you're working on another patent with  
9 Lululemon?

10 A Not currently, but I did spend time on that  
11 patent.

12 Q Which patent is that? Do you know?

13 A I would be speculating. I don't know the  
14 number offhand.

15 Q Do you remember the subject matter that it  
16 relates to?

17 A I haven't looked at that in quite some time,  
18 so I know it has to do with exercise equipment, but  
19 I...

20 Q Is this your first deposition?

21 A No.

22 Q How many times have you been deposed  
23 before?

24 A Twice.

25 Q And when was the last time?

1 A 2020.

2 Q What case was that for?

3 A Powerbond versus Wahoo Fitness, Foundation  
4 Fitness, and others.

5 Q Which side were you on?

6 A The plaintiffs.

7 Q So petitioner -- wait. Was that a district  
8 court case, or was that an IPR?

9 A It was not an IPR.

10 Q Okay.

11 Was that a patent case?

12 A Yes.

13 Q And what was the actual technological subject  
14 matter there?

15 A So, it's been a few years since I looked at  
16 that in any detail, but the subject matter was methods  
17 for making an exercise bicycle feel like it's being  
18 ridden in an actual outdoor environment with hills,  
19 et cetera. So haptic feedback to the user.

20 Q And you said you were deposed once before  
21 that.

22 What case was that for?

23 A That was -- so I don't remember the order of  
24 the parties involved, but it was scientific games  
25 and -- I've actually forgotten the name -- the various

1 names of the other side.

2 Q Was that also a patent case?

3 A Yes.

4 Q Have you ever been an expert in a case that  
5 wasn't dealing with patents?

6 A Yes, but it's been quite a while.

7 Q And what was that case about?

8 A There was a case regarding tariff  
9 classifications for technology for imported goods, and  
10 that was maybe 20 years ago.

11 Q And for what expertise were you retained in  
12 that case?

13 A For my expertise in robotics and  
14 understanding of the technology that was being  
15 considered for tariff categorizations.

16 Q What did you do to prepare for your  
17 deposition today?

18 A I reread my own declaration, as well as the  
19 other documents that I refer to in my declaration,  
20 other documents, and I met with Forrest McClellan and  
21 Mehran Arjomand.

22 Q So you said documents that you refer to in  
23 your declaration.

24 Do you mean, like, the prior art in this  
25 case?

1           A     So in my declaration, I indicate --  
2                     (Telephonic interruption.)

3           THE WITNESS:   Sorry that's me.

4           In my declaration, I indicate which documents  
5     I referred to in writing my declaration, and so those  
6     are the ones that I mean.

7     BY MS. STAUBACH:

8           Q     So you -- is this a copy of your  
9     declaration?

10          A     Yes.   I have it here in front of me.

11          Q     Did you bring any other documents in with  
12     you?

13          A     No.   This was given to me by  
14     Forrest McClellen.   I didn't bring anything with  
15     myself -- for myself.

16          Q     Are there any annotations in there or  
17     highlighting or anything of that sort?

18          A     This was just given to me, but I don't see  
19     anything.

20                 MR. McCLELLEN:   It's a clean copy of his  
21     declaration.

22                 MS. STAUBACH:   Thank you.

23     BY MS. STAUBACH:

24          Q     So in your meetings to prepare for the  
25     deposition -- when were those meetings?

1           A     Over the past few days.

2                     So I think the first meeting -- over the past  
3     few days.  Maybe the first meeting was Saturday, a few  
4     days ago.

5           Q     How many days did you meet?

6           A     I -- we met by videoconferencing two or three  
7     times, and then I flew to L.A., and I've been here  
8     since Tuesday morning.  This is Thursday.

9           Q     So how many hours total would you say you  
10    spent preparing for this deposition?

11          A     A lot of it was reading the documents again,  
12    and so it's definitely been more than 10, definitely  
13    less than 100.  So double digits, but I don't have a  
14    more detailed accounting.

15          Q     Who was present in your meetings to  
16    prepare?

17          A     Forrest McClellan and Mehran Arjomand.

18          Q     Anyone else?

19          A     Alex Yap stopped by for 10 minutes or so.

20          Q     You said that you looked at your declaration,  
21    you looked at other documents that you list in your  
22    declaration, and then you said the third bucket of  
23    documents, just other documents.

24                     What were those?

25          A     The primary were the Court's decision on the

1 petition, and the declaration of Dr. Tony Bulgar.

2 Now, I have not heard her name pronounced  
3 before, so is that a correct pronunciation?

4 Q I say Bulgar, and I hope I'm right.

5 A Dr. Tony Bulgar. So I'll say Tony Bulgar.  
6 So those two documents.

7 Q Okay.

8 So you've also reviewed the petition in this  
9 case; right?

10 A Actually, I have not.

11 Q You've never read the petition?

12 A I've seen it, but I've never read it.

13 Q In what context did you see it?

14 A It was a part of a package of documents that  
15 was given to me, but I was told that I didn't need to  
16 read it.

17 MR. McCLELLLEN: Objection. Privilege.

18 THE WITNESS: I'm sorry.

19 MR. McCLELLLEN: Dr. Lynch, you can tell  
20 Lindsey that you received the petition. You can talk  
21 about whether you reviewed it, but don't describe what  
22 we discussed about it.

23 So go ahead with that instruction.

24 THE WITNESS: I did not read the petition or  
25 the patent owner's response.

1 BY MS. STAUBACH:

2 Q When did you receive the petition?

3 A At least last week. If I received it before  
4 then, I'm not recalling it.

5 Q So you didn't read it, but you looked at it?

6 A I looked at the front page. I was aware of  
7 it.

8 Q And you said you did review the institution  
9 decision?

10 A Yes.

11 Q Have you reviewed all of the prior art in  
12 this case? Let me rephrase.

13 Have you ever referred to a reference called  
14 Tagliabue?

15 A No.

16 Q Arrasvuori?

17 A Yes.

18 Q Watterson?

19 A Yes.

20 Q Ellis?

21 A Yes.

22 Q With regard to those last three references --  
23 so Arrasvuori, Watterson, and Ellis -- would you say  
24 that you are very familiar with those references at  
25 this point?



1           A     I focused on pieces of those references. So  
2 I'm familiar with all of it, but only very familiar  
3 with bits of it.

4           Q     All right.

5                     I want to turn to your CV, if you would. I'm  
6 just going to walk through some of your background and  
7 qualifications.

8                     You're a professor of mechanical engineering  
9 at Northwestern University; right?

10          A     That's correct.

11          Q     How long have you held that position?

12          A     I started at Northwestern in 1997, and then  
13 progressed through the ranks of assistant, associate  
14 to full professor, but I've been at Northwestern for  
15 26 years.

16          Q     What did you do before that?

17          A     Immediately before that, I was a post-doc at  
18 a government research lab in Japan. Before that, I  
19 was received my Ph.D. in robotics at Carnegie Melon,  
20 and before that, I got my undergraduate degree in  
21 electrical engineering from Princeton.

22                     And, of course, other things are mixed in  
23 there too.

24          Q     Are you still actively teaching?

25          A     Yes.

1 Q What courses do you teach currently?

2 A I teach courses in robotics and systems  
3 modeling. So dynamics and systems modeling.

4 Q Do you do research as a part of your  
5 position?

6 A Yes.

7 Q So you do more research than teaching?

8 A Much more.

9 Q Okay.

10 What kind of research do you focus on?

11 A So my research in robotics spans several  
12 fields, but examples include network robotic systems,  
13 swarm robots, so that refers to multiple robots that  
14 cooperate and collaborate with each other by  
15 communicating over a network. So that's swarm  
16 robotics.

17 I also work on human robot interaction. So  
18 this is where humans and robots physically couple with  
19 each other to perform tasks. So we have to sense  
20 human intentions. We have to apply sensors to the  
21 humans, sensors to the robots, and design robots and  
22 control systems that allow humans and robots to work  
23 safely and productively together.

24 I also do research in robotic locomotion.

25 COURT REPORTER: Say that again.

1 THE WITNESS: Research in robotic locomotion,  
2 which refers to legged robots and how they can walk or  
3 run over uneven or soft terrain.

4 I also do research in robot manipulation, and  
5 this refers to how robots can use hands or other end  
6 effectors to usefully manipulate the world. Those are  
7 examples. I work on other things also.

8 BY MS. STAUBACH:

9 Q And you're currently the director for the  
10 Center for Robotics and Biosystems; right?

11 A At Northwestern, that's correct.

12 Q What are biosystems?

13 A Biosystems for us means technological or  
14 artificial systems interfacing with biological  
15 systems.

16 So for the examples that I gave you, human  
17 robot systems would be an example; haptic interfaces;  
18 understanding how animal control systems work and  
19 interrogating them using technological tools. So  
20 basically anything where a biological system and a  
21 technological system, usually something to do with  
22 robots, interface.

23 Q So can you tell me what you mean by measuring  
24 human intentions?

25 A Yes.

1           So when a human is interacting with the  
2 robot, to make that interaction safe, it's important  
3 for us to be able to understand what the human's  
4 objectives are because safety is obviously the highest  
5 priority, and then functionality comes after that.

6           In addition to those kinds of human robot  
7 systems, we also use robots to understand the human  
8 motor control system. And so for all of these, we  
9 need sensors to understand what the human is doing.  
10 As one example, we're working on lower body  
11 exoskeletons, so these are robots that you wear on  
12 your legs and help you to walk, perhaps if you're  
13 recovering from stroke or other injury.

14           So one thing we might do there is have the  
15 human walk on a conveyor belt that's implemented with  
16 force plates so we can understand the forces they are  
17 applying. We might have EMG sensors on their muscles  
18 so that we can understand how activated their muscles  
19 are. We might have accelerometers to detect motion.  
20 We might have motion capture or tracking systems,  
21 usually cameras that are arrayed around the subject  
22 watching what the subject is doing. We might use  
23 inertial measurement units, often shortened IMUs, and  
24 then various other sensors that will help us  
25 understand what the human is doing and what they are

1     trying to do.

2           Q     Do you have any experience with measuring  
3     human fitness data?

4           A     My work is not towards -- generally towards  
5     human -- so -- so when we do studies of human fitness,  
6     we're normally looking at people who've suffered a  
7     stroke or a spinal cord injury, and so we're  
8     evaluating their progress under those circumstances,  
9     or if we're talking about a human walking in an  
10    exoskeleton, we're evaluating their motor learning as  
11    they interact with the system.

12                   But we're not -- usually or ever -- working  
13    with high performance athletes to understand their  
14    performance. Not in my research anyway.

15          Q     So your particular research is a little bit  
16    different than measuring users of some kind of network  
17    system or measuring system that are -- that's  
18    measuring, like, how fast humans are going in a race,  
19    say?

20          A     We do research on competitive situations,  
21    where two people are attached to robots that are then  
22    virtually coupled with each other, and the two humans  
23    compete with each other on playing various games on a  
24    video screen with their interaction with robots.

25                   None of those have been a running race, for

1 example.

2 Q Would you say that your particular experience  
3 is more hardware-based or software-based?

4 MR. McCLELLEN: Objection. Form.

5 THE WITNESS: As a roboticist, we do  
6 everything.

7 BY MS. STAUBACH:

8 Q And I think on page 15 of your CV -- let's  
9 see -- at the bottom there, it lists -- and onto the  
10 next page -- three patents on which you're an  
11 inventor.

12 A Yes.

13 Q Did you have an active role in procuring  
14 those patents?

15 A Yes.

16 Q Were you involved in the prosecution before  
17 the USPTO?

18 MR. McCLELLEN: Objection. Form.

19 THE WITNESS: So these patents are issued to  
20 Northwestern University because they are based on  
21 research that I did at Northwestern. So we worked  
22 with Northwestern lawyers, and the lawyers for the  
23 most part are interfacing with the patent office,  
24 although I have been involved in phone calls with the  
25 patent examiner with a lawyer present.

1 BY MS. STAUBACH:

2 Q So you've been in interviews with the patent  
3 examiner?

4 A Yes.

5 Q And would you say you learned a lot about the  
6 patenting process?

7 MR. McCLELLEN: Objection. Form.

8 THE WITNESS: By going through these patent  
9 processes, yes, I learned a lot.

10 BY MS. STAUBACH:

11 Q All right.

12 So you've got your declaration there.

13 Who wrote that declaration?

14 A This was a joint effort between me and  
15 Forrest or -- I think Forrest here at Morrison  
16 Foerster.

17 Q So which portions did you write?

18 MR. McCLELLEN: Objection. Calls for work  
19 product and privilege.

20 Instruct the witness not to answer.

21 (Witness instructed not to answer.)

22 BY MS. STAUBACH:

23 Q So you said it was a collaborative process,  
24 so some combination of you and counsel drafted this.

25 Would you agree with that?

1           A     Everything in here I signed my name to, so  
2 everything is mine.

3           Q     At the time that the declaration was filed,  
4 did you agree with all of your opinions in it?

5           A     Yes.

6           Q     Do you still?

7           A     There are a few inconsequential typos that I  
8 noticed upon rereading in the past week, but nothing  
9 of substance.

10          Q     Would you like to make any corrections on the  
11 record?

12          A     Sure.

13          Q     You want to point me to those.

14          A     So paragraph 87 refers to -- at the last  
15 sentence refers to 272 A to 272 N, but those should be  
16 252 A to 252 N as shown on -- at paragraph 84, the  
17 figure at paragraph 84.

18          Q     Anything else?

19          A     Repetitions of that mistake a few times. So  
20 paragraph 88 has it right in the next sentence, and I  
21 probably will not be able to be exhaustive now, but I  
22 believe it's confined to the next several paragraphs,  
23 but it does recur at least a couple of more times.

24          Q     But other than typographical errors, you  
25 stick by your opinions in the declaration?



1 A Yes.

2 Q How many hours would you say you spent  
3 putting this declaration together?

4 A Double digits, not triple.

5 Q Close to 100?

6 A I don't know, sitting here right now.

7 Q In the declaration, you say you were  
8 compensated at your standard consulting rate. That's  
9 paragraph 3.

10 What is that rate?

11 A \$400 an hour.

12 Q Is there a reason you didn't put it in here?

13 A No.

14 Q What percentage of your annual income would  
15 you say comes from your expert consultant work?

16 A It varies wildly. Close to zero some years,  
17 and possibly close to a third other years.

18 Q All right.

19 I'm going to hand you the 256 patent, which  
20 is the challenge patent.

21 MS. STAUBACH: We can mark that as Exhibit 1.

22 (Exhibit 1 marked.)

23 THE WITNESS: This is also marked  
24 Exhibit 1001 at the bottom.

25 BY MS. STAUBACH:

1 Q It is Exhibit 1001 from this IPR proceeding.  
2 Will you understand if I refer to this as the  
3 256 patent today?

4 A Yes.

5 Q Have you read this patent?

6 A Yes.

7 Q How many times?

8 A I've read portions of it several times and  
9 portions perhaps once.

10 Q When's the last time you reviewed this  
11 patent?

12 A I reviewed portions of it yesterday.

13 Q Have you reviewed the claims?

14 A Yes.

15 Q Have you reviewed the claims in their  
16 entirety?

17 A I have not provided, nor was I asked to  
18 provide, an analysis of the claims in their entirety,  
19 but I did review the claims in their entirety.

20 Q So in forming your opinions in your  
21 declaration, you didn't consider the claims in their  
22 entirety?

23 A In my declaration, I was not asked to go  
24 element by element through the claims, but rather  
25 provide my opinions on certain aspects of the

1 technologies in this, as well as the other references.

2 Q Did you not think it was important to analyze  
3 the limitations of the claims?

4 MR. McCLELLEN: Objection. Form.

5 THE WITNESS: I'll refer you to paragraph 15  
6 of my declaration. It says, "I am not a lawyer, and I  
7 will not provide any legal opinions; rather I have  
8 been asked to provide any technical opinions based on  
9 a person of ordinary skill in the art would have  
10 understood various references before the 256 patent's  
11 March 3, 2008, priority date. And although I am not a  
12 lawyer, I have been advised to apply certain legal  
13 standards in forming my opinion," and then there's  
14 listing of some legal standards.

15 I was not asked to perform a comprehensive  
16 analysis of any one of all -- any one of the claims,  
17 but rather to look at certain aspects of the  
18 technology.

19 BY MS. STAUBACH:

20 Q My question was a little bit different than  
21 that.

22 Did you think it was important to analyze the  
23 limitations of the claims?

24 MR. McCLELLEN: Objection. Form.

25 THE WITNESS: My job here was not to be a

1 lawyer, but rather to review the technology, given  
2 what I know about it and what a person of ordinary  
3 skill in the art would know about it. So I was not  
4 asked to do, for instance, an invalidity analysis that  
5 was comprehensive.

6 BY MS. STAUBACH:

7 Q So you've been an expert in two patent -- at  
8 least two patent cases before; is that right?

9 A Yes.

10 Q Have you worked on invalidity topics in those  
11 cases?

12 A Yes.

13 Q In those cases, did you provide opinions  
14 based on claim limitations?

15 A Yes.

16 Q And if you provided those opinions before,  
17 why didn't you provide them this time?

18 A Before I was asked for that. This time I was  
19 not asked for that.

20 Q So you did not analyze the claims as a  
21 whole?

22 MR. McCLELLLEN: Objection. Form.

23 THE WITNESS: I did not perform a  
24 comprehensive analysis of the claims element by  
25 element.

1 BY MS. STAUBACH:

2 Q But you've read the claims?

3 A Yes.

4 Q You're a skilled artisan in this field?

5 A Yes.

6 Q And do you have some understanding of what  
7 the claims mean?

8 A I have not performed a claim construction on  
9 all the terms, but I have a general understanding of  
10 what they could mean.

11 Q All right.

12 Let's look at Claim 1.

13 I want to focus on the last limitation, but  
14 in order to get there, I just want you to read through  
15 the entire claim. So if you want to take a moment to  
16 do that, you can let me know when you're done.

17 A I'm done.

18 Q You've read the entire Claim 1?

19 A Yes.

20 Q Okay.

21 So that last limitation, I'll just repeat,  
22 says, "Continuously generate and simultaneously  
23 communicate in realtime to the first user at the first  
24 location and the second user at the second location  
25 and interface indicating whether the challenge has

1     been met."

2             Did I read that correctly?

3     A     Yes.

4     Q     And did you consider this claim limitation in  
5     rendering your opinions?

6     A     In my declaration, I referred to individual  
7     terms in this claim limitation.

8     Q     So you picked out specific words from the  
9     last claim limitation that I just read?

10    A     Well, I was asked to consider this claim  
11    limitation generally in the context of --

12             COURT REPORTER:   Of what?

13             THE WITNESS:   Sorry.   Should we call this A?  
14    Do you want me to spell it?   A-r-r-a-s-v-u-o-r-i, and  
15    I'll be pronouncing that as Arrasvuori.   Sorry.

16    BY MS. STAUBACH:

17    Q     Do you have some understanding of what this  
18    claim limitation means?

19    A     As I mentioned, I have not performed a claim  
20    construction within the context of the specification  
21    of this paper of this -- of this patent, but I do  
22    have, you know, in the context of Arrasvuori, I can  
23    see elements from this claim limitation represented in  
24    Arrasvuori's disclosure.

25             So I don't have an opinion, sitting here now,

1 as to the entire scope of this claim limitation, but I  
2 can recognize prior work that satisfies the claim  
3 limitation by any reasonable definitions, any  
4 reasonable claim constructions.

5 Q Is it your opinion that all of the terms in  
6 these claims are given their ordinary and customary  
7 meaning?

8 A I think it has to be interpreted in the  
9 context of the specification. For example, the word  
10 "continuous" has multiple meanings depending on  
11 context. So it has to be construed; however, there  
12 are certain definitions -- there are certain features,  
13 for example, continuous that will have to be in any  
14 final definition.

15 Q And you've read the claims, and you've read  
16 the entire specification at least once?

17 A Yes.

18 Q And you hold yourself out as a person of  
19 ordinary skill in the art at the relevant time, and  
20 so, sitting here today, you must have some opinion of  
21 what this limitation means.

22 MR. McCLELLEN: Objection. Form.

23 THE WITNESS: I have opinions as to  
24 technology that may satisfy this limitation, but I  
25 have not done an analysis in my declaration of the

1 full scope of that claim limitation.

2 BY MS. STAUBACH:

3 Q Well, let's --

4 A So I can recognize an example of it, but I  
5 can't tell you everything that's not an example of  
6 it.

7 Q Let's break it down a little bit.

8 So in this limitation, it includes the phrase  
9 "in realtime."

10 Do you have an understanding of what "in  
11 realtime" means?

12 A Again, without having done the analysis in  
13 the context of the patent, I will withhold a  
14 definitive answer, but a common definition for  
15 "realtime" would be something with low latency, where  
16 latency -- low latency is defined by the particular  
17 task or application.

18 Q What does "low latency" mean?

19 A So if I may quote this claim element, it  
20 says, Generate and communicate in realtime to the  
21 users.

22 Is that okay as paraphrasing?

23 Q You can paraphrase how you wish.

24 A Generate and communicate in realtime to the  
25 users.



1           So I -- here I would talk about latency being  
2     the time from the generation to the communication.  
3     That would seem to be what's implied.

4           Q     And what's the difference between generation  
5     and communication?

6           A     I would understand generate to mean creating  
7     some data and communicate to be communicating some  
8     data.

9           Q     So is what you're saying communicating is the  
10    actual displaying of the data?

11          A     I am not going to -- I don't agree with that.

12          Q     What would you say communicating means?

13          A     I would say it means that one device is  
14    communicating to another device. That's generally  
15    what communicate means.

16          Q     Okay.

17                I'd like -- I'm going to hand you the  
18    petition in this case. And I know you haven't taken a  
19    close look at this, so feel free to peruse now and let  
20    me know when you're ready.

21          A     Well, I don't think I'm going to read it  
22    sitting here, but -- so I guess I'm ready.

23                MR. McCLELLLEN: Lindsey, do you want to give  
24    this an exhibit number?

25                MS. STAUBACH: I don't think so. We didn't

1 do that with the declaration.

2 BY MS. STAUBACH:

3 Q Page 56 -- actually, let's go to page 55.

4 This is the discussion of this same claim  
5 limitation which begins, "Continuously generate and  
6 simultaneously communicate in realtime in the context  
7 of Arrasvuori-based grounds."

8 And on page 56, there's a discussion of  
9 generating the interface. So this begins, in that  
10 first paragraph on page 56, "The server generates the  
11 interface that it sends to the user wireless nodes  
12 and/or computers."

13 Did I read that right?

14 A Yes.

15 Q So this says the server generates the  
16 interface.

17 Do you agree with that?

18 A That's what it says.

19 Q And is that how you understand generate  
20 within this claim term?

21 A Is -- I'm sorry. Is what how I understand  
22 it?

23 Q A moment ago you said generate was measuring  
24 data or gathering data.

25 A I think I said creating data, but --

1 Q Okay. Fair.

2 Creating data.

3 Here it says, "The server generates the  
4 interface." So is generation referring to data or the  
5 interface?

6 MR. McCLELLLEN: Objection. Form.

7 THE WITNESS: The interface is data.

8 BY MS. STAUBACH:

9 Q Can you expand on that a little bit more.

10 A Sure.

11 So the server is sending information to the  
12 user wireless nodes so that the user wireless nodes  
13 can display something to the user, and that data that  
14 it's sending encodes the interface.

15 Q Okay.

16 So for the rest of this paragraph, it says,  
17 "Arrasvuori discloses a server might make leaderboards  
18 available for receipt by user wireless nodes and/or  
19 other computers, which, in turn, could provide  
20 leaderboard display to their users via GUIs and/or  
21 other interfaces. The phrase 'make leaderboards  
22 available for receipt' and the verb 'display' confirm  
23 that the server generates the leaderboards."

24 Do you see any discussion of data in here?

25 A So GUI is G-U-I for graphical user interface.

1 Q Uh-huh.

2 A So the server transmits data to the user  
3 wireless nodes, and that data encodes the leaderboards  
4 or possibly other GUIs that are displayed by the user  
5 wireless nodes. That would be commonly understood.

6 Q Do you include a discussion of that in your  
7 declaration?

8 A Some things are so obvious I did not point  
9 them out in my declaration. This would be an example.

10 Q So it's --

11 A I don't know. I'd have to go through my  
12 entire declaration to see if I say that an interface  
13 is encoded by data, but that is definitely something  
14 that I would assume to be common knowledge.

