

1 UNITED STATES PATENT AND TRADEMARK OFFICE

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3
4 BEFORE THE PATENT TRIAL AND APPEAL BOARD

5
6 LULULEMON ATHLETICA CANADA INC. and LULULEMON USA INC.
7 Petitioners,

8 -v-

9
10 NIKE, INC.
11 Patent Owner.

12 Case IPR2023-00438

13 Patent 8,620,413

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15 Video-Recorded Deposition of Kevin Lynch, Ph.D.
16 70 West Madison Street
17 Suite 4200
18 Chicago, Illinois
19 9:03 a.m.

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21 Reported By Beth Radtke, RPR, CRR
22 License No. 084-004561
23 Legal Videographer: Nick Page
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lululemon v. NIKE, Inc. IPR2023-00438 Patent No. 8,620,413 Ex. 2012
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Page 2 1 APPEARANCES 