15 Q Well, it's up to your knowledge. It's not in  
16 your declaration?

17 MR. McCLELLLEN: Objection. Form.

18 THE WITNESS: I would have to review the  
19 whole thing with that question in mind to know for  
20 sure, but I would not be surprised if I didn't feel  
21 the need to say that explicitly.

22 BY MS. STAUBACH:

23 Q So what does it mean within the context of  
24 the 256 patent to say, Providing an interface in  
25 realtime?

1           A     Is that phrase written somewhere? Should I  
2     be referring to something, or are you paraphrasing?

3           Q     Let me rephrase.

4                     What would it mean within the context of the  
5     256 patent to generate and communicate an interface in  
6     realtime?

7           A     So again, my analysis was not to delineate  
8     everything that's encompassed by that, but rather to  
9     look at specific examples and ask if that is an  
10    example of that claim language. So that's the  
11    analysis that I did.

12                    I did not do, you know, setting the bounds of  
13    what that limitation must mean, but rather  
14    identifying, for example, that Arrasvuori discloses  
15    continuously generating and simultaneously  
16    communicating in realtime, but, again, only in the  
17    context of the individual terms in there.

18                    So just as a reference, Arrasvuori -- and I  
19    don't have it in front of me -- but Arrasvuori is a  
20    patent application written in the context of  
21    multiplayer video games, which were very well-known in  
22    2007. And so it was very clear what sorts of things  
23    are being referred to there, and Arrasvuori discloses  
24    that also. The realtime, the simultaneous, and the  
25    continuous generation.

1 Q So you didn't exactly answer my question.

2 My question was, what would it mean within  
3 the context of the 256 patent to generate and  
4 communicate an interface in realtime?

5 A So I think I did answer your question. I'll  
6 try again.

7 I did not try to put a boundary around  
8 everything that that could possibly mean in my  
9 declaration. Instead what I did was I looked at other  
10 prior art and asked the question whether that would  
11 satisfy any reasonable definition of some of the terms  
12 in this claim limitation.

13 Q So in order to say a prior art reference,  
14 like Arrasvuori, generates and communicates an  
15 interface, which in paragraph 72 of your declaration  
16 you say is a leaderboard, in realtime, how can you  
17 make that determination without having an  
18 understanding of the claim language?

19 A Well, I think I said earlier -- I'll say it  
20 again -- that realtime, a reasonable definition of  
21 "realtime" will almost certainly mean low latency  
22 between one event and the next. In this case, the  
23 events are generating and communicating.

24 So most definitions or all definitions -- all  
25 reasonable definitions I can think of of realtime

1 would have a notion of low latency. And what low  
2 latency means has to depend on the application or the  
3 task. So again, it's context-dependent.

4 But in the context of multiplayer video games  
5 as were common in 2007, many very popular ones, people  
6 around the world are playing in realtime shooting at  
7 each other, and those things have to be done with low  
8 latency. It has to be continuously generated. It has  
9 to be simultaneously communicated with an appropriate  
10 definition of those terms.

11 Arrasvuori discloses similar sorts of  
12 interfaces looking at paragraphs 52 and 53, for  
13 example, and I do not have the reference in front of  
14 me. But if you read those, you'll see a disclosure of  
15 exactly that sort of system where players are playing  
16 and getting feedback from each other in realtime.

17 Q So would you agree that your opinions in your  
18 declaration are based on reasonable definitions of  
19 these terms but not in the context of what the  
20 256 patent says?

21 A My opinions in my declaration --

22 MR. McCLELLLEN: Objection. Form.

23 Sorry. Please continue.

24 THE WITNESS: So my opinions in my  
25 declaration are based on any reasonable definition of

1 those terms, but I did not try to delineate everything  
2 that could be captured or excluded that by last claim  
3 element because I did not do claim construction, and I  
4 did not do a careful invalidity of analysis of entire  
5 claims.

6 Instead, I was looking at individual terms,  
7 and understanding what they have to mean without  
8 trying to say what else they could mean.

9 BY MS. STAUBACH:

10 Q So you've been an expert in patent cases  
11 before. In those cases, have you given opinions based  
12 on reasonable definitions that aren't deduced from the  
13 relevant patent in the case?

14 A So my reasonable definitions are based on the  
15 specification 256, as well as my own engineering  
16 understanding, but, again, I did not try to come up  
17 with a clear delineation between everything that's  
18 included by that element and everything that's  
19 excluded by the element.

20 So I did consider 256 when I looked at  
21 Arrasvuori and determined whether it was generating an  
22 interface in realtime.

23 Q In what way did you consider the 256 if you  
24 didn't try to delineate what the claim limitations  
25 mean in light of the specification of the 256 patent?



1           A       I'll try to explain one more time.

2                   So what I am saying is that Arrasvuori is an  
3       example of what's disclosed in this last claim  
4       element. What I'm not saying is everything that can  
5       be excluded by this last claim element. So those are  
6       different things.

7                   And my determination that Arrasvuori is  
8       disclosing what's in this claim element is based on my  
9       own engineering understanding, what a POSITA would  
10      know, and the specification of the 256 patent.  
11      P-O-S-I-T-A, person of ordinary skill in the art.

12          Q       All right.

13                  Can you tell me all the reasonable  
14      definitions you're aware of for the phrase  
15      "realtime"?

16                  MR. McCLELLEN: I'm sorry to interrupt. This  
17      sounds like this might be going on for a little bit.  
18      We've been going for about an hour.

19                  Do you want to take a break first?

20                  MS. STAUBACH: After this question.

21                  MR. McCLELLEN: Okay.

22      BY MS. STAUBACH:

23          Q       Can you tell me all the reasonable  
24      definitions you're aware of for the phrase "realtime"?

25          A       I believe any reasonable definition will have

1 some notion of low latency built into it, and what low  
2 latency means has to depend on the task or the  
3 application. So I can't tell you every definition,  
4 but I can tell you all definitions will probably have  
5 that -- I believe would be that in it.

6 MS. STAUBACH: All right. Thank you.

7 We can go off the record.

8 THE VIDEOGRAPHER: Going off the record. The  
9 time is approximately 9:59 a.m.

10 (Recess taken.)

11 THE VIDEOGRAPHER: We're back on the record.  
12 The time is approximately 10:11 a.m.

13 BY MS. STAUBACH:

14 Q Okay. Welcome back.

15 So as we previously discussed, you did not  
16 perform an analysis to determine the scope of the  
17 claims in the 256 patent; is that right?

18 A I did not perform a detailed analysis of the  
19 claims, just some of the individual terms.

20 Q Did you perform any analysis to ascertain the  
21 scope of the full claims?

22 A That's not what I was asked to do.

23 Q So the answer to that would be no?

24 A That's right.

25 Q Sitting here today, you can't provide me with

1 a definition of the phrase "realtime" within the  
2 context of the 256 patents claims?

3 MR. McCLELLEN: Objection. Form.

4 THE WITNESS: Just refer to my previous  
5 answer. I know what it has to include, that  
6 definition, but it may include other things  
7 potentially. But it definitely has to include some  
8 notion of low latency.

9 BY MS. STAUBACH:

10 Q How can you understand whether the Arrasvuori  
11 reference teaches a claim limitation, such as this  
12 realtime limitation, if you don't understand the scope  
13 of the claims themselves?

14 A Arrasvuori teaches low latency, and it also  
15 teaches realtime, and those two are consistent with  
16 each other.

17 Q But is low latency how realtime is -- let me  
18 rephrase.

19 Is low latency the definition of "realtime"  
20 as it appears in the 256 patent claims?

21 A It definitely means low latency, and it may  
22 mean other things too. So I haven't done a claim  
23 construction within the 256 patent's context, but it's  
24 clear from the specification that realtime in the 256  
25 context means that there's low latency, in this case

1 between generate and communicate. So it means at  
2 least that.

3 Q When you were considering Arrasvuori, you  
4 only considered whether Arrasvuori meets certain  
5 technological aspects of the 256 patent?

6 MR. McCLELLLEN: Objection. Form.

7 THE WITNESS: I was asked to provide an  
8 analysis of Arrasvuori and what it teaches, and also  
9 certain obvious combinations.

10 BY MS. STAUBACH:

11 Q So if we look at your declaration table of  
12 contents on page I, Section 7(A), there are  
13 subsections titled, "Network Architecture," "Game  
14 Initiation and Gameplay Operations," "Monitoring and  
15 Feedback Operations."

16 Do you see that?

17 A Yes.

18 Q And "Compensatory Operations."

19 So in these sections do you agree that you  
20 gave overviews of how Arrasvuori teaches these  
21 concepts?

22 A So those sections are primarily summarizing  
23 important -- important passages from Arrasvuori and  
24 also giving my own understanding of what they mean.  
25 And the structure is mirroring the structure of the

1 Arrasvuori disclosure, game initiation and gameplay  
2 operations, monitoring and feedback operations, and  
3 compensatory operations are listed in that order in  
4 the Arrasvuori disclosure.

5 Q And did you select these specific categories  
6 of information to discuss with regard to Arrasvuori?

7 MR. McCLELLEN: Objection. Calls for  
8 privilege and work product.

9 Instruct the witness not to answer.

10 (Witness instructed not to answer.)

11 BY MS. STAUBACH:

12 Q Did you analyze any particular claim  
13 limitations from Arrasvuori in these sections?

14 A I did not analyze Arrasvuori's claims.

15 Q I'm sorry.

16 I meant, did you analyze any of the 256  
17 patent's claims with regard to Arrasvuori in these  
18 sections?

19 A Particular terms, yes, but not entire claims  
20 or even entire claim elements as they are defined.

21 Q And can you point me to the terms that you  
22 analyzed?

23 A It may take some time, but I will just flip  
24 through my declaration.

25 Q Well, you start discussing Arrasvuori on page

1 23.

2 A Okay.

3 Q Let me be a little bit more specific. So  
4 let's go to page 23, the section entitled, "Network  
5 Architecture."

6 Does this section analyze any claim  
7 limitations from the 256 patent?

8 A This section is primarily telling you how  
9 Arrasvuori works, and it may use language from the  
10 claims, but it was not conducted to address any  
11 particular claim element.

12 Q So this section doesn't address any  
13 particular claim limitation from the 256 patent?

14 A Section -- this section 48, paragraph 48 on,  
15 is describing how it works -- how Arrasvuori works in  
16 terms of its network architecture.

17 Q But you agree that it doesn't discuss any  
18 specific claim limitations from the 256 patent?

19 A So my understanding from the district --  
20 sorry -- from the review board is that Claim 1, for  
21 example, is broken into a number of claim elements:  
22 A, B, C, D, et cetera. And in my description of the  
23 network architecture, I do not address any one of  
24 those claim elements in its entirety.

25 Q How about the next section, Game Initiation

1 and Gameplay Operations on page 24?

2 A Uh-huh.

3 Q Does that address any particular claim  
4 limitations from the 256 patent?

5 MR. McCLELLEN: Objection. Form.

6 THE WITNESS: Again, this will be the same  
7 answer. It's addressing aspects of the claim  
8 limitations, but it is not taking a single, say, 1(D)  
9 and saying, Does Arrasvuori disclose claim element  
10 1(D). I do not do that in this -- in my declaration.

11 BY MS. STAUBACH:

12 Q So I'll ask you the same question for the  
13 next section, Game Initiation Operations.

14 Does this section discuss any particular  
15 limitation from the 256 patent claims?

16 A It uses language from the claims, but does  
17 not address a complete claim element.

18 Q What language from the claims does it use?

19 A Which -- which section are you talking about?

20 Q Page 25, Game Initiation Operations.

21 A So there's quite a few words in common  
22 between that text and the claim text.

23 Q Are any of those words intended to be in  
24 common?

25 MR. McCLELLEN: Objection. Calls --

1 Dr. Lynch, you can answer the question to the  
2 extent you don't describe communications between  
3 myself and you or with Mehran.

4 THE WITNESS: Can you ask the question one  
5 more time.

6 BY MS. STAUBACH:

7 Q Sure.

8 Are any of the words in this Game Initiation  
9 Operation section intended to be in common with the  
10 256 patent claims?

11 MR. McCLELLEN: Objection. Form.

12 Same caution, Dr. Lynch.

13 THE WITNESS: In the sense that I'm  
14 describing technology similar to the technology  
15 described in the 256 patent, there's naturally going  
16 to be some common words used.

17 BY MS. STAUBACH:

18 Q But there are no phrases lifted verbatim from  
19 the 256 patent claims.

20 Would you agree with that?

21 A I agree with that. I was not trying to lift  
22 claim language and then do comparison against it  
23 explicitly.

24 Q And I'll ask for one time for the next  
25 section, Game Play Operations. The same question.



1 Do you address any specific claim language  
2 from the 256 patent claims?

3 MR. McCLELLLEN: Objection. Form.

4 THE WITNESS: I would give the same answer;  
5 that because I'm describing similar technology in  
6 Arrasvuori as appears in the 256 patent, there would  
7 naturally be some overlap in words, but I did not lift  
8 an entire claim element from the 256 patent and  
9 analyze that.

10 BY MS. STAUBACH:

11 Q So when considering whether Arrasvuori has  
12 realtime feedback, you used a reasonable definition of  
13 the phrase "realtime."

14 Do you agree?

15 A I used an understanding of realtime --

16 MR. McCLELLLEN: I'm sorry.

17 Objection. Form.

18 Please continue.

19 THE WITNESS: I used an understanding of  
20 realtime that any reasonable definition would also  
21 have as part of it -- and I mentioned this before --  
22 low latency.

23 BY MS. STAUBACH:

24 Q Did you similarly use a reasonable definition  
25 for the term "communicate" as used in the 256 patent's

1 claims?

2 MR. McCLELLEN: Objection. Form.

3 THE WITNESS: So I believe communicate has a  
4 fairly clear meaning.

5 BY MS. STAUBACH:

6 Q What is that meaning?

7 A That a communication was achieved. So in  
8 this case two devices somehow are talking to each  
9 other.

10 Q So in the context of two devices talking to  
11 each other, a second device received a communication  
12 from the first device or vice versa?

13 MR. McCLELLEN: Objection. Form.

14 THE WITNESS: The way in which a  
15 communication is performed, there's many ways that can  
16 happen, but there will be a sender, and there will be  
17 a receiver.

18 BY MS. STAUBACH:

19 Q But you don't have a definition of the term  
20 "communicate" as it appears in the context of the 256  
21 patent claim?

22 MR. McCLELLEN: Objection. Form.

23 THE WITNESS: It must mean that two devices  
24 are talking to each other, as I said earlier.

25 BY MS. STAUBACH:

1 Q So is that your opinion of what the plain and  
2 ordinary meaning of the term "communicate" is as it  
3 appears in Claim 1 of the 256 patent?

4 MR. McCLELLEN: Objection. Form.

5 THE WITNESS: I believe two devices have to  
6 be talking to each other, at least two devices.

7 BY MS. STAUBACH:

8 Q So that's the scope you're giving to the term  
9 "communicate" within the 256 patent?

10 MR. McCLELLEN: Objection. Form.

11 THE WITNESS: Just to be clear, I am not  
12 giving a scope of any of the terms. What I'm saying  
13 is that any reasonable definition would have to have  
14 that as part of it.

15 BY MS. STAUBACH:

16 Q How about the phrase "simultaneously  
17 communicate"? What's the reasonable definition of  
18 that that you considered?

19 MR. McCLELLEN: Objection. Form.

20 THE WITNESS: So simultaneously communicate  
21 in this claim element is not completely clear, so I  
22 can't say what the scope of that is; however, as I  
23 mentioned in the Arrasvuori disclosure, there is a  
24 notion of the server communicating with user devices.

25 BY MS. STAUBACH:

1 Q So it's not entirely clear to you what the  
2 phrase "simultaneously communicate" means in the  
3 context of the 256 patent's claims?

4 A It's ambiguous.

5 Q You didn't offer any opinion on that in your  
6 declaration; correct?

7 MR. McCLELLEN: Objection. Form.

8 THE WITNESS: Again, my declaration was not  
9 based on studying or providing an analysis of the  
10 claim elements, but rather studying prior art and  
11 seeing if it would be an example of any of the terms  
12 used here.

13 BY MS. STAUBACH:

14 Q And how can you understand whether Arrasvuori  
15 teaches communication without being able to understand  
16 what that means in the 256 patent's claims?

17 MR. McCLELLEN: Same objection.

18 THE WITNESS: As I mentioned, communication  
19 must involve one device talking to another device, and  
20 that's clearly happening in Arrasvuori.

21 BY MS. STAUBACH:

22 Q Let me reask that.

23 How can you understand whether Arrasvuori  
24 teaches simultaneous communication without being able  
25 to understand what that means in the context of the

1 256 patent?

2 MR. McCLELLEN: Same objection.

3 THE WITNESS: So the use of "simultaneously  
4 communicate" in Claim 1 -- the last claim element of  
5 Claim 1 in the 256 patent is ambiguous. But according  
6 to any definition that I can think of, Arrasvuori  
7 discloses it.

8 If you want me to show you paragraphs 52 and  
9 53, I can explain, of Arrasvuori. I don't have it in  
10 front of me.

11 BY MS. STAUBACH:

12 Q What does "continuously generate" mean to you  
13 in the context of the 256 patent?

14 A Again, it's not -- I haven't done a claim  
15 construction for that in the context of the 256  
16 patent; however, I would understand continuously  
17 generates in this case to mean something to generate  
18 recurrently. It's not done once.

19 So one idea is that you generate the  
20 interface once, and that's clearly not continuously  
21 generating it. If you do it multiple times, then that  
22 can be continuously generating.

23 Q So when you say "recurrently," if the  
24 interface was generated once every hour, in your  
25 opinion, is that continuous?

1           A       That would depend on the application.

2                   In any case, as any engineer knows, there's a  
3 difference between continuous time and discrete time.  
4 Continuous has a very strong definition to an  
5 engineer, which is clearly not what's being used in  
6 the 256 patent. And so now we have to resort to more  
7 colloquial understanding or commonsense understandings  
8 of what continuously might mean.

9                   And so that would depend on the context. It  
10 could have many different meanings.

11          Q       Well, let's talk about the context of the 256  
12 patent and activity tracking.

13                   What does "continuous generation" mean in  
14 that context?

15          A       As I said, it means recurring, at least. It  
16 could mean other things, but it at least means  
17 recurring. It definitely means recurring.

18          Q       But it doesn't have to be recurring with any  
19 particular frequency?

20          A       No. That would depend on the task and the  
21 application.

22          Q       All right.

23                   Let's talk about Arrasvuori and Arrasvuori's  
24 computer video game.

25                   What would satisfy continuous generation in

1     that context?

2           A     So as an example --

3                   I don't have Arrasvuori in front of me.

4     Would you like to give that to me, or should I do it  
5     from memory?

6           Q     Sure.

7                   This is Exhibit 2.

8                   (Exhibit 2 marked.)

9                   THE WITNESS: Should I start answering, or  
10    would you like to ask the question again?

11   BY MS. STAUBACH:

12           Q     Do you need me to repeat it?

13           A     Please.

14           Q     What would satisfy "continuous generation" in  
15    Arrasvuori's context?

16           A     Okay.

17                   So there are -- again, I did not focus on the  
18    word "continuous" in my declaration because, honestly,  
19    it's quite obvious, but I will pick out one example  
20    here. Paragraphs 52 and 53.

21                   I read, "As another example with completion  
22    of and/or during performance of a real world fitness  
23    task, display might be provided wherein graphical  
24    indicators corresponding to users that are performing  
25    and/or that have performed a real world task" --

1     sorry -- "fitness task are positioned relative to one  
2     another, a goal corresponding to the task, and/or a  
3     root corresponding to the task. Such display might,  
4     for instance, provide a game world depiction and/or be  
5     presented via one or more GUIs and/or other interfaces  
6     provided by wireless nodes and/or other computers of  
7     users. Such display might, in various embodiments,  
8     take into account quality of real world fitness task  
9     performance."

10             So paragraph 53 then gets more to the heart.

11             "For example, in the case where a stage of a  
12     game requires that users reach a game world landmark  
13     by performing a real world fitness task of running  
14     and/or jogging, display might provide a graphical  
15     representation for each user performing the task and  
16     show the graphical representations as progressing  
17     along a game world route, terminating in the game  
18     world landmark. A user viewing such display might,  
19     for instance, be able to determine how close each  
20     participating user was to the goal and/or how well  
21     each such user was competing relative to other such  
22     users."

23             So that was a long quotation. I think I got  
24     it mostly right.

25             The point here is that, as an example,



1 multiple competitors are competing in a running or  
2 jogging race. They are seeing in realtime a graphical  
3 representation showing how each of the competitors is  
4 progressing along a game world route, and that  
5 terminates in a game world landmark. So by watching  
6 this display, I can see how well I'm doing compared to  
7 others.

8 So this has to be continuously generated, the  
9 interface. It has to be simultaneously communicated.  
10 And, again, simultaneously here is an impossible  
11 definition by a strict theoretical viewpoint, but  
12 communicated simultaneously could mean as soon after  
13 as reasonable that you've generated the interface;  
14 that could be simultaneous, and/or it could be  
15 simultaneously communicated to all of the users.

16 So those are two different possible uses of  
17 "simultaneously," both of which are here. And in  
18 realtime, this interface would be useless unless there  
19 is low latency between the data being received at the  
20 server and then be displayed on my GUI. So by any  
21 definition I can think of for "continuously  
22 generated," "simultaneously communicated," by at least  
23 those two definitions and provided in realtime,  
24 paragraphs 52 and 53 very clearly disclose that.

25 And so in my own declaration when I did not

1 focus on the "continuous" aspect of it, to my mind it  
2 was so obvious that it did not need to be a focus of  
3 my declaration.

4 Q So in paragraph 53 where Arrasvuori discusses  
5 users "reaching a game world landmark by performing a  
6 real world fitness task of running or jogging and  
7 showing graphical representation for each user," does  
8 Arrasvuori ever say how frequently the graphical  
9 representations are updated?

10 A No. Again, that's where it has to be task  
11 dependent; what it means to be realtime, what it means  
12 to be continuously generated.

13 And so for this task, if it's a running race  
14 that lasts a minute, an interval of one minute between  
15 updates would not suffice. It would not be realtime.  
16 It would not be continuous. If the running race  
17 lasted ten years, then a one-minute update might be  
18 fine.

19 So it has to be interpreted in the context of  
20 its usage because continuous has many meanings. So it  
21 has to depend on how it's used in context.

22 Q So what you're saying is that, in the context  
23 of Arrasvuori, if the race is, let's say, an hour  
24 long, a one-minute refresh rate for progress is too  
25 slow to be continuous generation?

1 MR. McCLELLEN: Objection. Form.

2 THE WITNESS: What I'm saying is that for  
3 this to be useful, for it to be satisfying for the  
4 users, for me to want to use it, it has to be  
5 refreshed often enough, and whether it's, you know, a  
6 millisecond or 100 milliseconds or something else is  
7 something that would be of focus of a user study, for  
8 example.

9 In any case, it's not zero. It's not  
10 continuous by the mathematical theoretical engineering  
11 definition. It's something that recurs. So the word  
12 "continuous" has to be interpreted in context.

13 BY MS. STAUBACH:

14 Q So let's say that Arrasvuori's running or  
15 jogging race described here lasts -- is a distance of  
16 one mile.

17 Could you put a time span on what it would  
18 mean to be continuous generation in that context?

19 A I think --

20 MR. McCLELLEN: Objection. Form.

21 Go ahead.

22 THE WITNESS: I think the ultimate purpose of  
23 bothering to write a patent is to disclose something  
24 that somebody might want to use, and so this is  
25 telling us that there is a colloquial meaning of

1 continuous refresh, which means continuous generation,  
2 simultaneous communication, realtime; so this is  
3 disclosing that.

4 And then if you want to ask what is the  
5 refresh rate, I would say that is a subject for a user  
6 study and is not something explicitly here.

7 BY MS. STAUBACH:

8 Q So Arrasvuori doesn't explicitly teach this  
9 refresh rate idea; correct?

10 MR. McCLELLEN: Objection. Form.

11 THE WITNESS: Again, this is in the context  
12 of multiplayer video games, which were very well-known  
13 then. So my reading of this, which I'm sure is the  
14 correct reading, is that this patent application is  
15 geared towards giving people some exercise while they  
16 play video games, which they are motivated to do.

17 So for them to be motivated to play a video  
18 game, they would need to have an interface that was  
19 fun to use, and if it were overly delayed, nobody  
20 would use it. And again, we have plenty of examples  
21 of multiplayer games, people playing around the world,  
22 shooting games, for example, where if I shoot at you  
23 and I don't know what happens for a minute, I'm not  
24 going to play that game.

25 So that's the context in which this is being

1 provided. So this is disclosing effectively  
2 continuous in the context of the task.

3 BY MS. STAUBACH:

4 Q What do you mean by "effectively  
5 continuous"?

6 A I am just hedging against the theoretical  
7 definition.

8 So anybody who is an engineer, including  
9 people in this room, have seen the word "continuous  
10 time" and have seen it differentiated from discrete  
11 time, and computers, which all of this is based on,  
12 are running in discrete time. So they can't satisfy  
13 that theoretical definition.

14 So instead we're left with reasonable  
15 definition, colloquial definitions, definitions that  
16 make sense in the context of the application. So as  
17 you read this, there's no way to interpret it other  
18 than that the feedback that the interface is being  
19 continuously generated, simultaneously communicated,  
20 and in realtime.

21 There's no way to read this; otherwise, this  
22 would not disclose anything that anybody would want to  
23 do.

24 Q But sitting here today, in the four corners  
25 of Arrasvuori you can't point to any disclosure where

1 Arrasvuori gives such a refresh rate; correct?

2 MR. McCLELLEN: Objection. Form.

3 THE WITNESS: So if you ask me questions  
4 like, Is it anywhere in the disclosure, I probably  
5 will not be able to answer without reading the whole  
6 thing. But I will say that I am not aware of it  
7 saying 10 milliseconds anywhere, for example.

8 BY MS. STAUBACH:

9 Q Do you see anything like that in the  
10 paragraphs that you pointed me to, paragraph 52 and  
11 53?

12 MR. McCLELLEN: Objection. Form.

13 THE WITNESS: It's a description of a user  
14 experience, so it's not giving me what the low latency  
15 means in this application.

16 BY MS. STAUBACH:

17 Q So it doesn't tell you a frequency with which  
18 the data is generated --

19 A Correct.

20 Q -- on the interface?

21 A Correct.

22 Q Could there be a situation where data is  
23 generated in realtime but not continuously?

24 MR. McCLELLEN: Objection. Form.

25 THE WITNESS: It's possible to define such a

1 thing.

2 BY MS. STAUBACH:

3 Q How would that work?

4 A Well, so I already referred to  
5 continuous-time systems and discrete-time systems.  
6 There are also systems called event-based systems.

7 And so it's possible, for example, when the  
8 door closes, for a sensor to sense that the door has  
9 closed and then transmit it somewhere in realtime;  
10 right? So after the door closes, within some amount  
11 of time, I'm notified that the door has closed. So  
12 that is something that doesn't have to be continuous.

13 Q But if that door was opened and closed  
14 multiple times, it would then be continuous because  
15 it's recurring?

16 A So an event-based system can have events that  
17 are recurring is certainly the case.

18 Q And is -- any time an event-based system has  
19 a recurring event, does that make the event  
20 continuous?

21 MR. McCLELLEN: Objection. Form.

22 THE WITNESS: Well, I'm not sure how to  
23 answer that question. But from a user's standpoint,  
24 if all they care about is the event happening, then  
25 they may not be able to distinguish between something

1 being updated at a high frequency and something being  
2 updated when the event occurs.

3 BY MS. STAUBACH:

4 Q How do you know that Arrasvuori isn't an  
5 event-based system?

6 A Well, event-based systems are very broad and  
7 include discrete-time systems, which includes  
8 everything that a computer can do. So the event could  
9 be a millisecond has passed. That's another event.

10 Q Earlier you mentioned in the context of video  
11 games, video games needing to be enjoyable to the  
12 user.

13 Are you in a position to offer opinions on  
14 user preferences or what a user would enjoy in the  
15 context of video games in 2006?

16 MR. McCLELLLEN: Objection. Form.

17 THE WITNESS: I have my own opinions as to  
18 what's fun, and I'm sure you do too.

19 BY MS. STAUBACH:

20 Q But you're not an expert in that field?

21 A No.

22 MR. McCLELLLEN: Dr. Lynch, just a reminder.  
23 Please pause before answering the question to give me  
24 time to object.

25 THE WITNESS: Sure.



1 MR. McCLELLEN: So objection, form, to that  
2 question.

3 BY MS. STAUBACH:

4 Q I'm going to reask a question from earlier  
5 because I'm not sure that I got an answer.

6 How do you know that Arrasvuori isn't an  
7 event-based system?

8 MR. McCLELLEN: Objection. Form.  
9 Foundation.

10 THE WITNESS: So, again, event -- if you  
11 think of a Venn diagram, event-based systems is a  
12 circle that includes all discrete-time systems. So to  
13 call it an event-based system is not limiting.

14 So the event that can occur is that, for  
15 example, a millisecond has passed, and that makes  
16 it -- that's an example of a discrete-time system, but  
17 none of these are, by an engineering definition, a  
18 theoretical definition, which doesn't fit -- it does  
19 not fit these disclosures of continuous.

20 BY MS. STAUBACH:

21 Q So if an event-based system includes all  
22 discrete-time systems, there's Arrasvuori would fall  
23 within that; right?

24 MR. McCLELLEN: Objection. Form.

25 THE WITNESS: I think everything would, but

1 the point is that -- I mean, with a computer. But the  
2 point is that discrete-time systems can march along at  
3 fixed time intervals; event-based systems do not have  
4 to.

5 MS. STAUBACH: Can we go off the record and  
6 take a 10-minute break?

7 THE VIDEOGRAPHER: Sure.

8 Going off the record. The time is  
9 approximately 10:48 a.m.

10 (Recess taken.)

11 THE VIDEOGRAPHER: We're going back on the  
12 record. The time is approximately 11:03 a.m.

13 BY MS. STAUBACH:

14 Q So just to recap, continuously generating an  
15 interface in terms of the Arrasvuori reference -- let  
16 me rephrase. Sorry.

17 In your opinion, Arrasvuori discloses  
18 continuously generating an interface based on the fact  
19 that you think Arrasvuori's video game had to be  
20 enjoyable to users; is that correct?

21 MR. McCLELLEN: Objection. Form.

22 THE WITNESS: I'm not -- it had to be  
23 appropriate to the task, right; whether it's enjoyable  
24 or not is an individual preference and decision. But  
25 the continuous generation, simultaneous communication,

1 and realtimeness of it needs to be appropriate to the  
2 task, the application, otherwise it has no value.

3 BY MS. STAUBACH:

4 Q So what other considerations, other than  
5 whether the video game is enjoyable, are appropriate  
6 to the task?

7 MR. McCLELLEN: Objection. Form.

8 THE WITNESS: It depends on the task.

9 BY MS. STAUBACH:

10 Q Okay.

11 Let's consider the task is Arrasvuori's video  
12 game.

13 A That's -- okay.

14 Q What other considerations other than whether  
15 a user is enjoying the video game are there?

16 MR. McCLELLEN: Same objection.

17 Go ahead.

18 THE WITNESS: So Arrasvuori discloses many  
19 kinds of games, but here is -- the focus mostly is on  
20 running in those two paragraphs that I cited.

21 So are you asking for an opinion on those two  
22 paragraphs or --

23 BY MS. STAUBACH:

24 Q What is your opinion that Arrasvuori teaches  
25 continuously generating an interface based on?

1           A       Based --

2                   MR. McCLELLEN: I'm sorry. One second.

3                   Go ahead.

4                   THE WITNESS: Based on the description in the  
5 disclosure and the context of multiplayer games.

6 BY MS. STAUBACH:

7           Q       What particular portions of Arrasvuori say to  
8 you that Arrasvuori discloses continuous generation of  
9 an interface?

10          A       So, again, I believe continuous generation  
11 must mean that it's generated in a recurrent fashion,  
12 so not just once. It happens again.

13          Q       And where does Arrasvuori say that?

14          A       In paragraphs 52 and 53 among many, many  
15 other places. And it's clear to -- if it's not stated  
16 explicitly, it's clear in the reading.

17          Q       What makes it clear from the reading?

18          A       Because the task is very clearly defined.  
19 I'm racing against other runners. I want to see where  
20 they are now.

21          Q       So a user that couldn't see where they are  
22 now in relation to the other users wouldn't be  
23 enjoying Arrasvuori's video game; right?

24                   MR. McCLELLEN: Objection. Form.

25                   THE WITNESS: Enjoying has nothing to do with

1 52 and 53. I don't want to talk about that. But it's  
2 describing here that people need to be able to see  
3 where their competitors are to understand their  
4 current status in the race.

5 BY MS. STAUBACH:

6 Q But Arrasvuori never actually discloses  
7 continuous updating of the graphical indicators.

8 Do you agree with that?

9 MR. McCLELLEN: Objection. Form.

10 THE WITNESS: I do not agree with that.

11 In my own declaration, I did not focus on the  
12 word "continuous," again, because it's so obvious, and  
13 the same applies in Arrasvuori. You don't need to see  
14 the word "continuous" to understand what's being  
15 described.

16 BY MS. STAUBACH:

17 Q So in terms of choosing which terms from the  
18 256 patent's claims you would address in your  
19 declaration, you excluded terms that you thought were  
20 too obvious to discuss?

21 MR. McCLELLEN: Objection. Calls for work  
22 product and privilege.

23 Dr. Lynch, you can answer to the extent you  
24 exclude discussions between myself and you and with  
25 Mehran.

1 THE WITNESS: So to reiterate, I did not do a  
2 comprehensive analysis of the claim limitations in my  
3 analysis of Arrasvuori.

4 BY MS. STAUBACH:

5 Q Did you intentionally not consider the term  
6 "continuous" because it was too obvious?

7 MR. McCLELLEN: Same objection. Also, form.

8 THE WITNESS: There was no reason to focus on  
9 it because it's so obvious to anyone of ordinary skill  
10 in the art.

11 BY MS. STAUBACH:

12 Q Did you exclude any other claim terms from  
13 your declaration because they were too obvious?

14 MR. McCLELLEN: Objection. Form.

15 THE WITNESS: To reiterate, I did not do an  
16 analysis based on the language of the claim  
17 limitations comprehensively.

18 BY MS. STAUBACH:

19 Q How do you determine if something is so  
20 obvious that you don't need to talk about it?

21 MR. McCLELLEN: Objection. Form.

22 THE WITNESS: Paragraphs 52 and 53 in  
23 Arrasvuori, as an example, among many others, I don't  
24 see any way that a reasonable person could read this  
25 and not think that the interface is being generated

1 recurrently, that it's being communicated  
2 simultaneously -- by either definition of  
3 simultaneously -- and that it's being done realtime.  
4 I don't see a way to read that without understanding  
5 that.

6 BY MS. STAUBACH:

7 Q I think we talked about earlier appropriate  
8 to the task at hand, recurrence rates that are too  
9 slow could be noncontinuous, in your opinion --

10 MR. McCLELLEN: Objection --

11 BY MS. STAUBACH:

12 Q Do you agree with that?

13 MR. McCLELLEN: I'm sorry.

14 Objection. Form.

15 THE WITNESS: I am certain that continuous in  
16 these contexts, in the context of the 256, means  
17 recurrent, but I do not see a clear definition of when  
18 it stops being continuous based on the interval.

19 BY MS. STAUBACH:

20 Q You don't see a clear definition where? In  
21 Arrasvuori or in the --

22 A 256.

23 Q Do you see a clear definition in Arrasvuori?

24 A Yes. Implicit in the description of the game  
25 that's being performed by multiple users. So it's not

1 an explicit number, but it's an explicit usage or  
2 meaning of continuous in the context of this task.

3 Q But if whether a system meets this  
4 "continuous generation" term depends on the interval  
5 of updates -- let me rephrase.

6 You say there's a clear definition implied in  
7 Arrasvuori, but whether a system continuously  
8 generates an interface depends on the actual task at  
9 hand; correct?

10 MR. McCLELLEN: Objection. Form.

11 THE WITNESS: So, again, any definition of  
12 continuous here has to be taken in context, and I'm  
13 saying the context depends on the task.

14 BY MS. STAUBACH:

15 Q But even within Arrasvuori's disclosure, such  
16 as paragraphs 52 and 53 that we discussed earlier,  
17 there could be situations where the frequency of  
18 updating the interface is too slow to be continuous;  
19 right?

20 MR. McCLELLEN: Objection. Form.

21 THE WITNESS: I'm not saying that. It could  
22 be too slow to be enjoyable.

23 BY MS. STAUBACH:

24 Q Well --

25 A So my definition of continuous must include



1 recurring, but I'm not applying a standard as to the  
2 rate or the events that have to occur.

3 Q I think previously we discussed if there was  
4 a long-term activity that lasted, maybe, for a month,  
5 an interval of one minute might be acceptable, but if  
6 it was a shorter activity of maybe, like, an hour-long  
7 race, then one minute would be far too slow.

8 Do you remember that?

9 A I remember saying that it's going to be  
10 task-dependent, and what -- one of the factors in that  
11 task is the length of time that that task is going to  
12 take, but that's not the only factor.

13 Q But you have to be able to draw a line  
14 somewhere; right?

15 THE WITNESS: I am not drawing a line.

16 MR. McCLELLLEN: Objection. Form.

17 THE WITNESS: I am not drawing a line. As an  
18 example, if I'm trying to balance a pendulum for a  
19 million years, I'm still going to need a fast update  
20 rate to balance that pendulum, even though the  
21 duration of the task is quite long. So it depends on  
22 multiple factors, what's appropriate for the task.

23 BY MS. STAUBACH:

24 Q But if Arrasvuori's race, as contemplated by  
25 paragraph 53, was a one-mile race that was only

1 updated -- the data on the interface was updated with  
2 a frequency of every two minutes, that would be too  
3 slow to be continuous.

4 Would you agree with that?

5 MR. McCLELLEN: Objection. Form.

6 THE WITNESS: This is not part of my analysis  
7 in my declaration.

8 BY MS. STAUBACH:

9 Q You're a person of ordinary skill in the art;  
10 right?

11 A Yes.

12 Q And you understand the hypothetical that I'm  
13 posing; right?

14 A Yes.

15 Q So as a person of ordinary skill in the art,  
16 would you think that seeing an update on the interface  
17 every two minutes in a one-mile race would be too slow  
18 to be continuous?

19 A I would say that --

20 MR. McCLELLEN: Objection. Form.

21 Go ahead.

22 THE WITNESS: That would be too slow to be  
23 enjoyable.

24 BY MS. STAUBACH:

25 Q Too slow to be enjoyable.

1 And is that the baseline for determining  
2 whether something is being continuously generated?

3 MR. McCLELLEN: Same objection.

4 THE WITNESS: No.

5 BY MS. STAUBACH:

6 Q And Arrasvuori doesn't say the length of the  
7 race; it doesn't say the frequency with which the  
8 graphical indicators are updated.

9 Do you agree?

10 MR. McCLELLEN: Objection. Form.

11 THE WITNESS: It does not say those things,  
12 not in paragraphs 52 and 53.

13 BY MS. STAUBACH:

14 Q Does it say it anywhere?

15 A Does it say what anywhere?

16 Q Does it say the length of a race or does it  
17 say the frequency with which the graphical indicators  
18 are updated?

19 MR. McCLELLEN: Objection. Form.

20 THE WITNESS: I'll take the second one.

21 I am not familiar with anywhere that says  
22 what the length of the update rate has to be. Again,  
23 this is in the context of multiplayer video games.

24 BY MS. STAUBACH:

25 Q You said you didn't review Tagliabue; is that

1 right?

2 A That's correct.

3 Q Why not?

4 A I wasn't --

5 MR. McCLELLEN: Objection. Calls for work  
6 product and attorney-client privilege.

7 Instruct the witness not to answer.

8 (Witness instructed not to answer.)

9 BY MS. STAUBACH:

10 Q Did you not think it was important to address  
11 Tagliabue in your declaration?

12 MR. McCLELLEN: Objection. Form.

13 THE WITNESS: No, I did not think it was  
14 something I needed to do because it was not part of  
15 what I was asked to do.

16 BY MS. STAUBACH:

17 Q So you don't offer any opinions on whether  
18 Tagliabue anticipates any claim of the 256 patent;  
19 correct?

20 A I do not.

21 Q Can you turn with me to page 7 of your  
22 declaration.

23 A Just one moment.

24 Just to continue my answer to the previous  
25 question. In paragraph 46 of my declaration is what I

1 was asked to do, for reference.

2 Sorry to interrupt. Where would you like me  
3 to go?

4 Q Page 7.

5 A Yes.

6 Q The first full sentence. "Although I'm not a  
7 lawyer, I have been advised to apply certain legal  
8 standards in forming my opinions."

9 Do you see that?

10 A Yes.

11 Q And then you have the claim construction  
12 standards section directly below.

13 It says that "I understand that claim terms  
14 are given their ordinary and customary meaning as  
15 would be understood by a person of ordinary skill in  
16 the relevant part in the context of the patent's  
17 entire disclosure and prosecution history."

18 Did I read that right?

19 A Yes.

20 Q And is this one of the legal standards that  
21 you applied in forming your opinions?

22 A I did not give any special meanings to the  
23 claim terms.

24 Q Did you give them ordinary and customary  
25 meanings?

1 MR. McCLELLEN: Objection. Form.

2 THE WITNESS: Again, my analysis was not to  
3 try to limit or to understand the full scope of any  
4 element or any claim, but rather to look at other  
5 prior work and explain what they are teaching and how  
6 it relates to topics in the 256 patent.

7 BY MS. STAUBACH:

8 Q Why is this claim construction standard  
9 section in here?

10 MR. McCLELLEN: Objection. Calls for work  
11 product. Attorney-client privilege.

12 Instruct the witness not to answer.

13 (Witness instructed not to answer.)

14 BY MS. STAUBACH:

15 Q But just to confirm, you did not apply the  
16 claim construction ordinary and customary meaning  
17 standard in your declaration?

18 MR. McCLELLEN: Objection. Form.

19 THE WITNESS: As I mentioned, some of the  
20 terms here are ambiguous in the claims and need to be  
21 construed in the context of the specification, and  
22 what I did was to analyze other prior art to see if it  
23 meets any reasonable definitions of certain of these  
24 claim terms, not a comprehensive analysis of the  
25 claim.

1 BY MS. STAUBACH:

2 Q So earlier we discussed the claim phrase  
3 "simultaneously communicate," and you indicated that  
4 that was ambiguous.

5 Which other claim terms are ambiguous, in  
6 your opinion?

7 A There are a lot of claim terms. Would you  
8 like to point me to any particular ones?

9 Q Well, in Claim 1 -- I'm happy if you need  
10 time to read it again.

11 Do you see any other claim terms there that  
12 are ambiguous?

13 MR. McCLELLEN: Objection. Form.

14 THE WITNESS: This was not part of my  
15 analysis, so it's not in my report.

16 BY MS. STAUBACH:

17 Q I understand it's not in your report.

18 But sitting here today looking at Claim 1, do  
19 you see any other claim terms that you consider  
20 ambiguous?

21 MR. McCLELLEN: Same objection.

22 THE WITNESS: I'm not prepared to opine on  
23 that in realtime.

24 BY MS. STAUBACH:

25 Q So earlier when you said there are plural

1     ambiguous claim terms, you didn't have anything in  
2     mind?

3           A     My point was -- so ambiguous I meant to  
4     include a case where the meaning depends on the  
5     context. So there are multiple terms where the  
6     meaning depends on the context.

7           Q     Okay.

8                     Let's go to the next section down on page 7,  
9     "Anticipation and Obviousness."

10                    The first sentence of paragraph 17 says, "I  
11     understand that a patent claim is invalid if it is  
12     anticipated or obvious in view of the prior art. I  
13     further understand that invalidity of a claim requires  
14     that the claim be anticipated or obvious from the  
15     perspective of a person of ordinary skill in the art  
16     at the time the invention was made."

17                    Do you see that?

18           A     Yes.

19           Q     Do you provide any further detail on what it  
20     means to anticipate a claim?

21           A     No. I was not asked to perform an  
22     anticipation analysis.

23           Q     So you haven't drawn any conclusions  
24     regarding whether any prior art reference anticipates  
25     any claim of the 256 patent; correct?



1 MR. McCLELLEN: Objection. Form.

2 THE WITNESS: That's not part of my  
3 declaration.

4 BY MS. STAUBACH:

5 Q Do you know if Lululemon's petition included  
6 anticipation grounds?

7 MR. McCLELLEN: Objection. Foundation.

8 THE WITNESS: I haven't read the petition.

9 BY MS. STAUBACH:

10 Q And you're not familiar with the grounds in  
11 it?

12 MR. McCLELLEN: Objection. Form.

13 THE WITNESS: I don't know the details. I'd  
14 have to speculate.

15 BY MS. STAUBACH:

16 Q You also have a section on obviousness legal  
17 standards.

18 Did you apply the obviousness legal standards  
19 in forming your opinions?

20 A Yes.

21 Q What did you apply in particular?

22 A So paragraph 19 gives examples of rationale  
23 for obviousness.

24 Q So you talked about these rationales in your  
25 declaration?

1           A     I don't believe I explicitly referred to any  
2     of them when I performed an obviousness analysis.

3           Q     Do you ever offer an opinion on whether any  
4     prior art reference discloses or suggests any claim  
5     limitation from the 256 patent?

6           A     I'm sorry.

7                 MR. McCLELLEN:  Objection.  Form.

8                 Go ahead.

9                 THE WITNESS:  Can you ask that question  
10    again?

11    BY MS. STAUBACH:

12           Q     Sure.

13                 Do you ever offer an opinion on whether any  
14    prior art reference discloses or suggests any claim  
15    limitation from the 256 patent?

16                 MR. McCLELLEN:  Objection.  Form.

17                 THE WITNESS:  Can you clarify what you mean  
18    by "claim limitation"?  Are you talking about, for  
19    example, 1 A, B, C, D as an example?

20    BY MS. STAUBACH:

21           Q     Yes, that's right.

22           A     I never did an analysis of all of the words  
23    in a single claim element in my declaration.

24           Q     So, similarly, you also -- you also never  
25    provided an opinion on whether any prior art reference

1 discloses any claim as a whole from the 256 patent?

2 MR. McCLELLEN: Objection. Form.

3 THE WITNESS: So just referring, again, to  
4 what I was asked to do. You can see it in paragraph  
5 46. That's what I was asked to do.

6 BY MS. STAUBACH:

7 Q So you were not asked to provide an opinion  
8 on whether any prior art reference discloses any claim  
9 as a whole from the 256 patent?

10 MR. McCLELLEN: Objection. Form. Calls for  
11 attorney-client privilege and work product.

12 You can answer to the extent that you've  
13 talked about this in a declaration, but please do not  
14 discuss conversations with myself and Mehran.

15 THE WITNESS: I was not asked to consider an  
16 entire claim element and perform an invalidity  
17 analysis on a claim as a whole.

18 BY MS. STAUBACH:

19 Q If you did not consider an entire claim  
20 element, then you did not consider an entire claim.

21 Would you agree with that?

22 MR. McCLELLEN: Objection. Form.

23 THE WITNESS: I was not asked to perform an  
24 invalidity analysis.

25 BY MS. STAUBACH:

1 Q So if you were not asked to provide an  
2 invalidity analysis, did you not offer an opinion on  
3 whether any prior art reference teaches any claim as a  
4 whole of the 256 patent?

5 MR. McCLELLEN: Objection. Form.

6 THE WITNESS: I did not analyze any claim as  
7 a whole. But the context of the entire patent was  
8 relevant to my opinion -- the opinions I do express.

9 BY MS. STAUBACH:

10 Q Do you know if Arrasvuori ever discloses the  
11 specific hardware of the wireless node?

12 MR. McCLELLEN: Objection. Form.

13 THE WITNESS: So paragraph 90 of Arrasvuori  
14 talks about a number of different kinds of computers  
15 that could be the wireless node.

16 BY MS. STAUBACH:

17 Q Does paragraph 90 ever use the term "wireless  
18 node"?

19 A I'd have to read it to see if that word is in  
20 there. But wireless nodes are discussed elsewhere in  
21 the disclosure.

22 Q My question is if paragraph 90 uses the term  
23 "wireless node"?

24 A May I read it?

25 Q Certainly.

1           A     So throughout the patent application, it  
2     refers to "wireless nodes and/or other computers" and  
3     90 is listing what could be those wireless nodes  
4     and/or other computers.

5           Q     My question was a little bit different.

6           A     Okay.

7           Q     Does paragraph 90 ever use the term "wireless  
8     node"?

9           A     Paragraph 90 in isolation does not.

10          Q     Does Arrasvuori ever depict a user wearing a  
11     wireless node?

12          A     In the text Arrasvuori does.

13          Q     Does it show it in a figure?

14          A     No. No, I don't believe so.

15          Q     Does Arrasvuori ever talk about a user  
16     wearing a wireless node on an appendage?

17          A     Arrasvuori talks about wearing computers and  
18     also talks about a computerized watch, which would  
19     naturally be on an appendage.

20          Q     That disclosure of computerized watch comes  
21     from paragraph 90; correct?

22          A     Yes.

23          Q     Does paragraph 90 ever use the term "wireless  
24     node"?

25          A     I believe you asked that already, and the

1 answer is still no.

2 Q Do you know if Arrasvuori ever refers to the  
3 term "challenge"?

4 A Yes. Sorry. Yes.

5 Q Where does that happen?

6 A Without reading the entire thing, I can't be  
7 exhaustive or comprehensive, but at least in paragraph  
8 2.

9 Q Do you know if Arrasvuori ever uses the term  
10 "competition"?

11 A Yes. It's describing competitions  
12 throughout, and it does use the word "competition,"  
13 but I will not be able to find everywhere. One  
14 example is paragraph 36.

15 Q Does Arrasvuori ever describe the concept of  
16 winning?

17 A Arrasvuori in many places describes  
18 leaderboards and depictions of who is in front in a  
19 running race, for example, and then also discloses  
20 when you move onto the next stage after achieving a  
21 goal.

22 So achieving a goal or a challenge or winning  
23 is implicit, but I don't know everywhere it might be  
24 talking about winning.

25 Q Paragraph 20 of Arrasvuori describes a user

1 being able to form a team or to join a team.

2 Do you agree with that?

3 I'm sorry. I meant paragraph 18.

4 A Yes, I agree with that. Paragraph 18  
5 discloses the ability to join a team.

6 Q Does this paragraph discuss selecting a  
7 competitor in a challenge?

8 A So paragraph 18 discusses "a graphical user  
9 interface that allows one to learn of available users,  
10 create one or more teams, select one or more users for  
11 one or more new and/or existing teams, to invite one  
12 or more users to join one or more new and/or existing  
13 teams, to request to join one or more new and/or  
14 existing teams, and/or to accept invitation to join  
15 one or more new and/or existing teams."

16 Then it goes on to say, "The users wireless  
17 node and/or other computer might act to perform and  
18 join operation with a server; e.g., a game server".

19 Q I'm not sure that answered my question.

20 Does paragraph 18 describe selecting a  
21 competitor for a challenge?

22 MR. McCLELLLEN: Objection. Form.

23 THE WITNESS: It describes "to select one or  
24 more users for one or more new and/or existing teams  
25 for example."

1                   So yes is the answer to your question.

2       BY MS. STAUBACH:

3           Q       So to you, paragraph 18 indicates that the  
4       user is choosing a competitor?

5           A       It says "to select one" --

6                   MR. McCLELLEN:  Objection.  Form.

7                   THE WITNESS:  It says, "allows them to select  
8       one or more user," so they are selecting another  
9       player.

10       BY MS. STAUBACH:

11           Q       After Arrasvuori -- after a user of  
12       Arrasvuori's system chooses a team, the user is  
13       allowed to select a game to play; right?

14                   I'm looking at paragraph 20.

15                   MR. McCLELLEN:  Objection.  Form.

16                   THE WITNESS:  Paragraph 20 says that "the  
17       wireless node and/or other computer might allow for  
18       selection of one or more games to play."

19       BY MS. STAUBACH:

20           Q       And then paragraph 21 talks about a user  
21       being able to vote for a game that they wish to play.

22                   Do you see that?

23           A       Yes.

24           Q       And then paragraph 22, Arrasvuori says, "The  
25       user selection of one or more games might affect her



1 membership in one or more teams."

2 Do you see that?

3 A Yes.

4 Q Does that mean to you that even if a user  
5 selects another user to play with or against, if those  
6 users choose different games, they might not play  
7 against each other anymore?

8 MR. McCLELLLEN: Objection. Form.

9 THE WITNESS: I understand Arrasvuori to be  
10 explaining a number of possibilities. So if your  
11 question is -- whatever you said, which I'm forgetting  
12 now, is a possibility, that may be so, but I'm not  
13 certain.

14 BY MS. STAUBACH:

15 Q So if I asked you to play a game with me, and  
16 then selected Game A, but you selected Game B, we  
17 wouldn't be playing together anymore in accordance  
18 with Arrasvuori's paragraph 32?

19 MR. McCLELLLEN: Objection. Form.

20 THE WITNESS: Again, Arrasvuori is describing  
21 many possibilities. So if your question is what you  
22 said, is that a possibility, then perhaps.

23 BY MS. STAUBACH:

24 Q Did Arrasvuori ever specifically discuss the  
25 scenario in which a first user invites a second user

1 to compete in a specific challenge?

2 MR. McCLELLEN: Same objection.

3 THE WITNESS: Yes. Paragraph 18.

4 BY MS. STAUBACH:

5 Q Paragraph 18 --

6 A "Invites one or more," so one user to join a  
7 team.

8 Q And is that first user selecting the gameplay  
9 for the second user?

10 A There are other options, so I can't say what  
11 that user would do.

12 Q So Arrasvuori doesn't say whether a first  
13 user is able to invite a second user to compete in a  
14 challenge and where that first user selects the  
15 challenge?

16 MR. McCLELLEN: Objection. Form.

17 THE WITNESS: I would have to read the  
18 specification to find that.

19 BY MS. STAUBACH:

20 Q So sitting here today, you don't know whether  
21 a first user is able to invite a second user to  
22 compete in a challenge where the first user selects  
23 the challenge for both users?

24 MR. McCLELLEN: Objection. Form.

25 THE WITNESS: I believe they can, but, again,

1 I would have to read. This is not part of my  
2 analysis, so I would have to read the whole thing.  
3 It's not in my declaration.

4 BY MS. STAUBACH:

5 Q Would you agree that that disclosure would  
6 come from the game initiation and gameplay operation  
7 section of Arrasvuori?

8 A So the invitation to another user to play a  
9 game with the first user would be part of the game  
10 initiation and gameplay operations.

11 Q Would the first user be able to choose the  
12 game that the second user would play?

13 MR. McCLELLEN: Objection. Form.

14 THE WITNESS: I believe so, but this is not  
15 part of my declaration, so I would have to read  
16 further.

17 BY MS. STAUBACH:

18 Q When you consider the disclosure of  
19 Arrasvuori, did you consider that disclosure as a  
20 skilled artisan is 2023?

21 A No.

22 Q As of what time did you consider the  
23 disclosure of Arrasvuori?

24 A The priority date, which is in 2007.

25 Q What did you do to place yourself in the

1 shoes of a skilled artisan in 2007?

2 A Well, at that point I had been a professor  
3 for ten years at Northwestern teaching master's and  
4 Ph.D. students who satisfy the definition of person of  
5 ordinary skill in the art, so I would put myself in  
6 their shoes.

7 I'm very familiar with what those students  
8 were familiar with at that time.

9 Q What was your experience with video games in  
10 2007?

11 MR. McCLELLEN: Objection. Form.

12 THE WITNESS: Can you be a little bit more  
13 specific with that question?

14 BY MS. STAUBACH:

15 Q Had you done any work with video games?

16 MR. McCLELLEN: Same objection.

17 THE WITNESS: Have I done work with video  
18 games? Do you mean the popular games, like Call of  
19 Duty? What -- I'm sorry.

20 BY MS. STAUBACH:

21 Q Did your career in any way focus on video  
22 games as of 2007?

23 A No. We created video games as part of  
24 human/robot control studies, so we would make games  
25 for people to play. They were not very interesting

1 games, but they were good for our research.

2 So we did create games, but my knowledge of  
3 games, then, is what somebody -- anybody who would  
4 know about games, particularly working with students  
5 who played games a lot in terms of these online video  
6 games, multiplayer video games.

7 Q So when you say "we created video games,"  
8 when was that?

9 A That's been throughout my career as a  
10 professor. So since the late '90s until present. And  
11 these are multiplayer games, but nothing anybody would  
12 pay to play.

13 MS. STAUBACH: You all ready to take a lunch  
14 break?

15 MR. McCLELLEN: I see lunch has arrived.  
16 Let's take a break.

17 MS. STAUBACH: Can we go off record?

18 THE VIDEOGRAPHER: Okay.

19 Going off the record. The time is  
20 approximately 11:47 a.m.

21 (Lunch recess taken.)

22 THE VIDEOGRAPHER: We're going back on the  
23 record. The time is approximately 12:29 p.m.

24 BY MS. STAUBACH:

25 Q All right. Let's switch gears a little bit

1 and talk about Watterson. In paragraph 85 of your  
2 declaration, you point to -- let me know when you're  
3 there. Sorry.

4 You point to user modules that may take the  
5 form of other devices including Treadmill 12.

6 Do you see that?

7 A Yes.

8 Q And the next sentence says, "Watterson  
9 teaches that Treadmill 12 includes one or more sensors  
10 such as a Belt Speed Sensor 230 and Incline Sensor  
11 343."

12 Do you see that?

13 A Yes.

14 Q So Belt Speed Sensor 230, would that be on  
15 the treadmill itself?

16 A Yes.

17 Q Okay.

18 Same question for the incline sensor.

19 Would that be on the treadmill?

20 A I believe so. I don't have the patent here,  
21 but I believe so, yes.

22 Q Continuing on in paragraph 85, the next  
23 sentence says, "The sensors can also gather various  
24 operating parameters such as, but not limited to,  
25 maximum pulse and heart rate, average pulse and heart

1 rate, target heart rate, length of workout session and  
2 the like."

3 Do you see that?

4 A Yes.

5 Q So a pulse rate sensor, would that be on the  
6 treadmill?

7 A It would be on the user and possibly also  
8 attached to the treadmill.

9 Q So it could be, like, a handle bar that you  
10 hold that would take your pulse, for example?

11 A Can I have the patent?

12 Q Sure.

13 Exhibit 3.

14 (Exhibit 3 marked.)

15 BY MS. STAUBACH:

16 Q So that sentence I just read from paragraph  
17 85, you quote, Watterson at Column 25, Line 17 through  
18 20.

19 A Just give me a moment to catch up. Thank  
20 you.

21 Q Would you like me to repeat the question?

22 A Yes.

23 Q So could the pulse rate sensor be a handlebar  
24 that you hold to take your pulse on a treadmill, for  
25 example?

1           A     I don't remember opining on this in my  
2     declaration.

3           Q     So just pointing to paragraph 85, where it  
4     says -- again, that last sentence, "The sensors can  
5     also gather various other operating parameters such  
6     as, but not limited to, maximum pulse and heart rate."

7                     So are you familiar with treadmills?

8           MR. McCLELLEN:  Objection.  Form.

9           THE WITNESS:  Generally, yes.

10    BY MS. STAUBACH:

11          Q     Have you seen treadmills that have, like,  
12     metal bars that you hold to take your pulse rate while  
13     you're working out?

14          A     I'm sorry.  I've not used the treadmill.  I  
15     can't answer that.

16          Q     Have you seen -- you've never used a  
17     treadmill?

18          A     Never used a treadmill.

19          Q     So you don't have an opinion on where the  
20     pulse sensor would be?

21                     MR. McCLELLEN:  Objection.  Form.

22                     THE WITNESS:  I'm sorry.  I can't speak about  
23     treadmills.

24    BY MS. STAUBACH:

25          Q     All right.



1           On page 43 of your declaration, you talk  
2   about Watterson's competitions.

3           Do you see that?

4           A     Yes.

5           Q     In paragraph 89, you discuss that Watterson  
6   teaches Competition Module 314?

7           A     Yes.

8           Q     And then in paragraph 90, you mention three  
9   types of races from Watterson, including the race  
10  around the world, the race against the computer, and  
11  the personalized race.

12          Do you see that?

13          A     Yes.

14          Q     All right.

15                In paragraph 91, you talk about that first  
16  type of race, the race around the world; right?

17          A     Yes.

18          Q     And you quote Watterson in that paragraph for  
19  "Communication Module 254 tracks the exercise  
20  activities of competing users of user Modules 252A  
21  through 252N and computes the distance traveled per  
22  exercise session and per user."

23          Did I read that right?

24          A     Yes.

25          Q     In paragraph 92 -- just one second.  Sorry.

1           If you turn over to page 45, it says that  
2       "Communication Module 254 may deliver a graphical  
3       representation of the user's exercise distance, time,  
4       speed, and other information compared against other  
5       competitors to the user via Module 252A through 252N."

6           Do you see that?

7       A     Yes.

8       Q     In the discussion of the race around the  
9       world, does Watterson ever discuss comparing any data  
10      for users other than distance, time, or speed?

11      A     I chose those as exemplary. I'd have to read  
12      through the description to know for sure.

13      Q     So let's turn to Column 40 of Watterson,  
14      beginning on line 48. That's where the discussion of  
15      the race around the world begins. And it goes until  
16      Column 41, line 25. So if you want to take the time  
17      to read that.

18      A     Just for clarity, I'm starting at line 37?

19      Q     Column 40, line 48.

20      A     Lines 37 also mentions race around the world.

21      Q     Sure. Line 37.

22      A     What's the question?

23      Q     So in this passage, where Watterson discusses  
24      the race around the world, does Watterson mention  
25      comparing anything other than speed, distance, or time

1 of users in the race?

2 A It also talks about total distance, but I  
3 think those are basically the ones that I referred to.

4 Q Next there is a race around the computer --  
5 race against the computer. I'm sorry. That picks up  
6 where the race around the world discussion left off,  
7 beginning Column 41, line 25 through line 40.

8 I'd ask the same question: Does this passage  
9 discuss comparing data for users other than speed,  
10 distance, time?

11 A It looks like the user sets a difficulty  
12 level, and that can affect the speed, incline, or  
13 distance.

14 Q Does it say that the difficulty level is  
15 compared between the users?

16 A I believe this is the race against the  
17 computer.

18 Q Does it say that it's compared between the  
19 user and the computer?

20 A It talks about giving a head start to the  
21 computer or the user, and then the user can race  
22 against the computer, so I imagine the user is  
23 comparing their performance to the computer's for  
24 motivation.

25 Q The final race type, which is the

1 personalized race, that discussion begins at  
2 Column 41, line 42, and continues until Column 42,  
3 line 55. Could you please read that.

4 A Do you want me to look for anything in  
5 particular while I read this?

6 Q So in your declaration in paragraph 93, you  
7 say, "Regarding the personalized race, that Watterson  
8 discloses in the personalized race two or more  
9 individuals scheduled a live-on-live session, such as  
10 in a private room, a personal training Module 312  
11 where they may race against the other while reviewing  
12 graphical representations of the distance, time, and  
13 speed of the other competitors."

14 So my question is the same: Does the  
15 personalized race discussion of Watterson disclose  
16 comparing anything other than distance, time, or speed  
17 of the users?

18 A So you'd like me to read that passage and see  
19 if I see anything else there?

20 Q Yes, please.

21 A So all I see relevant to your question is it  
22 may be appreciated that various other data flows and  
23 displays are appropriate and known to one skilled in  
24 the art in view of the teaching contained herein.

25 Q None specifically other than distance, time,

1 and speed mentioned in that section.

2 Do you agree with that?

3 MR. McCLELLLEN: Objection. Form.

4 THE WITNESS: I see those ones mentioned  
5 explicitly, and any other ones are mentioned  
6 implicitly.

7 BY MS. STAUBACH:

8 Q Do you see pulse rate mentioned in this  
9 section at all describing races?

10 A I wasn't looking for it. I don't think so,  
11 but I have to hedge because I wasn't looking at it. I  
12 don't remember seeing it.

13 Q Would you like to read it again?

14 A Would you like me to read it again?

15 Q If it would help you understand if pulse is  
16 mentioned. So that would be from Column 40, line 37  
17 to Column 42, line 64.

18 A Column 41?

19 Q Column 40, if we're going to start with the  
20 first race.

21 A So for all three of them, you're asking me  
22 now if pulse rate is mentioned anywhere?

23 Q Yes.

24 A For Column 40, line -- whatever --

25 Q 37.

1           A     Okay.

2                     Is there anything else that you would like me  
3     to look for while I'm doing this?

4           Q     This will be the last thing that I'll ask you  
5     to look for. I won't have you read it ten times.

6           A     I do not see pulse rate cited in the passages  
7     you asked me to read.

8           Q     So just to clarify, in Watterson's discussion  
9     of the race around the world, the race against the  
10    computer, and the personalized race in these columns,  
11    there's no mention of pulse rate; correct?

12                     MR. McCLELLEN: Objection. Form.

13                     THE WITNESS: I believe mentions of pulse  
14    rate are elsewhere, but not in those passages.

15    BY MS. STAUBACH:

16           Q     So I know you said you haven't used a  
17    treadmill.

18                     Do you have an understanding of how  
19    treadmills generally work?

20                     MR. McCLELLEN: Objection. Foundation.  
21    Form.

22                     THE WITNESS: Generally, yes.

23    BY MS. STAUBACH:

24           Q     Do you know how a treadmill would calculate  
25    distance run, for example?

1 MR. McCLELLEN: Same objections.

2 THE WITNESS: I could guess.

3 BY MS. STAUBACH:

4 Q What's your guess?

5 MR. McCLELLEN: Same objections.

6 THE WITNESS: I would imagine that it tracks  
7 the speed and effectively numerically integrates it  
8 with respect to time.

9 BY MS. STAUBACH:

10 Q Would a simple calculation of distance on a  
11 treadmill take into account a user's pulse rate?

12 MR. McCLELLEN: Objection. Form.  
13 Foundation.

14 THE WITNESS: The distance that's traveled by  
15 the belt would not be affected by the pulse rate.

16 BY MS. STAUBACH:

17 Q Have you read the entire Watterson reference?

18 A I have, but, as I mentioned, I focused on  
19 particular places, so it's been a while since I've  
20 seen all of it.

21 Q Would you say that Watterson's disclosure is  
22 primarily directed to systems involving treadmills?

23 MR. McCLELLEN: Objection. Form.

24 THE WITNESS: Well, I did not evaluate the  
25 claims of Watterson, which is -- would tell us the

1 scope.

2 BY MS. STAUBACH:

3 Q So you would need to evaluate Watterson's  
4 claims to understand the scope of the Watterson  
5 reference?

6 A Yes.

7 Q Are the disclosures in Watterson that you  
8 rely on in your declaration related to treadmills?

9 A Yes.

10 Q In paragraph 112 of your declaration, in the  
11 Watterson and Arrasvuori section, you say that  
12 "Watterson, however, hints that Watterson's  
13 personalized race might not improve every user's  
14 motivation to exercise."

15 Do you see that?

16 A Yes.

17 Q And the next sentence says, "When describing  
18 a spin class, Watterson states the master may  
19 selectively change groups of participants based on  
20 various criteria such as participants' heart rates,  
21 and change those participants' exercise program while  
22 maintaining other participants at the original or  
23 different exercise level."

24 Do you see that?

25 A Yes.



1 Q This discussion in Watterson that you point  
2 to, Column 49, line 7 through 11, that is not in the  
3 section of Watterson discussing races.

4 Would you agree with that?

5 MR. McCLELLEN: Objection. Form.

6 THE WITNESS: I don't believe the discussion  
7 of races is confined to the few paragraphs I read  
8 earlier. I believe they are either explicitly or  
9 implicitly referred to elsewhere.

10 BY MS. STAUBACH:

11 Q So are you saying that paragraph 49 --  
12 sorry -- Column 49, lines 7 through 11 of Watterson is  
13 directed to a personalized race?

14 A No. I'm not saying that. I'm saying that  
15 it's not necessarily excluded from the personalized  
16 race as defined has people go into separate rooms, but  
17 there may still be a race going on here in Column 49,  
18 7 to 11.

19 Q How does Column 49, lines 7 through 11, of  
20 Watterson hint that Watterson's personalized race  
21 might not improve every user's motivation to exercise?

22 A The idea is that two people cannot compete  
23 directly against each other because they have -- they  
24 are put into different groups because they have  
25 different skill levels. So I may not be able to

1 compete directly against somebody who has improved  
2 fitness level compared to me. And so that might cause  
3 me to be demotivated. I can't compete against that  
4 person.

5 Q So back in Column 41 to Column 42, where the  
6 personalized race is discussed -- I lied. I'm going  
7 ask you to look for something else. I'm sorry.

8 Does this section ever describe an issue with  
9 user motivation?

10 A I'm not referring to that in my report, and  
11 at the moment I'm not seeing it except for implicit  
12 that users are motivated to race against each other  
13 and try to beat each other, the live-on-live  
14 competition. So this is saying that a user would be  
15 motivated to compete against someone. I don't believe  
16 these passages are talking about the demotivation that  
17 would come if they could not compete fairly.

18 Q But if the disclosure of Watterson at  
19 Column 49, 7 through 11, pertains to a personalized  
20 race, and if a master in that situation can already  
21 group participants based on their fitness level,  
22 wouldn't Watterson already propose a solution to this  
23 motivational issue?

24 MR. McCLELLLEN: Objection. Form.

25 THE WITNESS: As an example, if there are two

1 people and they have different fitness levels, they  
2 could each be put in a group of one, and they couldn't  
3 compete against each other.

4 BY MS. STAUBACH:

5 Q Couldn't the master just change one user to a  
6 different exercise level within the personalized race?

7 MR. McCLELLEN: Objection. Form.

8 THE WITNESS: This discloses that the master  
9 can change the exercise level of the participants but  
10 does not disclose that they, then, can compete against  
11 each other directly.

12 BY MS. STAUBACH:

13 Q And is that because this disclosure is not in  
14 the context of races?

15 A I can't say why it's written that way.

16 Q But you do agree that Column 49, lines 7  
17 through 11, doesn't mention the personalized race?

18 A Those lines do not refer explicitly to a  
19 personalized race.

20 Q Do they refer implicitly to a personalized  
21 race?

22 A I'm not certain. It doesn't appear to.

23 Q So you offer the opinion that Watterson can  
24 be combined with Arrasvuori's compensatory functions  
25 in order to cure this motivational issue; is that

1 right?

2 A So, yes, Arrasvuori provides compensatory  
3 operations, which would allow two people of different  
4 fitness levels to compete directly against each other  
5 and see on a graphical user interface how they are  
6 doing relative to each other without the person who  
7 has a higher fitness level having a major advantage  
8 over the person with a lower fitness level.

9 Q How would that -- in this combination, how  
10 would the users' pulse rates be compared?

11 A Sorry. I didn't understand the question.

12 Q Are you proposing in this combination that  
13 the users' pulse rates would be compared to one  
14 another?

15 A Not necessarily. So Arrasvuori teaches ways  
16 of determining fitness levels, and that information  
17 could be used to set up the compensatory operation.

18 Q In your proposed combination, pulse rate as  
19 monitored would be used to compensate a user's  
20 performance; right?

21 A I'm sorry.

22 Where are you referring to?

23 Q I'm talking generally about your opinions  
24 provided from page 55 to 58.

25 A So my opinion here is saying that two users

1 of different fitness levels could compete against each  
2 other and have it be a fair competition or a close  
3 competition by compensating, for example, by allowing  
4 the person with a lower fitness level to have their  
5 performance enhanced essentially relative to the  
6 person with higher fitness level in the feedback that  
7 they receive.

8           So if the person at the lower fitness level  
9 is running four miles per hour and a person of a  
10 higher fitness level is running six miles per hour,  
11 but those are typical numbers for each of them, then  
12 maybe they would be shown as progressing at the same  
13 speed in the graphical interface, so that's what I'm  
14 referring to here in the section -- there's many  
15 different ways that one could do that compensatory  
16 operation. It could be based on target heart rates,  
17 or it could be based on indicated fitness levels by  
18 the users or could be based on the tests that were  
19 performed under Arrasvuori to determine the fitness  
20 levels, so there's several options for that.

21           Q     So you're not proposing during the race  
22 actively monitoring each user's pulse and compensating  
23 their performance during the race based on that  
24 monitoring?

25           A     That is one of the options, one of several.

1 Q But you're not proposing any particular  
2 solution?

3 MR. McCLELLEN: Objection. Form.

4 THE WITNESS: There are many possible  
5 solutions. I gave an illustration in my report, but  
6 that was just an illustration.

7 BY MS. STAUBACH:

8 Q So you're just pointing to Arrasvuori  
9 compensatory operation generally, and saying that it  
10 would have been obvious to combine those with  
11 Watterson in order to level the playing field of the  
12 users in a personalized race?

13 MR. McCLELLEN: Objection. Form.

14 THE WITNESS: Right. The reader of the  
15 Watterson patent might see a deficiency or would see a  
16 deficiency that two users of different fitness levels  
17 could not compete directly against each other, and  
18 then they could turn to Arrasvuori for a solution to  
19 that, and a few different options are given there, and  
20 one option that I explicitly mentioned is measuring  
21 the heart rates of both competitors in realtime.

22 BY MS. STAUBACH:

23 Q And so does Watterson teach how that measured  
24 heart rate could compensate a user's race performance?

25 A I'm sorry.

1                    Could you ask that one more time?

2            Q        Sure.

3                    Does Watterson teach how measured heart rate  
4 could compensate a user's race performance?

5            A        No. I don't think Watterson says that.

6            Q        Does Arrasvuori teach how measured heart rate  
7 could compensate a user's race performance?

8            A        Well, Arrasvuori discloses several  
9 possibilities, so give me a moment so I can be as  
10 accurate as possible.

11                    So Arrasvuori discloses doing tests to see  
12 that user's fitness level or having them specify it  
13 and other information that this normalization, this  
14 compensatory operation, may be based on. Paragraph 84  
15 includes age, gender, weight, target heart weight  
16 range, muscle range, stamina and/or special skills.  
17 So the target heart rate range is one way to specify a  
18 fitness level potentially. In general, older people  
19 would have a lowered target heart rate during exercise  
20 than younger people.

21            Q        Does Arrasvuori ever detail how someone would  
22 actually compensate a user of Watterson's race based  
23 on heart rate?

24                    MR. McCLELLEN: Objection. Form.

25                    THE WITNESS: The description is basically

1 saying that some specification of fitness level would  
2 be used to do the compensation. So there are many  
3 possibilities mentioned, including the target heart  
4 rate.

5 BY MS. STAUBACH:

6 Q So in paragraph 116 of your declaration, you  
7 propose an equation here for calculating apparent  
8 velocity; right?

9 A Yes.

10 Q Does Arrasvuori ever mention this equation?

11 A This is just one illustration how one measure  
12 of fitness could be used to do the compensation. For  
13 example here, if the constant I defined HC is a target  
14 heart rate, then H divided by HC is the ratio of  
15 actual heart rate to the target heart rate, and  
16 presumably the higher that is, the better your  
17 performance, but mostly I just provided this as a way  
18 to make sure that the units for V-prime, the effective  
19 or feedback velocity of the user are the same as the  
20 velocity of the user. If one is measured in miles per  
21 hour, then the other one is measured in miles per  
22 hour, because H divided by HC has no units. If  
23 someone had a higher target heart rate, they would  
24 have to have a higher heart rate for that ratio to be  
25 the same as the other competitor has a lower target



1 heart rate and a lower heart rate.

2 Q So you said the constant I defined, which is  
3 HC --

4 A HC.

5 Q What is that constant? What's the value?

6 A It would depend on the user, and remember,  
7 this is just an illustration. So another way this  
8 could have been written is that V-prime, which is the  
9 compensated velocity, is equal to some function of the  
10 actual velocity, and the actual heart rate and some  
11 other parameter. So this is one such function. I'm  
12 not proposing it as the best one to use by any means.  
13 It's just an example. It's an illustration. So in  
14 this illustration, HC might be in units of beats per  
15 minute. H is in units of beats per minute. So when  
16 you divide them, there's no units.

17 Q So this example that you came up with, a  
18 person of ordinary skill in the art in 2007, would  
19 have known how to come up with this same equation?

20 A Not necessarily this equation, although it's  
21 one possibility. But rather they would read the  
22 compensatory operations of Arrasvuori as saying, I  
23 need to adjust the apparent performance of the user,  
24 say, with the lower fitness level so that they can  
25 compete fairly with a person of a higher fitness

1 level. So one of them or both of them need to be  
2 adjusted so that they can level the playing field.  
3 This is just one possibility to do it.

4 Q So a person of ordinary skill in the art  
5 might not have necessarily come up with this  
6 solution -- sorry. Let me rephrase.

7 A person of ordinary skill in the art  
8 wouldn't have necessarily come up with this particular  
9 solution; right?

10 MR. McCLELLLEN: Objection. Form.

11 THE WITNESS: A person of ordinary skill in  
12 the art might have come up with this or might have  
13 come up with something different. Maybe something  
14 better.

15 BY MS. STAUBACH:

16 Q Can we go off the record?

17 THE VIDEOGRAPHER: Going off the record. The  
18 time is approximately 1:17 p.m.

19 (Recess taken.)

20 THE VIDEOGRAPHER: We're back on the record.  
21 The time is approximately 1:41 p.m.

22 BY MS. STAUBACH:

23 Q Did you ever conduct an analysis of whether  
24 Arrasvuori discloses any claim limitation of the  
25 256 patent claims?

1 MR. McCLELLEN: Objection. Form.

2 THE WITNESS: As I mentioned before, I did  
3 not provide a comprehensive analysis of the claimed  
4 constructions, but I did look at Arrasvuori in the  
5 context of the 256 patent -- and I've forgotten your  
6 question now.

7 BY MS. STAUBACH:

8 Q The question was, did you ever conduct an  
9 analysis of whether Arrasvuori discloses any claim  
10 limitation of the 256 patent claims?

11 MR. McCLELLEN: Same objection.

12 THE WITNESS: So the analysis that I did was  
13 based on the elements from the claim elements and not  
14 the entire claim.

15 BY MS. STAUBACH:

16 Q So you never analyzed whether Arrasvuori  
17 discloses any entire claim limitation of the 256  
18 patent claims?

19 MR. McCLELLEN: Objection. Form.

20 THE WITNESS: I just performed an analysis of  
21 Arrasvuori relative to some of the definitions or some  
22 of the words in the claim. I did not look at the  
23 entire claim as a whole in my declaration.

24 BY MS. STAUBACH:

25 Q So you didn't conduct an analysis of whether

1 Arrasvuori discloses the 256 patents, Claim 1, as a  
2 whole?

3 MR. McCLELLEN: Objection. Form.

4 THE WITNESS: It's not in my declaration, but  
5 I do touch on multiple elements in Claim 1 in my  
6 Arrasvuori analysis.

7 BY MS. STAUBACH:

8 Q But you never conduct that analysis with  
9 respect to Claim 1 as a whole?

10 MR. McCLELLEN: Objection. Form.

11 THE WITNESS: I did not perform an invalidity  
12 analysis for Claim 1.

13 BY MS. STAUBACH:

14 Q You also didn't perform an invalidity  
15 analysis for any claim limitation within Claim 1; is  
16 that right?

17 MR. McCLELLEN: Objection. Form.

18 THE WITNESS: I consider many of the terms in  
19 the claim limitations, but I did not take an entire  
20 claim element and map it onto Arrasvuori.

21 BY MS. STAUBACH:

22 Q Why didn't you perform an invalidity  
23 analysis?

24 MR. McCLELLEN: Objection. Calls for work  
25 product. Attorney-client privilege. Instruct the

1 witness not to answer.

2 (Witness instructed not to answer.)

3 BY MS. STAUBACH:

4 Q Did you conduct an analysis of whether any  
5 prior art reference discloses any claim limitation of  
6 the 256 patent claims?

7 A My analysis of the prior art was in terms of  
8 the terms and the -- within the claims and the claim  
9 elements, but I never took an entire claim element and  
10 compared or mapped directly against the prior art.

11 MS. STAUBACH: That's it from us. Thank you.

12 MR. McCLELLEN: Let's go off the record.

13 And can we have five minutes just to talk it  
14 over?

15 MS. STAUBACH: Sounds good.

16 THE VIDEOGRAPHER: Off the record. The time  
17 is approximately 1:45 p.m.

18 (Recess taken.)

19 THE VIDEOGRAPHER: We're going back on the  
20 record. The time is 1:48 p.m.

21 MR. McCLELLEN: Petitioner has no redirect  
22 examination. I think we're done.

23 COURT REPORTER: You would like an electronic  
24 copy; right?

25 MR. McCLELLEN: Yes. May we please have an

1 electronic rough.

2 THE VIDEOGRAPHER: Your video, you guys want  
3 synced; correct?

4 MR. BOWLING: Yes, please.

5 THE VIDEOGRAPHER: This concludes today's  
6 video deposition of Dr. Kevin Lynch. The original  
7 media of today's proceedings will remain in the  
8 custody of Kusar Lexitas. Going off the record. The  
9 time is approximately 1:49 p.m.

10 (Proceedings concluded at 1:49 p.m.)  
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DECLARATION UNDER PENALTY OF PERJURY

I, Dr. Kevin Lynch, hereby certify under penalty of perjury that I have read the foregoing transcript of my deposition taken on July 27, 2023; that I have made such corrections as appear noted on the Deposition Errata Page, attached herein, as corrected, is true and correct.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2023, at \_\_\_\_\_, California.

\_\_\_\_\_  
Dr. Kevin Lynch

1 STATE OF CALIFORNIA )  
2 )  
3 COUNTY OF LOS ANGELES )

4 I, Brandi Celestino, a Certified Shorthand  
5 Reporter, do hereby certify:  
6

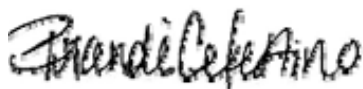
7 That prior to being examined, the witness in the  
8 foregoing proceedings was by me duly sworn to testify  
9 to the truth, the whole truth, and nothing but the  
10 truth;

11 That said proceedings were taken before me at the  
12 time and place therein set forth and were taken down  
13 remotely by me in shorthand and thereafter transcribed  
14 into typewriting under my direction and supervision;

15 I further certify that I am neither counsel for,  
16 nor related to, any party to said proceedings, not in  
17 any way interested in the outcome thereof.

18 In witness whereof, I have hereunto subscribed my  
19 name.  
20

21 Dated: July 27, 2023  
22

23   
24 \_\_\_\_\_

25 Brandi Celestino





DEPOSITION ERRATA SHEET

Page No. \_\_\_\_\_ Line No. \_\_\_\_\_

Change: \_\_\_\_\_

Reason for change: \_\_\_\_\_

Page No. \_\_\_\_\_ Line No. \_\_\_\_\_

Change: \_\_\_\_\_

Reason for change: \_\_\_\_\_

Page No. \_\_\_\_\_ Line No. \_\_\_\_\_

Change: \_\_\_\_\_

Reason for change: \_\_\_\_\_

Page No. \_\_\_\_\_ Line No. \_\_\_\_\_

Change: \_\_\_\_\_

Reason for change: \_\_\_\_\_

\_\_\_\_\_  
Dr. Kevin Lynch

\_\_\_\_\_  
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\$	2	3	6	
<b>\$400</b> 25:11	<b>2</b> 55:7,8 86:8	<b>3</b> 25:9 27:11 95:13, 14	<b>6000</b> 6:13	<b>ability</b> 8:6 87:5
<b>1</b>	<b>20</b> 12:10 86:25 88:14,16 95:18	<b>312</b> 100:10	<b>64</b> 101:17	<b>accelerometers</b> 20:19
<b>1</b> 25:21,22 29:12, 18 46:20 51:3 53:4,5 79:9,18 82:19 116:1,5,9, 12,15	<b>2006</b> 64:15	<b>314</b> 97:6	<b>7</b>	<b>accept</b> 87:14
<b>1(D)</b> 47:8,10	<b>2007</b> 37:22 39:5 91:24 92:1,10,22 113:18	<b>32</b> 89:18	<b>7</b> 76:21 77:4 80:8 105:2,12,18,19 106:19 107:16	<b>acceptable</b> 73:5
<b>10</b> 14:12,19 62:7	<b>2008</b> 27:11	<b>343</b> 94:11	<b>7(A)</b> 44:12	<b>accordance</b> 89:17
<b>10-minute</b> 66:6	<b>2020</b> 11:1	<b>36</b> 86:14	<b>707</b> 6:12	<b>account</b> 56:8 103:11
<b>100</b> 14:13 25:5 59:6	<b>2022</b> 8:20	<b>37</b> 98:18,20,21 101:16,25	<b>72</b> 38:15	<b>accounting</b> 14:14
<b>1001</b> 25:24 26:1	<b>2023</b> 6:2 91:20	<b>4</b>	<b>8</b>	<b>accurate</b> 8:16 111:10
<b>10:11</b> 42:12	<b>21</b> 88:20	<b>40</b> 98:13,19 99:7 101:16,19,24	<b>84</b> 24:16,17 111:14	<b>achieved</b> 50:7
<b>10:48</b> 66:9	<b>22</b> 88:24	<b>41</b> 98:16 99:7 100:2 101:18 106:5	<b>85</b> 94:1,22 95:17 96:3	<b>achieving</b> 86:20, 22
<b>11</b> 105:2,12,18,19 106:19 107:17	<b>23</b> 46:1,4	<b>42</b> 100:2 101:17 106:5	<b>87</b> 24:14	<b>act</b> 87:17
<b>112</b> 104:10	<b>24</b> 47:1	<b>43</b> 97:1	<b>88</b> 24:20	<b>activated</b> 20:18
<b>116</b> 112:6	<b>25</b> 47:20 95:17 98:16 99:7	<b>45</b> 98:1	<b>89</b> 97:5	<b>active</b> 22:13
<b>11:03</b> 66:12	<b>252</b> 24:16	<b>46</b> 76:25 83:5	<b>9</b>	<b>actively</b> 17:24 109:22
<b>11:47</b> 93:20	<b>252A</b> 97:20 98:5	<b>48</b> 46:14 98:14,19	<b>90</b> 84:13,17,22 85:3,7,9,21,23 97:8	<b>activities</b> 97:20
<b>12</b> 94:5,9	<b>252N</b> 97:21 98:5	<b>49</b> 105:2,11,12,17, 19 106:19 107:16	<b>90017</b> 6:13	<b>activity</b> 54:12 73:4,6
<b>12:29</b> 93:23	<b>254</b> 97:19 98:2	<b>5</b>	<b>90s</b> 93:10	<b>actual</b> 11:13,18 33:10 72:8 112:15 113:10
<b>15</b> 22:8 27:5	<b>256</b> 25:19 26:3 27:10 36:24 37:5 38:3 39:20 40:15, 20,23,25 41:10 42:17 43:2,20,23, 24 44:5 45:16 46:7,13,18 47:4,15 48:10,15,19 49:2, 6,8,25 50:20 51:3, 9 52:3,16 53:1,5, 13,15 54:6,11 69:18 71:16,22 76:18 78:6 80:25 82:5,15 83:1,9 84:4 114:25 115:5, 10,17 116:1 117:6	<b>52</b> 39:12 53:8 55:20 57:24 62:10 68:14 69:1 70:22 72:16 75:12	<b>91</b> 97:15	<b>addition</b> 20:6
<b>17</b> 80:10 95:17	<b>1997</b> 17:12	<b>53</b> 39:12 53:9 55:20 56:10 57:24 58:4 62:11 68:14 69:1 70:22 72:16 73:25 75:12	<b>92</b> 97:25	<b>address</b> 46:10,12, 23 47:3,17 49:1 69:18 76:10
<b>18</b> 87:3,4,8,20 88:3 90:3,5	<b>1:17</b> 114:18	<b>55</b> 34:3 100:3 108:24	<b>93</b> 100:6	<b>addressing</b> 47:7
<b>19</b> 81:22	<b>1:41</b> 114:21	<b>56</b> 34:3,8,10	<b>9:04</b> 6:2,5	<b>adjust</b> 113:23
<b>1997</b> 17:12	<b>1:45</b> 117:17	<b>58</b> 108:24	<b>9:59</b> 42:9	<b>adjusted</b> 114:2
<b>1:17</b> 114:18	<b>1:48</b> 117:20		<b>A</b>	<b>advantage</b> 108:7
<b>1:41</b> 114:21	<b>1:49</b> 118:9,10		<b>A-R-R-A-S-V-U- O-R-I</b> 30:14	<b>advised</b> 27:12 77:7
<b>1:45</b> 117:17			<b>a.m.</b> 6:2,5 42:9,12 66:9,12 93:20	<b>affect</b> 88:25 99:12
<b>1:48</b> 117:20			<b>Aaron</b> 7:2	<b>affected</b> 103:15
<b>1:49</b> 118:9,10				<b>affiliations</b> 6:23
				<b>age</b> 111:15
				<b>agree</b> 6:19 23:25 24:4 33:11 34:17

39:17 44:19 46:17 48:20,21 49:14 69:8,10 71:12 74:4 75:9 83:21 87:2,4 91:5 101:2 105:4 107:16	<b>anticipated</b> 80:12,14	11 51:23 52:14,20, 23 53:6,9 54:23 55:3 58:4,8,23 60:8 61:25 62:1 64:4 65:6,22 66:15,17 67:18,24 68:7,8,13 69:6,13 70:3,23 71:21,23 72:7 75:6 84:10,13 85:10,12,15,17 86:2,9,15,17,25 88:11,24 89:9,20, 24 90:12 91:7,19, 23 104:11 108:2, 15 109:19 110:8, 18 111:6,8,11,21 112:10 113:22 114:24 115:4,9,16, 21 116:1,6,20	<b>Athletica</b> 6:9 20
<b>ahead</b> 15:23 59:21 67:17 68:3 74:21 82:8	<b>anticipates</b> 76:18 80:24		<b>attached</b> 21:21 95:8
<b>Alex</b> 14:19	<b>anticipation</b> 80:9, 22 81:6		<b>attorney</b> 6:21
<b>allowed</b> 88:13	<b>anymore</b> 89:7,17		<b>attorney-client</b> 76:6 78:11 83:11 116:25
<b>allowing</b> 109:3	<b>apparent</b> 112:7 113:23		<b>audio</b> 6:18
<b>ambiguous</b> 52:4 53:5 78:20 79:4,5, 12,20 80:1,3	<b>appearances</b> 6:22		<b>average</b> 94:25
<b>amount</b> 63:10	<b>appears</b> 43:20 49:6 50:20 51:3		<b>aware</b> 16:6 41:14, 24 62:6
<b>analysis</b> 26:18 27:16 28:4,24 31:25 32:12 37:7, 11 40:4 42:16,18, 20 44:8 52:9 70:2, 3,16 74:6 78:2,24 79:15 80:22 82:2, 22 83:17,24 84:2 91:2 114:23 115:3, 9,12,20,25 116:6, 8,12,15,23 117:4,7	<b>appendage</b> 85:16,19		<hr/> <b>B</b> <hr/>
<b>analyze</b> 27:2,22 28:20 45:12,14,16 46:6 49:9 78:22 84:6	<b>application</b> 32:17 37:20 39:2 42:3 54:1,21 60:14 61:16 62:15 67:2 85:1	<b>Arrasvuori's</b> 30:24 45:14 54:23 55:15 59:14 66:19 67:11 68:23 72:15 73:24 88:12 89:18 107:24	<b>back</b> 42:11,14 66:11 93:22 106:5 114:20 117:19
<b>analyzed</b> 45:22 115:16	<b>applied</b> 77:21	<b>Arrasvuori-</b> <b>based</b> 34:7	<b>background</b> 17:6
<b>and/or</b> 34:12 35:18,20 55:22,25 56:2,4,5,6,14,20 57:14 85:2,4 87:11,12,13,14,15, 17,24 88:17 111:16	<b>applies</b> 69:13	<b>arrayed</b> 20:21	<b>balance</b> 73:18,20
<b>Angeles</b> 6:1,13	<b>apply</b> 18:20 27:12 77:7 78:15 81:18, 21	<b>arrived</b> 93:15	<b>bar</b> 95:9
<b>animal</b> 19:18	<b>applying</b> 20:17 73:1	<b>art</b> 12:24 16:11 27:9 28:3 31:19 38:10,13 41:11 52:10 70:10 74:9, 15 78:22 80:12,15, 24 82:4,14,25 83:8 84:3 92:5 100:24 113:18 114:4,7,12 117:5,7,10	<b>bars</b> 96:12
<b>annotations</b> 13:16	<b>appreciated</b> 100:22	<b>artificial</b> 19:14	<b>based</b> 22:20 27:8 28:14 39:18,25 40:11,14 41:8 52:9 61:11 66:18 67:25 68:1,4 70:16 71:18 104:19 106:21 109:16,17,18,23 111:14,22 115:13
<b>annual</b> 25:14	<b>approximately</b> 6:5 42:9,12 66:9, 12 93:20,23 114:18,21 117:17 118:9	<b>artisan</b> 29:4 91:20 92:1	<b>baseline</b> 75:1
<b>answering</b> 55:9 64:23	<b>architecture</b> 44:13 46:5,16,23	<b>ascertain</b> 42:20	<b>basically</b> 19:20 99:3 111:25
<b>anticipate</b> 80:20	<b>Arjomand</b> 7:4 12:21 14:17	<b>aspect</b> 58:1	<b>Beach</b> 6:17
	<b>Arnold</b> 6:25	<b>aspects</b> 26:25 27:17 44:5 47:7	<b>beat</b> 106:13
	<b>Arrasvuori</b> 16:16, 23 30:15,22 35:17 37:14,18,19,23 38:14 39:11 40:21 41:2,7 43:10,14 44:3,4,8,20,23 45:1,4,6,13,17,25 46:9,15 47:9 49:6,	<b>assistant</b> 17:13	<b>beats</b> 113:14,15
		<b>associate</b> 17:13	<b>beginning</b> 98:14 99:7
		<b>assume</b> 8:4 36:14	<b>begins</b> 34:5,9 98:15 100:1
		<b>athletes</b> 21:13	<b>behalf</b> 7:1
			<b>belt</b> 20:15 94:10, 14 103:15
			<b>bicycle</b> 11:17
			<b>biological</b> 19:14,
			20
			<b>biosystems</b> 19:10,12,13
			<b>bit</b> 21:15 27:20 32:7 35:9 41:17 46:3 85:5 92:12 93:25
			<b>bits</b> 17:3
			<b>board</b> 46:20
			<b>body</b> 20:10
			<b>bothering</b> 59:23
			<b>bottom</b> 22:9 25:24
			<b>Boulevard</b> 6:12
			<b>boundary</b> 38:7
			<b>bounds</b> 37:12
			<b>Bowling</b> 7:2 118:4
			<b>Brandi</b> 6:16
			<b>break</b> 8:9 32:7 41:19 66:6 93:14, 16
			<b>breaks</b> 8:11
			<b>bring</b> 13:11,14
			<b>broad</b> 64:6
			<b>broken</b> 46:21
			<b>bucket</b> 14:22
			<b>built</b> 42:1
			<b>Bulgar</b> 15:1,4,5
			<hr/> <b>C</b> <hr/>
			<b>calculate</b> 102:24
			<b>calculating</b> 112:7
			<b>calculation</b> 103:10
			<b>California</b> 6:1,13, 17
			<b>call</b> 30:13 65:13 92:18
			<b>called</b> 16:13 63:6
			<b>calls</b> 9:15 22:24 23:18 45:7 47:25 69:21 76:5 78:10

83:10 116:24	<b>claim</b> 28:14 29:8, 12,15,18 30:4,7,9, 10,18,19,23 31:1, 2,4 32:1,19 34:4, 20 37:10 38:12,18 40:2,3,24 41:3,5,8 43:11,22 45:12,20 46:6,11,13,18,20, 21,24 47:3,7,9,17, 22 48:22 49:1,8 50:21 51:3,21 52:10 53:4,5,14 70:2,12,16 76:18 77:11,13,23 78:4, 8,16,24,25 79:2,5, 7,9,11,18,19 80:1, 11,13,14,20,25 82:4,14,18,23 83:1,8,16,17,19,20 84:3,6 114:24 115:9,13,14,17,22, 23 116:1,5,9,12, 15,19,20 117:5,8,9	<b>closes</b> 63:8,10 <b>cocounsel</b> 7:2 <b>collaborate</b> 18:14 <b>collaborative</b> 23:23 <b>colleague</b> 7:4 <b>colloquial</b> 54:7 59:25 61:15 <b>Column</b> 95:17 98:13,16,19 99:7 100:2 101:16,17, 18,19,24 105:2,12, 17,19 106:5,19 107:16 <b>columns</b> 102:10 <b>combination</b> 23:24 108:9,12,18 <b>combinations</b> 44:9 <b>combine</b> 110:10 <b>combined</b> 107:24 <b>common</b> 32:14 36:14 39:5 47:21, 24 48:9,16 <b>commonly</b> 36:5 <b>commonsense</b> 54:7 <b>communicate</b> 29:23 32:20,24 33:7,15 34:6 37:5 38:4 44:1 49:25 50:3,20 51:2,9,17, 20 52:2 53:4 79:3 <b>communicated</b> 39:9 57:9,12,15,22 61:19 71:1 <b>communicates</b> 38:14 <b>communicating</b> 18:15 33:7,9,12,14 37:16 38:23 51:24 <b>communication</b> 9:5,10 33:2,5 50:7, 11,15 52:15,18,24 60:2 66:25 97:19 98:2	<b>communications</b> 48:2 <b>compared</b> 57:6 98:4 99:15,18 106:2 108:10,13 117:10 <b>comparing</b> 98:9, 25 99:9,23 100:16 <b>comparison</b> 48:22 <b>compensate</b> 108:19 110:24 111:4,7,22 <b>compensated</b> 25:8 113:9 <b>compensating</b> 109:3,22 <b>compensation</b> 112:2,12 <b>compensatory</b> 44:18 45:3 107:24 108:2,17 109:15 110:9 111:14 113:22 <b>compete</b> 21:23 90:1,13,22 105:22 106:1,3,15,17 107:3,10 108:4 109:1 110:17 113:25 <b>competing</b> 56:21 57:1 97:20 <b>competition</b> 86:10,12 97:6 106:14 109:2,3 <b>competitions</b> 86:11 97:2 <b>competitive</b> 21:20 <b>competitor</b> 87:7, 21 88:4 112:25 <b>competitors</b> 57:1, 3 69:3 98:5 100:13 110:21 <b>complete</b> 47:17 <b>completely</b> 51:21 <b>completion</b> 55:21	<b>comprehensive</b> 27:15 28:5,24 70:2 78:24 86:7 115:3 <b>comprehensively</b> 70:17 <b>computer</b> 54:24 64:8 66:1 87:17 88:17 97:10 99:4, 5,17,19,21,22 102:10 <b>computer's</b> 99:23 <b>computerized</b> 85:18,20 <b>computers</b> 34:12 35:19 56:6 61:11 84:14 85:2,4,17 <b>computes</b> 97:21 <b>concept</b> 86:15 <b>concepts</b> 44:21 <b>concluded</b> 118:10 <b>concludes</b> 118:5 <b>conclusions</b> 80:23 <b>conduct</b> 114:23 115:8,25 116:8 117:4 <b>conducted</b> 46:10 <b>confined</b> 24:22 105:7 <b>confirm</b> 35:22 78:15 <b>considerations</b> 67:4,14 <b>considered</b> 12:15 44:4 51:18 <b>consistent</b> 43:15 <b>constant</b> 112:13 113:2,5 <b>construction</b> 29:8 30:20 40:3 43:23 53:15 77:11 78:8,16 <b>constructions</b> 31:4 115:4
<b>cameras</b> 20:21 <b>Canada</b> 6:9 <b>capture</b> 20:20 <b>captured</b> 40:2 <b>care</b> 63:24 <b>career</b> 92:21 93:9 <b>careful</b> 40:4 <b>Carnegie</b> 17:19 <b>case</b> 6:11 8:19 11:2,8,11,22 12:2, 4,7,8,12,25 15:9 16:12 33:18 38:22 40:13 43:25 50:8 53:17 54:2 56:11 59:9 63:17 80:4 <b>cases</b> 28:8,11,13 40:10,11 <b>catch</b> 95:19 <b>categories</b> 45:5 <b>categorizations</b> 12:15 <b>caution</b> 48:12 <b>Celestino</b> 6:16 <b>Center</b> 19:10 <b>cetera</b> 11:19 46:22 <b>challenge</b> 25:20 29:25 86:3,22 87:7,21 90:1,14, 15,22,23 <b>change</b> 104:19,21 107:5,9 <b>choose</b> 89:6 91:11 <b>chooses</b> 88:12 <b>choosing</b> 69:17 88:4 <b>chose</b> 98:11 <b>circle</b> 65:12 <b>circumstances</b> 21:8 <b>cited</b> 67:20 102:6	<b>claimed</b> 115:3 <b>claims</b> 26:13,15, 18,19,21,24 27:3, 16,23 28:20,24 29:2,7 31:6,15 40:5 42:17,19,21 43:2,13,20 45:14, 17,19 46:10 47:15, 16,18 48:10,19 49:2 50:1 52:3,16 69:18 78:20 103:25 104:4 114:25 115:10,18 117:6,8 <b>clarify</b> 82:17 102:8 <b>clarity</b> 98:18 <b>class</b> 104:18 <b>classifications</b> 12:9 <b>clean</b> 13:20 <b>clear</b> 8:7 37:22 40:17 43:24 50:4 51:11,21 52:1 68:15,16,17 71:17, 20,23 72:6 <b>close</b> 25:5,16,17 33:19 56:19 109:2 <b>closed</b> 63:9,11,13			

<b>construed</b> 31:11 78:21	72:7 75:2		<b>definitions</b> 31:3, 12 38:24,25 39:18 40:12,14 41:14,24 42:4 57:23 61:15 78:23 115:21	98:12 111:25
<b>consultant</b> 25:15	<b>control</b> 18:22 19:18 20:8 92:24	<b>D</b>		<b>design</b> 18:21
<b>consulting</b> 25:8	<b>conversations</b> 10:2 83:14	<b>data</b> 21:3 33:7,8, 10 34:24,25 35:2, 4,7,13,24 36:2,3, 13 57:19 62:18,22 74:1 98:9 99:9 100:22	<b>definitive</b> 32:14	<b>detail</b> 11:16 80:19 111:21
<b>contained</b> 100:24	<b>conveyor</b> 20:15	<b>date</b> 27:11 91:24	<b>Defrank</b> 6:14	<b>detailed</b> 14:14 42:18
<b>contemplated</b> 73:24	<b>cooperate</b> 18:14	<b>days</b> 14:1,3,4,5	<b>degree</b> 17:20	<b>details</b> 81:13
<b>contents</b> 44:12	<b>copy</b> 13:8,20 117:24	<b>dealing</b> 12:5	<b>delayed</b> 60:19	<b>detect</b> 20:19
<b>context</b> 15:13 30:11,20,22 31:9, 11 32:13 34:6 36:23 37:4,17,20 38:3 39:4,19 43:2, 23,25 50:10,20 52:3,25 53:13,15 54:9,11,14 55:1,15 58:19,21,22 59:12, 18 60:11,25 61:2, 16 64:10,15 68:5 71:16 72:2,12,13 75:23 77:16 78:21 80:5,6 84:7 107:14 115:5	<b>cord</b> 21:7	<b>decision</b> 14:25 16:9 66:24	<b>delineate</b> 37:7 40:1,24	<b>determination</b> 38:17 41:7
<b>context-</b> <b>dependent</b> 39:3	<b>corners</b> 61:24	<b>declaration</b> 12:18,19,23 13:1, 4,5,9,21 14:20,22 15:1 23:12,13 24:3,25 25:3,7 26:21,23 27:6 30:6 31:25 34:1 36:7,9, 12,16 38:9,15 39:18,21,25 44:11 45:24 47:10 52:6,8 55:18 57:25 58:3 69:11,19 70:13 74:7 76:11,22,25 78:17 81:3,25 82:23 83:13 91:3, 15 94:2 96:2 97:1 100:6 104:8,10 112:6 115:23 116:4	<b>delineation</b> 40:17	<b>determine</b> 42:16 56:19 70:19 109:19
<b>contexts</b> 71:16	<b>correct</b> 15:3 17:10 19:11 52:6 60:9,14 62:1,19,21 66:20 72:9 76:2,19 80:25 85:21 102:11 118:3	<b>deduced</b> 40:12	<b>deliver</b> 98:2	<b>determined</b> 40:21
<b>continue</b> 6:19 39:23 49:18 76:24	<b>corrections</b> 24:10	<b>deficiency</b> 110:15,16	<b>demotivated</b> 106:3	<b>determining</b> 75:1 108:16
<b>continues</b> 100:2	<b>correctly</b> 30:2	<b>define</b> 62:25	<b>demotivation</b> 106:16	<b>device</b> 33:13,14 50:11,12 52:19
<b>Continuing</b> 94:22	<b>counsel</b> 10:3 23:24	<b>defined</b> 32:16 45:20 68:18 105:16 112:13 113:2	<b>depend</b> 39:2 42:2 54:1,9,20 58:21 113:6	<b>devices</b> 50:8,10, 23 51:5,6,24 94:5
<b>continuous</b> 31:10,13 37:25 53:25 54:3,4,13,25 55:14,18 58:1,16, 20,25 59:10,12,18 60:1 61:2,5,9 63:12,14,20 65:19 66:25 68:8,10 69:7,12,14 70:6 71:15,18 72:2,4, 12,18,25 74:3,18	<b>counsels</b> 6:21	<b>definition</b> 31:14 32:14 38:11,20 39:10,25 41:25 42:3 43:1,6,19 49:12,20,24 50:19 51:13,17 53:6 54:4 57:11,21 59:11 61:7,13,15 65:17, 18 71:2,17,20,23 72:6,11,25 92:4	<b>dependent</b> 58:11	<b>diagram</b> 65:11
<b>continuous-time</b> 63:5	<b>couple</b> 18:18 24:23	<b>deduced</b> 40:12	<b>depending</b> 31:10	<b>difference</b> 33:4 54:3
<b>continuously</b> 29:22 34:5 37:15 39:8 53:12,16,20, 22 54:8 57:8,21 58:12 61:19 62:23 66:14,18 67:25	<b>coupled</b> 21:22	<b>deficiency</b> 110:15,16	<b>depends</b> 67:8 72:4,8,13 73:21 80:4,6	<b>differentiated</b> 61:10
	<b>courses</b> 18:1,2	<b>define</b> 62:25	<b>depict</b> 85:10	<b>difficulty</b> 99:11,14
	<b>court</b> 6:15,23 7:9 11:8 18:25 30:12 117:23	<b>defined</b> 32:16 45:20 68:18 105:16 112:13 113:2	<b>depiction</b> 56:4	<b>digits</b> 14:13 25:4
	<b>Court's</b> 14:25	<b>definition</b> 31:14 32:14 38:11,20 39:10,25 41:25 42:3 43:1,6,19 49:12,20,24 50:19 51:13,17 53:6 54:4 57:11,21 59:11 61:7,13,15 65:17, 18 71:2,17,20,23 72:6,11,25 92:4	<b>depictions</b> 86:18	<b>directed</b> 103:22 105:13
	<b>create</b> 87:10 93:2	<b>deduced</b> 40:12	<b>deposed</b> 10:22 11:20	<b>directly</b> 77:12 105:23 106:1 107:11 108:4 110:17 117:10
	<b>created</b> 92:23 93:7	<b>deficiency</b> 110:15,16	<b>deposition</b> 6:7,12 7:6 8:13,16 10:20 12:17 13:25 14:10 118:6	<b>director</b> 19:9
	<b>creating</b> 33:6 34:25 35:2	<b>define</b> 62:25	<b>describe</b> 15:21 48:2 86:15 87:20 106:8	<b>disclose</b> 47:9 57:24 59:23 61:22 100:15 107:10
	<b>criteria</b> 104:20	<b>defined</b> 32:16 45:20 68:18 105:16 112:13 113:2	<b>describes</b> 86:17, 25 87:23	<b>disclosed</b> 41:3
	<b>cure</b> 107:25	<b>definition</b> 31:14 32:14 38:11,20 39:10,25 41:25 42:3 43:1,6,19 49:12,20,24 50:19 51:13,17 53:6 54:4 57:11,21 59:11 61:7,13,15 65:17, 18 71:2,17,20,23 72:6,11,25 92:4	<b>describing</b> 46:15 48:14 49:5 69:2 86:11 89:20 101:9 104:17	<b>discloses</b> 35:17 37:14,23 39:11 53:7 66:17 67:18 68:8 69:6 82:4,14 83:1,8 84:10 86:19 87:5 100:8 107:8 111:8,11 114:24
	<b>current</b> 69:4	<b>deduced</b> 40:12	<b>description</b> 46:22 62:13 68:4 71:24	
	<b>custody</b> 118:8	<b>deficiency</b> 110:15,16		
	<b>customary</b> 31:6 77:14,24 78:16	<b>define</b> 62:25		
	<b>CV</b> 17:5 22:8	<b>defined</b> 32:16 45:20 68:18 105:16 112:13 113:2		

115:9,17 116:1 117:5	<b>distinguish</b> 63:25	116:5 117:9	<b>et al</b> 6:9	<b>expert</b> 12:4 25:15 28:7 40:10 64:20
<b>disclosing</b> 41:8 60:3 61:1	<b>district</b> 11:7 46:19	<b>Ellis</b> 16:20,23	<b>evaluate</b> 103:24 104:3	<b>expertise</b> 12:11, 13
<b>disclosure</b> 30:24 39:14 45:1,4 51:23 61:25 62:4 68:5 72:15 77:17 84:21 85:20 91:5,18,19, 23 103:21 106:18 107:13	<b>divide</b> 113:16	<b>email</b> 9:10	<b>evaluating</b> 21:8, 10	<b>explain</b> 41:1 53:9 78:5
<b>disclosures</b> 65:19 104:7	<b>divided</b> 112:14,22	<b>embodiments</b> 56:7	<b>event</b> 38:22 63:19, 24 64:2,8,9 65:10, 14	<b>explaining</b> 89:10
<b>discrete</b> 54:3 61:10,12	<b>documents</b> 12:19,20,22 13:4, 11 14:11,21,23 15:6,14	<b>EMG</b> 20:17	<b>event-based</b> 63:6,16,18 64:5,6 65:7,11,13,21 66:3	<b>explicit</b> 72:1
<b>discrete-time</b> 63:5 64:7 65:12, 16,22 66:2	<b>door</b> 63:8,10,11,13	<b>encoded</b> 36:13	<b>events</b> 38:23 63:16 73:2	<b>explicitly</b> 36:21 48:23 60:6,8 68:16 82:1 101:5 105:8 107:18 110:20
<b>discuss</b> 45:6 46:17 47:14 69:20 83:14 87:6 89:24 97:5 98:9 99:9	<b>double</b> 14:13 25:4	<b>encodes</b> 35:14 36:3	<b>exact</b> 8:20	<b>express</b> 84:8
<b>discussed</b> 15:22 42:15 72:16 73:3 79:2 84:20 106:6	<b>drafted</b> 23:24	<b>encompassed</b> 37:8	<b>examination</b> 7:16 117:22	<b>extent</b> 9:13 48:2 69:23 83:12
<b>discusses</b> 58:4 87:8 98:23	<b>draw</b> 73:13	<b>end</b> 19:5	<b>examined</b> 7:13	<hr/> <b>F</b> <hr/>
<b>discussing</b> 45:25 105:3	<b>drawing</b> 73:15,17	<b>engineer</b> 54:2,5 61:8	<b>examiner</b> 22:25 23:3	<b>fact</b> 66:18
<b>discussion</b> 34:4,8 35:24 36:6 98:8,14 99:6 100:1,15 102:8 105:1,6	<b>drawn</b> 80:23	<b>engineering</b> 17:8, 21 40:15 41:9 59:10 65:17	<b>examples</b> 18:12 19:7,16 37:9 60:20 81:22	<b>factor</b> 73:12
<b>discussions</b> 69:24	<b>duly</b> 7:13	<b>enhanced</b> 109:5	<b>exclude</b> 69:24 70:12	<b>factors</b> 73:10,22
<b>display</b> 35:13,20, 22 55:23 56:3,7, 14,18 57:6	<b>duration</b> 73:21	<b>enjoy</b> 64:14	<b>excluded</b> 40:2,19 41:5 69:19 105:15	<b>fair</b> 35:1 109:2
<b>displayed</b> 36:4 57:20	<b>Duty</b> 92:19	<b>enjoyable</b> 64:11 66:20,23 67:5 72:22 74:23,25	<b>exemplary</b> 98:11	<b>fairly</b> 50:4 106:17 113:25
<b>displaying</b> 33:10	<b>dynamics</b> 18:3	<b>enjoying</b> 67:15 68:23,25	<b>exercise</b> 10:18 11:17 60:15 97:19, 22 98:3 104:14,21, 23 105:21 107:6,9 111:19	<b>fall</b> 65:22
<b>displays</b> 100:23	<hr/> <b>E</b> <hr/>	<b>entire</b> 29:15,18 31:1,16 36:12 40:4 45:19,20 49:8 77:17 83:16,19,20 84:7 86:6 103:17 115:14,17,23 116:19 117:9	<b>exhaustive</b> 24:21 86:7	<b>familiar</b> 16:24 17:2 75:21 81:10 92:7,8 96:7
<b>distance</b> 59:15 97:21 98:3,10,25 99:2,10,13 100:12, 16,25 102:25 103:10,14	<b>e.g.</b> 87:18	<b>entirety</b> 26:16,18, 19,22 46:24	<b>existing</b> 87:11,12, 14,15,24	<b>fashion</b> 68:11
	<b>earlier</b> 38:19 50:24 64:10 65:4 71:7 72:16 79:2,25 105:8	<b>entitled</b> 46:4	<b>exhibit</b> 25:21,22, 24 26:1 33:24 55:7,8 95:13,14	<b>fast</b> 21:18 73:19
	<b>effective</b> 112:18	<b>environment</b> 11:18	<b>exoskeleton</b> 21:10	<b>features</b> 31:12
	<b>effectively</b> 61:1,4 103:7	<b>equal</b> 113:9	<b>exoskeletons</b> 20:11	<b>feedback</b> 112:19
	<b>effectors</b> 19:6	<b>equation</b> 112:7,10 113:19,20	<b>expand</b> 35:9	<b>feedback</b> 11:19 39:16 44:15 45:2 49:12 61:18 109:6
	<b>effort</b> 23:14	<b>equipment</b> 10:18	<b>experience</b> 21:2 22:2 62:14 92:9	<b>feel</b> 11:17 33:19 36:20
	<b>electrical</b> 17:21	<b>errors</b> 24:24		<b>field</b> 29:4 64:20 110:11 114:2
	<b>electronic</b> 117:23 118:1	<b>essentially</b> 109:5		<b>fields</b> 18:12
	<b>element</b> 26:24 28:24,25 32:19 40:3,18,19 41:4,5, 8 46:11 47:9,17 49:8 51:21 53:4 78:4 82:23 83:16, 20 116:20 117:9	<b>estimation</b> 8:21		<b>figure</b> 24:17 85:13
	<b>elements</b> 30:23 45:20 46:21,24 52:10 115:13			<b>filed</b> 6:10 24:3
				<b>final</b> 31:14 99:25



<b>find</b> 86:13 90:18	102:12,21 103:12,23 105:5 106:24	60:12,16,21,22 64:11,15 67:19	<b>goal</b> 56:2,20 86:21,22	<b>HC</b> 112:13,14,22 113:3,4,14
<b>fine</b> 58:18	107:7 110:3,13	68:5 75:23 88:18,25 89:6 92:9,15,18,22,23,24 93:1,2,3,4,5,6,7,11	<b>good</b> 6:4 93:1 117:15	<b>head</b> 8:8 99:20
<b>fit</b> 65:18,19	111:24 114:10		<b>goods</b> 12:9	<b>hear</b> 8:3
<b>fitness</b> 11:3,4 21:3,5 55:22 56:1,8,13 58:6 106:2,21 107:1 108:4,7,8,16 109:1,4,6,8,10,17,19 110:16 111:12,18 112:1,12 113:24,25	115:1,19 116:3,10,17	<b>gather</b> 94:23 96:5	<b>government</b> 17:18	<b>heard</b> 15:2
<b>fixed</b> 66:3	<b>forming</b> 26:20 27:13 77:8,21 81:19	<b>gathering</b> 34:24	<b>graphical</b> 35:25 55:23 56:14,16 57:2 58:7,8 69:7 75:8,17 87:8 98:2 100:12 108:5 109:13	<b>heart</b> 56:10 94:25 95:1 96:6 104:20 109:16 110:21,24 111:3,6,15,17,19,23 112:3,14,15,23,24 113:1,10
<b>flew</b> 14:7	<b>Forrest</b> 7:3 9:4,5 10:3 12:20 13:14 14:17 23:15	<b>gave</b> 19:16 44:20 110:5	<b>ground</b> 7:24	<b>hedging</b> 61:6
<b>flip</b> 45:23	<b>Foundation</b> 11:3 65:9 81:7 102:20 103:13	<b>geared</b> 60:15	<b>grounds</b> 34:7 81:6,10	<b>held</b> 6:12 17:11
<b>flows</b> 100:22	<b>frame</b> 6:6	<b>gears</b> 93:25	<b>group</b> 106:21 107:2	<b>high</b> 21:13 64:1
<b>focus</b> 18:10 29:13 55:17 58:1,2 59:7 67:19 69:11 70:8 92:21	<b>free</b> 33:19	<b>gender</b> 111:15	<b>groups</b> 104:19 105:24	<b>higher</b> 108:7 109:6,10 112:16,23,24 113:25
<b>focused</b> 17:1 103:18	<b>frequency</b> 54:19 62:17 64:1 72:17 74:2 75:7,17	<b>general</b> 29:9 111:18	<b>guess</b> 33:22 103:2,4	<b>highest</b> 20:4
<b>Foerster</b> 7:5 23:16	<b>frequently</b> 58:8	<b>generally</b> 21:4 30:11 33:14 96:9 102:19,22 108:23 110:9	<b>GUI</b> 35:25 57:20	<b>highlighting</b> 13:17
<b>force</b> 20:16	<b>front</b> 13:10 16:6 37:19 39:13 53:10 55:3 86:18	<b>generate</b> 29:22 32:20,24 33:6 34:5,19,23 37:5 38:3 44:1 53:12,17,19	<b>GUIS</b> 35:20 36:4 56:5	<b>hills</b> 11:18
<b>forces</b> 20:16	<b>full</b> 17:14 32:1 42:21 77:6 78:3	<b>generated</b> 39:8 53:24 57:8,13,22 58:12 61:19 62:18,23 68:11 70:25 75:2	<b>guys</b> 118:2	<b>hint</b> 105:20
<b>forgetting</b> 89:11	<b>fun</b> 60:19 64:18	<b>generates</b> 34:10,15 35:3,23 38:14 53:17 72:8	<b>H</b>	<b>hints</b> 104:12
<b>forgotten</b> 11:25 115:5	<b>function</b> 113:9,11	<b>generating</b> 34:9 37:15 38:23 40:21 53:21,22 66:14,18 67:25	<b>half</b> 8:23,24	<b>history</b> 77:17
<b>form</b> 22:4,18 23:7 27:4,24 28:22 31:22 35:6 36:17 39:22 43:3 44:6 47:5 48:11 49:3,17 50:2,13,22 51:4,10,19 52:7 59:1,20 60:10 62:2,12,24 63:21 64:16 65:1,8,24 66:21 67:7 68:24 69:9 70:7,14,21 71:14 72:10,20 73:16 74:5,20 75:10,19 76:12 78:1,18 79:13 81:1,12 82:7,16 83:2,10,22 84:5,12 87:1,22 88:6,15 89:8,19 90:16,24 91:13 92:11 94:5 96:8,21 101:3	<b>functionality</b> 20:5	<b>generation</b> 33:2,4 35:4 37:25 54:13,25 55:14 58:25 59:18 60:1 66:25 68:8,10 72:4	<b>hand</b> 25:19 33:17 71:8 72:9	<b>hold</b> 9:11 31:18 95:10,24 96:12
	<b>functions</b> 107:24	<b>give</b> 8:13,15 33:23 49:4 55:4 64:23 77:22,24 95:19 111:9	<b>handle</b> 95:9	<b>honestly</b> 55:18
	<b>G</b>	<b>giving</b> 44:24 51:8,12 60:15 62:14 99:20	<b>handlebar</b> 95:23	<b>hope</b> 15:4
	<b>G-U-I</b> 35:25		<b>hands</b> 19:5	<b>hour</b> 25:11 41:18 53:24 58:23 109:9,10 112:21,22
	<b>game</b> 44:13 45:1 46:25 47:13,20 48:8,25 54:24 56:4,12,17 57:4,5 58:5 60:18,24 66:19 67:5,12,15 68:23 71:24 87:18 88:13,21 89:15,16 91:6,9,12		<b>happen</b> 50:16 86:5	<b>hour-long</b> 73:6
	<b>gameplay</b> 44:14 45:1 47:1 90:8 91:6,10		<b>happening</b> 52:20 63:24	<b>hours</b> 14:9 25:2
	<b>games</b> 11:24 21:23 37:21 39:4		<b>happy</b> 8:2,4 79:9	<b>human</b> 18:17,20 19:16,24 20:1,6,7,9,15,25 21:3,5,9
			<b>haptic</b> 11:19 19:17	<b>human's</b> 20:3
			<b>hardware</b> 84:11	<b>human/robot</b> 92:24
			<b>hardware-based</b> 22:3	<b>humans</b> 18:18,21,22 21:18,22
				<b>hypothetical</b>

74:12	<b>indicating</b> 29:25	87:9 108:5 109:13		<b>lawyer</b> 22:25 27:6, 12 28:1 77:7
<hr/>	<b>indicators</b> 55:24	<b>interfaces</b> 19:17	<hr/>	<b>lawyers</b> 22:22
<b>I</b>	69:7 75:8,17	35:21 39:12 56:5	<b>J</b>	<b>leaderboard</b> 35:20 38:16
<hr/>	<b>individual</b> 30:6	<b>interfacing</b> 19:14	<b>Japan</b> 17:18	<b>leaderboards</b> 35:17,21,23 36:3 86:18
<b>idea</b> 53:19 60:9 105:22	37:17 40:6 42:19 66:24	22:23	<b>job</b> 27:25	<b>learn</b> 87:9
<b>identifying</b> 37:14	<b>individuals</b> 100:9	<b>interpret</b> 61:17	<b>jogging</b> 56:14 57:2 58:6 59:15	<b>learned</b> 23:5,9
<b>illustration</b> 110:5, 6 112:11 113:7,13, 14	<b>inertial</b> 20:23	<b>interpreted</b> 31:8 58:19 59:12	<b>join</b> 87:1,5,12,13, 14,18 90:6	<b>learning</b> 21:10
<b>imagine</b> 99:22 103:6	<b>information</b> 9:16 35:11 45:6 98:4 108:16 111:13	<b>interrogating</b> 19:19	<b>joining</b> 7:18	<b>left</b> 61:14 99:6
<b>Immediately</b> 17:17	<b>initiation</b> 44:14 45:1 46:25 47:13, 20 48:8 91:6,10	<b>interrupt</b> 41:16 77:2	<b>joint</b> 23:14	<b>legal</b> 6:15 27:7,12, 14 77:7,20 81:16, 18
<b>implemented</b> 20:15	<b>injury</b> 20:13 21:7	<b>interruption</b> 13:2	<b>JULY</b> 6:2	<b>legged</b> 19:2
<b>implicit</b> 71:24 86:23 106:11	<b>instance</b> 28:4 56:4,19	<b>interval</b> 58:14 71:18 72:4 73:5	<hr/>	<b>legs</b> 20:12
<b>implicitly</b> 101:6 105:9 107:20	<b>institution</b> 16:8	<b>intervals</b> 66:3	<b>K</b>	<b>length</b> 73:11 75:6, 16,22 95:1
<b>implied</b> 33:3 72:6	<b>instruct</b> 9:17 23:20 45:9 76:7 78:12 116:25	<b>interviews</b> 23:2	<b>K-E-V-I-N</b> 7:21	<b>level</b> 99:12,14 104:23 106:2,21 107:6,9 108:7,8 109:4,6,8,10 110:11 111:12,18 112:1 113:24 114:1,2
<b>important</b> 20:2 27:2,22 44:23 76:10	<b>instructed</b> 9:18, 25 23:21 45:10 76:8 78:13 117:2	<b>invalid</b> 80:11	<b>Kevin</b> 6:8 7:12,21 118:6	<b>levels</b> 105:25 107:1 108:4,16 109:1,17,20 110:16
<b>imported</b> 12:9	<b>instruction</b> 15:23	<b>invalidity</b> 28:4,10 40:4 80:13 83:16, 24 84:2 116:11,14, 22	<b>kind</b> 18:10 21:16	<b>Lexitas</b> 6:17 118:8
<b>impossible</b> 57:10	<b>integrates</b> 103:7	<b>invention</b> 80:16	<b>kinds</b> 20:6 67:19 84:14	<b>lied</b> 106:6
<b>improve</b> 104:13 105:21	<b>integrate</b> 103:7	<b>inventor</b> 22:11	<b>knowledge</b> 36:14, 15 93:2	<b>lift</b> 48:21 49:7
<b>improved</b> 106:1	<b>intended</b> 47:23 48:9	<b>invitation</b> 87:14 91:8	<b>Kusar</b> 6:17 118:8	<b>lifted</b> 48:18
<b>IMUS</b> 20:23	<b>intentionally</b> 70:5	<b>invite</b> 87:11 90:13, 21	<hr/>	<b>light</b> 40:25
<b>incline</b> 94:10,18 99:12	<b>intentions</b> 18:20 19:24	<b>invites</b> 89:25 90:6	<b>L</b>	<b>limit</b> 78:3
<b>include</b> 18:12 36:6 43:5,6,7 64:7 72:25 80:4	<b>interact</b> 21:11	<b>involve</b> 52:19	<b>L-Y-N-C-H</b> 7:21	<b>limitation</b> 29:13, 21 30:4,7,9,11,18, 23 31:1,3,21,24 32:1,8 34:5 37:13 38:12 43:11,12 46:13 47:15 82:5, 15,18 114:24 115:10,17 116:15 117:5
<b>included</b> 40:18 81:5	<b>interacting</b> 20:1	<b>involved</b> 11:24 22:16,24	<b>L.A.</b> 14:7	
<b>includes</b> 32:8 64:7 65:12,21 94:9 111:15	<b>interaction</b> 18:17 20:2 21:24	<b>involving</b> 103:22	<b>lab</b> 17:18	
<b>including</b> 61:8 94:5 97:9 112:3	<b>interesting</b> 92:25	<b>IPR</b> 8:13 10:7 11:8, 9 26:1	<b>landmark</b> 56:12, 18 57:5 58:5	
<b>income</b> 25:14	<b>interface</b> 19:22 29:25 34:9,11,16 35:4,5,7,14,25 36:12,24 37:5 38:4,15 40:22 53:20,24 57:9,13, 18 60:18 61:18 62:20 66:15,18 67:25 68:9 70:25 72:8,18 74:1,16	<b>IPR2023-00189</b> 6:11	<b>language</b> 37:10 38:18 46:9 47:16, 18 48:22 49:1 70:16	
<b>inconsequential</b> 24:7		<b>isolation</b> 85:9	<b>lasted</b> 58:17 73:4	
		<b>issue</b> 106:8,23 107:25	<b>lasts</b> 58:14 59:15	
		<b>issued</b> 22:19	<b>late</b> 93:10	
			<b>latency</b> 32:15,16, 18 33:1 38:21 39:1,2,8 42:1,2 43:8,14,17,19,21, 25 49:22 57:19 62:14	



<b>limitations</b> 27:3, 23 28:14 40:24 45:13 46:7,18 47:4,8 70:2,17 116:19	<b>Lynch</b> 6:8 7:7,12, 18,21 9:13,17 15:19 48:1,12 64:22 69:23 118:6	49:3,16 50:2,13,22 51:4,10,19 52:7,17 53:2 59:1,20 60:10 62:2,12,24 63:21 64:16,22 65:1,8,24 66:21 67:7,16 68:2,24 69:9,21 70:7,14,21 71:10, 13 72:10,20 73:16 74:5,20 75:3,10,19 76:5,12 78:1,10,18 79:13,21 81:1,7,12 82:7,16 83:2,10,22 84:5,12 87:22 88:6,15 89:8,19 90:2,16,24 91:13 92:11,16 93:15 96:8,21 101:3 102:12,20 103:1,5, 12,23 105:5 106:24 107:7 110:3,13 111:24 114:10 115:1,11, 19 116:3,10,17,24 117:12,21,25	<b>media</b> 118:7	<b>mirroring</b> 44:25
<b>limited</b> 94:24 96:6	<b>M</b>		<b>meet</b> 14:5	<b>mistake</b> 24:19
<b>limiting</b> 65:13	<b>made</b> 80:16		<b>meeting</b> 14:2,3	<b>mixed</b> 17:22
<b>Lindsey</b> 6:25 15:20 33:23	<b>maintaining</b> 104:22		<b>meetings</b> 13:24, 25 14:15	<b>modeling</b> 18:3
<b>lines</b> 98:20 105:12,19 107:16, 18	<b>major</b> 108:7		<b>meets</b> 44:4 72:3 78:23	<b>Module</b> 97:6,19 98:2,5 100:10
<b>list</b> 14:21	<b>make</b> 8:7 20:2 24:10 35:17,21 38:17 61:16 63:19 92:24 112:18		<b>Mehran</b> 7:4 12:21 14:17 48:3 69:25 83:14	<b>modules</b> 94:4 97:20
<b>listed</b> 45:3	<b>makes</b> 65:15 68:17		<b>Melon</b> 17:19	<b>moment</b> 29:15 34:23 76:23 95:19 106:11 111:9
<b>listing</b> 27:14 85:3	<b>making</b> 11:17		<b>membership</b> 89:1	<b>monitored</b> 108:19
<b>lists</b> 22:9	<b>manipulate</b> 19:6		<b>memory</b> 55:5	<b>monitoring</b> 44:14 45:2 109:22,24
<b>live-on-live</b> 100:9 106:13	<b>manipulation</b> 19:4		<b>mention</b> 97:8 98:24 102:11 107:17 112:10	<b>month</b> 8:20 73:4
<b>located</b> 6:17	<b>map</b> 116:20		<b>mentioned</b> 30:19 49:21 51:23 52:18 64:10 78:19 101:1, 4,5,8,16,22 103:18 110:20 112:3 115:2	<b>morning</b> 6:4 14:8
<b>location</b> 29:24	<b>march</b> 27:11 66:2		<b>mentions</b> 98:20 102:13	<b>Morrison</b> 7:5 23:15
<b>locomotion</b> 18:24 19:1	<b>mark</b> 25:21		<b>met</b> 12:20 14:6 30:1	<b>motion</b> 20:19,20
<b>long</b> 6:17 17:11 56:23 58:24 73:21	<b>marked</b> 25:22,23 55:8 95:14	<b>meaning</b> 31:7 50:4,6 51:2 59:25 72:2 77:14 78:16 80:4,6	<b>metal</b> 96:12	<b>motivated</b> 60:16, 17 106:12,15
<b>long-term</b> 73:4	<b>master</b> 104:18 106:20 107:5,8	<b>meanings</b> 31:10 54:10 58:20 77:22, 25	<b>methods</b> 11:16	<b>motivation</b> 99:24 104:14 105:21 106:9
<b>looked</b> 10:17 11:15 14:20,21 16:5,6 38:9 40:20	<b>master's</b> 92:3	<b>means</b> 19:13 30:18 31:21 32:11 33:12,13,15 39:2 42:2 43:21,25 44:1 52:2,16,25 54:15, 16,17 58:11 60:1 62:15 71:16 80:20 113:12	<b>mile</b> 59:16	<b>motivational</b> 106:23 107:25
<b>Los</b> 6:1,13	<b>mathematical</b> 59:10		<b>miles</b> 109:9,10 112:20,21	<b>motor</b> 20:8 21:10
<b>lot</b> 14:11 23:5,9 79:7 93:5	<b>matter</b> 6:9 10:7,15 11:14,16	<b>meant</b> 45:16 80:3 87:3	<b>million</b> 73:19	<b>move</b> 86:20
<b>low</b> 32:15,16,18 38:21 39:1,7 42:1 43:8,14,17,19,21, 25 49:22 57:19 62:14	<b>matters</b> 10:6	<b>measure</b> 112:11	<b>millisecond</b> 59:6 64:9 65:15	<b>multiplayer</b> 37:21 39:4 60:12,21 68:5 75:23 93:6,11
<b>lower</b> 20:10 108:8 109:4,8 112:25 113:1,24	<b>maximum</b> 94:25 96:6	<b>measured</b> 110:23 111:3,6 112:20,21	<b>milliseconds</b> 59:6 62:7	<b>multiple</b> 18:13 31:10 53:21 57:1 63:14 71:25 73:22 80:5 116:5
<b>lowered</b> 111:19	<b>McClellan</b> 7:3 9:4, 11,24 12:20 13:14, 20 14:17 15:17,19 22:4,18 23:7,18 27:4,24 28:22 31:22 33:23 35:6 36:17 39:22 41:16, 21 43:3 44:6 45:7 47:5,25 48:11	<b>measurement</b> 20:23	<b>mind</b> 36:19 58:1 80:2	<b>muscle</b> 111:16
<b>Lululemon</b> 6:9 7:6 10:5,9		<b>measuring</b> 19:23 21:2,16,17,18 34:23 110:20	<b>mine</b> 24:2	<b>muscles</b> 20:17,18
<b>Lululemon's</b> 81:5		<b>mechanical</b> 17:8	<b>minute</b> 58:14 60:23 73:5,7 113:15	<b>N</b>
<b>lunch</b> 93:13,15,21			<b>minutes</b> 14:19 74:2,17 117:13	<b>names</b> 12:1
				<b>naturally</b> 48:15 49:7 85:19

<b>necessarily</b> 44:6 45:7 47:5,25 105:15 108:15 113:20 114:5,8	<b>operating</b> 94:24 96:5	<hr/> <b>P</b> <hr/>	<b>parties</b> 6:19 11:24
<b>needed</b> 76:14	<b>operation</b> 48:9 87:18 91:6 108:17 109:16 110:9 111:14	<b>P-O-S-I-T-A</b> 41:11	<b>passage</b> 98:23 99:8 100:18
<b>needing</b> 64:11	<b>operations</b> 44:14, 15,18 45:2,3 47:1, 13,20 48:25 91:10 108:3 113:22	<b>p.m.</b> 93:23 114:18, 21 117:17,20 118:9,10	<b>passages</b> 44:23 102:6,14 106:16
<b>network</b> 18:12,15 21:16 44:13 46:4, 16,23	<b>opine</b> 79:22	<b>Pacific</b> 6:6	<b>passed</b> 64:9 65:15
<b>Nike</b> 6:10 7:1	<b>opining</b> 96:1	<b>package</b> 15:14	<b>past</b> 14:1,2 24:8
<b>nodding</b> 8:8	<b>opinion</b> 27:13 30:25 31:5,20 51:1 52:5 53:25 66:17 67:21,24 71:9 79:6 82:3,13,25 83:7 84:2,8 96:19 107:23 108:25	<b>paper</b> 30:21	<b>patent</b> 6:8,10 7:1 10:8,11,12 11:11 12:2 15:25 22:23, 25 23:2,8 25:19,20 26:3,5,11 28:7,8 30:21 32:13 36:24 37:5,20 38:3 39:20 40:10,13,25 41:10 42:17 43:20 44:5 46:7,13,18 47:4,15 48:10,15,19 49:2, 6,8 50:21 51:3,9 53:1,5,13,16 54:6, 12 59:23 60:14 76:18 78:6 80:11, 25 82:5,15 83:1,9 84:4,7 85:1 94:20 95:11 110:15 114:25 115:5,10, 18 117:6
<b>node</b> 84:11,15,18, 23 85:8,11,16,24 87:17 88:17	<b>objections</b> 103:1, 5	<b>paragraph</b> 24:14, 16,17,20 25:9 27:5 34:10 35:16 38:15 46:14 56:10 58:4 62:10 73:25 76:25 80:10 81:22 83:4 84:13,17,22 85:7, 9,21,23 86:7,14,25 87:3,4,6,8,20 88:3, 14,16,20,24 89:18 90:3,5 94:1,22 95:16 96:3 97:5,8, 15,18,25 100:6 104:10 105:11 111:14 112:6	<b>patent's</b> 27:10 43:23 45:17 49:25 52:3,16 69:18 77:16
<b>nodes</b> 34:11 35:12,18 36:3,5 56:6 84:20 85:2,3	<b>objectives</b> 20:4	<b>paragraphs</b> 24:22 39:12 53:8 55:20 57:24 62:10 67:20, 22 68:14 70:22 72:16 75:12 105:7	<b>patenting</b> 23:6
<b>noncontinuous</b> 71:9	<b>obvious</b> 36:8 44:9 55:19 58:2 69:12, 20 70:6,9,13,20 80:12,14 110:10	<b>parameter</b> 113:11	<b>patents</b> 12:5 22:10,14,19 43:2 116:1
<b>normalization</b> 111:13	<b>obviousness</b> 80:9 81:16,18,23 82:2	<b>parameters</b> 94:24 96:5	<b>pause</b> 64:23
<b>Northwestern</b> 17:9,12,14 19:11 22:20,21,22 92:3	<b>occur</b> 65:14 73:2	<b>paraphrase</b> 32:23	<b>pay</b> 93:12
<b>notary</b> 6:14	<b>occurs</b> 64:2	<b>paraphrasing</b> 32:22 37:2	<b>pendulum</b> 73:18, 20
<b>note</b> 6:18	<b>offer</b> 52:5 64:13 76:17 82:3,13 84:2 107:23	<b>part</b> 15:14 18:4 22:23 49:21 51:14 74:6 76:14 77:16 79:14 81:2 91:1,9, 15 92:23	<b>people</b> 21:6,21 39:5 60:15,21 61:9 69:2 92:25 105:16, 22 107:1 108:3 111:18,20
<b>noticed</b> 24:8	<b>offhand</b> 10:14	<b>participants</b> 104:19,22 106:21 107:9	<b>percentage</b> 25:14
<b>noticing</b> 6:21	<b>office</b> 6:11 22:23	<b>participants'</b> 104:20,21	<b>perform</b> 18:19 27:15 28:23 42:16, 18,20 80:21 83:16, 23 87:17 116:11,
<b>notified</b> 63:11	<b>older</b> 111:18	<b>participating</b> 56:20	
<b>notion</b> 39:1 42:1 43:8 51:24	<b>one-mile</b> 73:25 74:17		
<b>number</b> 6:11 10:14 33:24 46:21 72:1 84:14 89:10	<b>one-minute</b> 58:17,24		
<b>numbers</b> 109:11	<b>online</b> 93:5		
<b>numerically</b> 103:7	<b>opened</b> 63:13		
<hr/> <b>O</b> <hr/>			
<b>object</b> 64:24			
<b>objection</b> 9:12,24 15:17 22:4,18 23:7,18 27:4,24 28:22 31:22 35:6 36:17 39:22 43:3			

14:22	<b>picked</b> 30:8	112:3	118:7,10	10,23,24 96:6,12, 20 101:8,15,22 102:6,11,13 103:11,15 108:10, 13,18 109:22
<b>performance</b> 21:13,14 55:22 56:9 99:23 108:20 109:5,23 110:24 111:4,7 112:17 113:23	<b>picks</b> 99:5	<b>possibility</b> 89:12, 22 113:21 114:3	<b>process</b> 23:6,23	<b>purpose</b> 59:22
	<b>pieces</b> 17:1	<b>possibly</b> 10:4 25:17 36:4 38:8 95:7	<b>processes</b> 23:9	<b>purposes</b> 7:6
	<b>place</b> 6:19 91:25	<b>post-doc</b> 17:17	<b>procuring</b> 22:13	<b>put</b> 25:12 38:7 59:17 92:5 105:24 107:2
	<b>places</b> 68:15 86:17 103:19	<b>potentially</b> 43:7 111:18	<b>product</b> 23:19 45:8 69:22 76:6 78:11 83:11 116:25	<b>putting</b> 25:3
<b>performed</b> 29:8 30:19 50:15 55:25 71:25 82:2 109:19 115:20	<b>plain</b> 51:1	<b>Powerbond</b> 11:3	<b>productively</b> 18:23	
<b>performing</b> 55:24 56:13,15 58:5	<b>plaintiffs</b> 11:6	<b>preference</b> 66:24	<b>professor</b> 17:8,14 92:2 93:10	<b>Q</b>
	<b>plan</b> 8:10	<b>preferences</b> 64:14	<b>program</b> 104:21	<b>qualifications</b> 17:7
<b>person</b> 27:9 28:2 31:18 41:11 70:24 74:9,15 77:15 80:15 92:4 106:4 108:6,8 109:4,6,8, 9 113:18,25 114:4, 7,11	<b>plates</b> 20:16	<b>prepare</b> 12:16 13:24 14:16	<b>progress</b> 21:8 58:24	<b>quality</b> 56:8
<b>personal</b> 100:10	<b>play</b> 48:25 60:16, 17,24 88:13,18,21 89:5,6,15 91:8,12 92:25 93:12	<b>prepared</b> 79:22	<b>progressed</b> 17:13	<b>question</b> 8:1,5 9:15 27:20 36:19 38:1,2,5,10 41:20 47:12 48:1,4,25 55:10 63:23 64:23 65:2,4 76:25 82:9 84:22 85:5 87:19 88:1 89:11,21 92:13 94:18 95:21 98:22 99:8 100:14, 21 108:11 115:6,8
<b>personalized</b> 97:11 100:1,7,8,15 102:10 104:13 105:13,15,20 106:6,19 107:6,17, 19,20 110:12	<b>played</b> 93:5	<b>preparing</b> 14:10	<b>progressing</b> 56:16 57:4 109:12	<b>questions</b> 7:24 8:8 62:3
	<b>player</b> 88:9	<b>present</b> 6:22 14:15 22:25 93:10	<b>pronounced</b> 15:2	<b>quotation</b> 56:23
<b>personal</b> 100:10	<b>players</b> 39:15	<b>presented</b> 56:5	<b>pronouncing</b> 30:15	<b>quote</b> 32:19 95:17 97:18
<b>perspective</b> 80:15	<b>playing</b> 21:23 39:6,15 60:21 89:17 110:11 114:2	<b>previous</b> 43:4 76:24	<b>pronunciation</b> 15:3	<b>R</b>
<b>pertains</b> 106:19	<b>plenty</b> 60:20	<b>previously</b> 42:15 73:3	<b>propose</b> 106:22 112:7	<b>race</b> 21:18,25 57:2 58:13,16,23 59:15 69:4 73:7,24,25 74:17 75:7,16 86:19 97:9,10,11, 16 98:8,15,20,24 99:1,4,5,6,16,21, 25 100:1,7,8,11,15 101:20 102:9,10 104:13 105:13,16, 17,20 106:6,12,20 107:6,17,19,21 109:21,23 110:12, 24 111:4,7,22
<b>peruse</b> 33:19	<b>plural</b> 79:25	<b>primarily</b> 44:22 46:8 103:22	<b>proposed</b> 108:18	
<b>Peter</b> 6:14	<b>point</b> 8:10 16:25 24:13 36:8 45:21 56:25 61:25 66:1,2 79:8 80:3 92:2 94:2,4 105:1	<b>primary</b> 14:25	<b>proposing</b> 108:12 109:21 110:1 113:12	
<b>petition</b> 15:1,8,11, 20,24 16:2 33:18 81:5,8	<b>pointed</b> 62:10	<b>Princeton</b> 17:21	<b>prosecution</b> 22:16 77:17	
<b>petitioner</b> 7:5 11:7 117:21	<b>pointing</b> 96:3 110:8	<b>prior</b> 12:24 16:11 31:2 38:10,13 52:10 78:5,22 80:12,24 82:4,14, 25 83:8 84:3 117:5,7,10	<b>provide</b> 9:14 26:18,25 27:7,8 28:13,17 35:19 42:25 44:7 56:4,14 80:19 83:7 84:1 115:3	
<b>Ph.d.</b> 17:19 92:4	<b>popular</b> 39:5 92:18	<b>priority</b> 20:5 27:11 91:24	<b>provided</b> 26:17 28:16 55:23 56:6 57:23 61:1 82:25 108:24 112:17	
<b>phone</b> 22:24	<b>Porter</b> 7:1	<b>private</b> 100:10	<b>providing</b> 36:24 52:9	
<b>phrase</b> 32:8 35:21 37:1 41:14,24 43:1 49:13 51:16 52:2 79:2	<b>portions</b> 23:17 26:8,9,12 68:7	<b>privilege</b> 9:12 15:17 23:19 45:8 69:22 76:6 78:11 83:11 116:25	<b>public</b> 6:15	
<b>phrases</b> 48:18	<b>posing</b> 74:13	<b>privileged</b> 9:15	<b>pulse</b> 94:25 95:5,	
<b>physically</b> 18:18	<b>POSITA</b> 41:9	<b>proceeding</b> 26:1		
<b>pick</b> 55:19	<b>position</b> 17:11 18:5 64:13	<b>proceedings</b>		
	<b>positioned</b> 56:1			
	<b>possibilities</b> 89:10,21 111:9			

<b>aces</b> 97:9 101:9 105:3,7 107:14	16,24 38:4,16,20, 21,25 39:6,16 40:22 41:15,24 43:1,12,15,17,19, 24 49:12,13,15,20 57:2,18,23 58:11, 15 60:2 61:20 62:23 63:9 71:3 79:23 110:21	<b>recurrent</b> 68:11 71:17	<b>rely</b> 104:8 22,23 10:3,5 12:11
<b>racing</b> 68:19	<b>realtimeness</b> 67:1	<b>recurrently</b> 53:18, 23 71:1	<b>remain</b> 118:7
<b>range</b> 111:16,17	<b>reask</b> 52:22 65:4	<b>recurs</b> 59:11	<b>remember</b> 8:20 9:3 10:15 11:23 73:8,9 96:1 101:12 113:6
<b>ranks</b> 17:13	<b>reason</b> 8:15 9:7, 22 25:12 70:8	<b>redirect</b> 117:21	<b>reminder</b> 64:22
<b>rate</b> 25:8,10 58:24 60:5,9 62:1 73:2, 20 75:22 94:25 95:1,5,23 96:6,12 101:8,22 102:6,11, 14 103:11,15 108:18 110:24 111:3,6,17,19,23 112:4,14,15,23,24 113:1,10	<b>reasonable</b> 31:3, 4 38:11,20,25 39:18,25 40:12,14 41:13,23,25 49:12, 20,24 51:13,17 57:13 61:14 70:24 78:23	<b>refer</b> 12:19,22 26:2 27:5 43:4 107:18, 20	<b>repeat</b> 8:2,4 29:21 55:12 95:21
<b>rates</b> 71:8 104:20 108:10,13 109:16 110:21	<b>recalling</b> 16:4	<b>reference</b> 16:13 37:18 38:13 39:13 43:11 66:15 77:1 80:24 82:4,14,25 83:8 84:3 103:17 104:5 117:5	<b>Repetitions</b> 24:19
<b>ratio</b> 112:14,24	<b>recap</b> 66:14	<b>references</b> 16:22, 24 17:1 27:1,10	<b>rephrase</b> 8:3 16:12 37:3 43:18 66:16 72:5 114:6
<b>rationale</b> 81:22	<b>receipt</b> 35:18	<b>referred</b> 13:5 16:13 30:6 37:23 63:4 82:1 99:3 105:9	<b>report</b> 79:15,17 106:10 110:5
<b>rationales</b> 81:24	<b>receipt'</b> 35:22	<b>referring</b> 35:4 37:2 83:3 106:10 108:22 109:14	<b>reporter</b> 6:16,24 7:9 18:25 30:12 117:23
<b>reach</b> 56:12	<b>receive</b> 16:2 109:7	<b>refers</b> 18:13 19:2, 5 24:14,15 85:2 86:2	<b>represent</b> 7:5
<b>reached</b> 9:3	<b>received</b> 15:20 16:3 17:19 50:11 57:19	<b>refresh</b> 58:24 60:1,5,9 62:1	<b>representation</b> 56:15 57:3 58:7 98:3
<b>reaching</b> 58:5	<b>receiver</b> 50:17	<b>refreshed</b> 59:5	<b>representations</b> 56:16 58:9 100:12
<b>read</b> 15:11,12,16, 24 16:5 26:5,8 29:2,14,18 30:2,9 31:15 33:21 34:13 39:14 55:21 61:17, 21 70:24 71:4 77:18 79:10 81:8 84:19,24 90:17 91:1,2,15 95:16 97:23 98:11,17 100:3,5,18 101:13, 14 102:5,7 103:17 105:7 113:21	<b>recess</b> 42:10 66:10 93:21 114:19 117:18	<b>regard</b> 16:22 45:6, 17	<b>represented</b> 30:23
<b>reader</b> 110:14	<b>recognize</b> 31:2 32:4	<b>regular</b> 8:11	<b>representing</b> 6:16
<b>reading</b> 14:11 60:13,14 62:5 68:16,17 86:6	<b>record</b> 6:5,20,23 7:20 8:7 24:11 42:7,8,11 66:5,8, 12 93:17,19,23 114:16,17,20 117:12,16,20 118:8	<b>reiterate</b> 70:1,15	<b>request</b> 87:13
<b>ready</b> 33:20,22 93:13	<b>recording</b> 6:18	<b>related</b> 104:8	<b>requires</b> 56:12 80:13
<b>real</b> 55:22,25 56:8, 13 58:6	<b>recovering</b> 20:13	<b>relates</b> 10:16 78:6	<b>reread</b> 12:18
<b>realtime</b> 29:23 32:9,11,15,20,24 34:6 36:25 37:6,	<b>recur</b> 24:23	<b>relation</b> 68:22	<b>rereading</b> 24:8
	<b>recurrence</b> 71:8	<b>relative</b> 56:1,21 108:6 109:5 115:21	<b>research</b> 17:18 18:4,7,10,11,24 19:1,4 21:14,15,20 22:21 93:1
		<b>relevant</b> 31:19 40:13 77:16 84:8 100:21	<b>resort</b> 54:6
			<b>respect</b> 103:8 116:9
			<b>response</b> 15:25
			<b>rest</b> 35:16
			<b>retained</b> 8:19 9:8,
			<b>review</b> 16:8 26:19 28:1 36:18 46:20 75:25
			<b>reviewed</b> 15:8,21 16:11 26:10,12,13, 15
			<b>reviewing</b> 100:11
			<b>ridden</b> 11:18
			<b>robot</b> 18:17 19:4, 17 20:2,6
			<b>robotic</b> 18:12,24 19:1
			<b>roboticist</b> 22:5
			<b>robotics</b> 12:13 17:19 18:2,11,16 19:10
			<b>robots</b> 18:13,18, 21,22 19:2,5,22 20:7,11 21:21,24
			<b>role</b> 22:13
			<b>room</b> 61:9 100:10
			<b>rooms</b> 105:16
			<b>root</b> 56:3
			<b>rough</b> 118:1
			<b>route</b> 56:17 57:4
			<b>rules</b> 7:25
			<b>run</b> 19:3 102:25
			<b>runners</b> 68:19
			<b>running</b> 21:25 56:13 57:1 58:6, 13,16 59:14 61:12 67:20 86:19 109:9, 10
			<hr/> <b>S</b> <hr/>
			<b>safe</b> 20:2
			<b>safely</b> 18:23
			<b>safety</b> 20:4
			<b>satisfies</b> 31:2
			<b>satisfy</b> 31:24 38:11 54:25 55:14 61:12 92:4

<b>satisfying</b> 59:3	<b>separate</b> 105:16	106:20	100:13,16 101:1	79:1,16,24 81:4,9,
<b>Saturday</b> 14:3	<b>series</b> 7:23	<b>situations</b> 21:20	103:7 109:13	15 82:11,20 83:6,
<b>scenario</b> 89:25	<b>server</b> 34:10,15	72:17	<b>spell</b> 7:19 30:14	18,25 84:9,16
<b>scheduled</b> 100:9	35:3,11,17,23 36:2	<b>skill</b> 27:9 28:3	<b>spend</b> 10:10	88:2,10,19 89:14,
<b>scientific</b> 11:24	51:24 57:20 87:18	31:19 41:11 70:9	<b>spent</b> 14:10 25:2	23 90:4,19 91:4,17
<b>scope</b> 31:1 32:1	<b>session</b> 95:1	74:9,15 77:15	<b>spin</b> 104:18	92:14,20 93:13,17,
42:16,21 43:12	97:22 100:9	80:15 92:5 105:25	<b>spinal</b> 21:7	24 95:15 96:10,24
51:8,12,22 78:3	<b>set</b> 108:17	113:18 114:4,7,11	<b>stage</b> 56:11 86:20	101:7 102:15,23
104:1,4	<b>sets</b> 99:11	<b>skilled</b> 29:4 91:20	<b>stamina</b> 111:16	103:3,9,16 104:2
<b>screen</b> 21:24	<b>setting</b> 37:12	92:1 100:23	<b>standard</b> 25:8	105:10 107:4,12
<b>section</b> 44:12	<b>shoes</b> 92:1,6	<b>skills</b> 111:16	73:1 78:8,17	110:7,22 112:5
46:4,6,8,12,14,25	<b>shoot</b> 60:22	<b>slow</b> 58:25 71:9	<b>standards</b> 27:13,	114:15,22 115:7,
47:13,14,19 48:9,	<b>shooting</b> 39:6	72:18,22 73:7	14 77:8,12,20	15,24 116:7,13,21
25 77:12 78:9 80:8	60:22	74:3,17,22,25	81:17,18	117:3,11,15
81:16 91:7 101:1,9	<b>shortened</b> 20:23	<b>soft</b> 19:3	<b>standpoint</b> 63:23	<b>stick</b> 24:25
104:11 105:3	<b>shorter</b> 73:6	<b>software-based</b>	<b>start</b> 45:25 55:9	<b>stopped</b> 14:19
106:8 109:14	<b>show</b> 53:8 56:16	22:3	99:20 101:19	<b>stops</b> 71:18
<b>sections</b> 44:19,22	85:13	<b>solution</b> 106:22	<b>started</b> 17:12	<b>strict</b> 57:11
45:13,18	<b>showing</b> 57:3	110:2,18 114:6,9	<b>starting</b> 6:21	<b>stroke</b> 20:13 21:7
<b>select</b> 45:5 87:10,	58:7	<b>solutions</b> 110:5	98:18	<b>strong</b> 54:4
23 88:5,7,13	<b>shown</b> 24:16	<b>sort</b> 13:17 39:15	<b>state</b> 6:22 7:19	<b>structure</b> 44:25
<b>selected</b> 89:16	109:12	<b>sorts</b> 37:22 39:11	<b>stated</b> 68:15	<b>students</b> 92:4,7
<b>selecting</b> 87:6,20	<b>side</b> 11:5 12:1	<b>sounds</b> 41:17	<b>states</b> 6:10 104:18	93:4
88:8 90:8	<b>signed</b> 24:1	117:15	<b>status</b> 69:4	<b>studies</b> 21:5
<b>selection</b> 88:18,	<b>similar</b> 39:11	<b>span</b> 59:17	<b>Staubach</b> 6:25	92:24
25	48:14 49:5	<b>spans</b> 18:11	7:17 9:20 10:1	<b>study</b> 59:7 60:6
<b>selectively</b>	<b>similarly</b> 49:24	<b>speak</b> 96:22	13:7,22,23 16:1	<b>studying</b> 52:9,10
104:19	82:24	<b>special</b> 77:22	19:8 22:7 23:1,10,	<b>subject</b> 10:15
<b>selects</b> 89:5	<b>simple</b> 103:10	111:16	22 25:21,25 27:19	11:13,16 20:21,22
90:14,22	<b>simultaneous</b>	<b>specialist</b> 6:15	28:6 29:1 30:16	60:5
<b>sender</b> 50:16	37:24 52:24 57:14	<b>specific</b> 30:8 37:9	32:2 33:25 34:2	<b>subsections</b>
<b>sending</b> 35:11,14	60:2 66:25	45:5 46:3,18 49:1	35:8 36:22 40:9	44:13
<b>sends</b> 34:11	<b>simultaneously</b>	84:11 90:1 92:13	41:20,22 42:6,13	<b>substance</b> 24:9
<b>sense</b> 18:19 48:13	29:22 34:6 37:15	<b>specifically</b> 89:24	43:9 44:10 45:11	<b>suffered</b> 21:6
61:16 63:8	39:9 51:16,20 52:2	100:25	47:11 48:6,17	<b>suffice</b> 58:15
<b>sensor</b> 63:8	53:3 57:9,10,12,	<b>specification</b>	49:10,23 50:5,18,	<b>suggests</b> 82:4,14
94:10,14,18 95:5,	15,17,22 61:19	30:20 31:9,16	25 51:7,15,25	<b>Suite</b> 6:13
23 96:20	71:2,3 79:3	40:15,25 41:10	52:13,21 53:11	<b>summarizing</b>
<b>sensors</b> 18:20,21	<b>single</b> 47:8 82:23	43:24 78:21 90:18	55:11 59:13 60:7	44:22
20:9,17,24 94:9,23	<b>sitting</b> 8:25 25:6	112:1	61:3 62:8,16 63:2	<b>surprised</b> 36:20
96:4	30:25 31:20 33:22	<b>speculate</b> 81:14	64:3,19 65:3,20	<b>swarm</b> 18:13,15
<b>sentence</b> 24:15,	42:25 61:24 79:18	<b>speculating</b> 8:22	66:5,13 67:3,9,23	<b>swear</b> 6:24 7:10
20 77:6 80:10	90:20	10:13	68:6 69:5,16 70:4,	<b>switch</b> 93:25
94:8,23 95:16 96:4	<b>situation</b> 62:22	<b>speed</b> 94:10,14	11,18 71:6,11,19	<b>sworn</b> 7:13
104:17		98:4,10,25 99:9,12	72:14,23 73:23	
			74:8,24 75:5,13,24	
			76:9,16 78:7,14	



<b>synced</b> 118:3	24 67:24 84:3 94:9 97:6 108:15	59:10 61:6,13 65:18	<b>training</b> 100:10	54:7 71:4 102:18
<b>system</b> 19:20,21 20:8 21:11,17 39:15 63:16,18 64:5 65:7,13,16,21 72:3,7 88:12	<b>teaching</b> 17:24 18:7 78:5 92:3 100:24	<b>thing</b> 20:14 36:19 62:6 63:1 86:6 91:2 102:4	<b>transmit</b> 63:9	<b>understandings</b> 54:7
<b>systems</b> 18:2,3, 12,22 19:14,15,17, 18 20:7,20 63:5,6 64:6,7 65:11,12,22 66:2,3 103:22	<b>team</b> 87:1,5 88:12 90:7	<b>things</b> 17:22 19:7 36:8 37:22 39:7 41:6 43:6,22 54:16 75:11	<b>transmits</b> 36:2	<b>understood</b> 27:10 36:5 77:15
	<b>teams</b> 87:10,11, 13,14,15,24 89:1	<b>thought</b> 69:19	<b>traveled</b> 97:21 103:14	<b>uneven</b> 19:3
	<b>technical</b> 27:8	<b>Thursday</b> 6:2 14:8	<b>treadmill</b> 94:5,9, 15,19 95:6,8,24 96:14,17,18 102:17,24 103:11	<b>United</b> 6:10
<b>T</b>	<b>technological</b> 11:13 19:13,19,21 44:5	<b>time</b> 6:5,6 7:9 10:10,17,25 24:3 26:10 28:17,18 31:19 33:2 41:1 42:9,12 45:23 48:5,24 54:3 59:17 61:10,11,12 63:11, 18 64:24 66:3,8,12 73:11 79:10 80:16 91:22 92:8 93:19, 23 98:3,10,16,25 99:10 100:12,16, 25 103:8 111:1 114:18,21 117:16, 20 118:9	<b>treadmills</b> 96:7, 11,23 102:19 103:22 104:8	<b>units</b> 20:23 112:18,22 113:14, 15,16
<b>table</b> 44:11	<b>technologies</b> 27:1	<b>times</b> 10:22 14:7 24:19,23 26:7,8 53:21 63:14 102:5	<b>triple</b> 25:4	<b>University</b> 17:9 22:20
<b>Tagliabue</b> 16:14 75:25 76:11,18	<b>technology</b> 12:9, 14 27:18 28:1 31:24 48:14 49:5	<b>titled</b> 44:13	<b>truthful</b> 8:16	<b>update</b> 58:17 73:19 74:16 75:22
<b>taking</b> 47:8	<b>telephonic</b> 13:2	<b>today</b> 7:18,24 8:12,15 12:17 26:3 31:20 42:25 61:24 79:18 90:20	<b>Tuesday</b> 14:8	<b>updated</b> 58:9 64:1,2 74:1 75:8, 18
<b>talk</b> 15:20 33:1 54:11,23 69:1 70:20 85:15 94:1 97:1,15 117:13	<b>telling</b> 46:8 59:25	<b>today's</b> 118:5,7	<b>turn</b> 17:5 35:19 76:21 98:1,13 110:18	<b>updates</b> 58:15 72:5
<b>talked</b> 71:7 81:24 83:13	<b>ten</b> 58:17 92:3 102:5	<b>tools</b> 19:19	<b>type</b> 97:16 99:25	<b>updating</b> 69:7 72:18
<b>talking</b> 21:9 47:19 50:8,10,24 51:6 52:19 82:18 86:24 106:16 108:23	<b>term</b> 34:20 49:25 50:19 51:2,8 70:5 72:4 84:17,22 85:7,23 86:3,9	<b>touch</b> 116:5	<b>types</b> 97:9	<b>usage</b> 58:20 72:1
<b>talks</b> 84:14 85:17, 18 88:20 99:2,20	<b>terminates</b> 57:5	<b>tracking</b> 20:20 54:12	<b>typical</b> 109:11	<b>useful</b> 19:6
<b>target</b> 95:1 109:16 111:15,17,19 112:3,13,15,23,25	<b>terminating</b> 56:17	<b>tracks</b> 97:19 103:6	<b>typographical</b> 24:24	<b>useless</b> 57:18
<b>tariff</b> 12:8,15	<b>terms</b> 29:9 30:7 31:5 37:17 38:11 39:10,19 40:1,6 42:19 45:19,21 46:16 51:12 52:11 66:15 69:17,19 70:12 77:13,23 78:20,24 79:5,7, 11,19 80:1,5 93:5 116:18 117:7,8	<b>Trademark</b> 6:11	<b>typos</b> 24:7	<b>user</b> 11:19 29:23, 24 34:11 35:12,13, 18,25 36:2,4 51:24 56:15,18,20,21 58:7 59:7 60:5 62:13 64:12,14 67:15 68:21 85:10, 15 86:25 87:8 88:4,8,11,12,20,25 89:4,5,25 90:6,8,9, 11,13,14,21,22 91:8,9,11,12 94:4 95:7 97:20,22 98:5 99:11,19,21,22 106:9,14 107:5 108:5 111:22 112:19,20 113:6, 23
<b>task</b> 32:17 39:3 42:2 54:20 55:23, 25 56:1,2,3,8,13, 15 58:6,10,13 61:2 66:23 67:2,6,8,11 68:18 71:8 72:2,8, 13 73:11,21,22	<b>terrain</b> 19:3		<b>U</b>	<b>user's</b> 63:23 98:3 103:11 104:13 105:21 108:19 109:22 110:24 111:4,7,12
<b>task-dependent</b> 73:10	<b>testified</b> 7:14		<b>Uh-huh</b> 36:1 47:2	<b>users</b> 21:16 32:21,
<b>tasks</b> 18:19	<b>testimony</b> 8:13,16 9:14		<b>ultimate</b> 59:22	
<b>teach</b> 18:1,2 60:8 110:23 111:3,6	<b>tests</b> 109:18 111:11		<b>undergraduate</b> 17:20	
<b>teaches</b> 43:11,14, 15 44:8,20 52:15,	<b>text</b> 47:22 85:12		<b>understand</b> 8:1,5, 12 20:3,7,9,16,18, 25 21:13 26:2 33:6 34:19,21 43:10,12 52:14,15,23,25 53:16 69:3,14 74:12 77:13 78:3 79:17 80:11,13 89:9 101:15 104:4 108:11	
	<b>theoretical</b> 57:11		<b>understanding</b> 12:14 19:18 29:6,9 30:17 32:10 38:18 40:7,16 41:9 44:24 46:19 49:15,19	

25 35:20 55:24 56:7,12,22 57:15 58:5 59:4 66:20 68:22 71:25 87:9, 10,12,16,24 89:6 90:23 97:20 98:10 99:1,9,15 100:17 106:12 108:25 109:18 110:12,16	<b>wait</b> 11:7  <b>walk</b> 17:6 19:2 20:12,15  <b>walking</b> 21:9  <b>watch</b> 85:18,20  <b>watching</b> 20:22 57:5	82:22 115:22  <b>work</b> 18:17,22 19:7,18 21:4 23:18 25:15 31:2 45:8 63:3 69:21 76:5 78:5,10 83:11 92:15,17 102:19 116:24
<b>users'</b> 108:10,13 <b>USPTO</b> 22:17	<b>Watterson</b> 16:18, 23 94:1,8 95:17 97:5,9,18 98:9,13, 23,24 100:7,15 103:17,25 104:4,7, 11,12,18 105:1,3, 12,20 106:18,22 107:23 110:11,15, 23 111:3,5	<b>worked</b> 22:21 28:10  <b>working</b> 10:8 20:10 21:12 93:4 96:13  <b>workout</b> 95:1  <b>works</b> 46:9,15  <b>world</b> 19:6 39:6 55:22,25 56:4,8, 12,13,17,18 57:4,5 58:5,6 60:21 97:10,16 98:9,15, 20,24 99:6 102:9
<hr/> <b>V</b> <hr/>	<b>Watterson's</b> 97:2 102:8 103:21 104:3,12 105:20 111:22	<b>write</b> 23:17 59:23  <b>writing</b> 13:5  <b>written</b> 37:1,20 107:15 113:8  <b>wrote</b> 23:13
<b>varies</b> 25:16  <b>velocity</b> 112:8,19, 20 113:9,10  <b>Venn</b> 65:11  <b>verb</b> 35:22  <b>verbally</b> 8:8  <b>verbatim</b> 48:18  <b>versa</b> 50:12  <b>versus</b> 6:10 11:3  <b>vice</b> 50:12	<b>ways</b> 50:15 108:15 109:15  <b>wear</b> 20:11  <b>wearing</b> 85:10,16, 17  <b>week</b> 16:3 24:8  <b>weight</b> 111:15	<hr/> <b>Y</b> <hr/>
<b>video</b> 6:7,15,18 21:24 37:21 39:4 54:24 60:12,16,17 64:10,11,15 66:19 67:5,11,15 68:23 75:23 92:9,15,17, 21,23 93:5,6,7 118:2,6  <b>videoconferenci ng</b> 14:6  <b>view</b> 80:12 100:24  <b>viewing</b> 56:18  <b>viewpoint</b> 57:11  <b>virtually</b> 21:22  <b>vote</b> 88:21	<b>well-known</b> 37:21 60:12  <b>When's</b> 26:10  <b>who've</b> 21:6  <b>wildly</b> 25:16  <b>Wilshire</b> 6:12  <b>winning</b> 86:16,22, 24  <b>wireless</b> 34:11 35:12,18 36:3,5 56:6 84:11,15,17, 20,23 85:2,3,7,11, 16,23 87:16 88:17  <b>withhold</b> 32:13  <b>word</b> 31:9 55:18 59:11 61:9 69:12, 14 84:19 86:12  <b>words</b> 30:8 47:21, 23 48:8,16 49:7	<b>Yap</b> 14:19  <b>year</b> 8:24  <b>years</b> 11:15 12:10 17:15 25:16,17 58:17 73:19 92:3  <b>yesterday</b> 26:12  <b>younger</b> 111:20
<hr/> <b>W</b> <hr/>		
<b>Wahoo</b> 11:3		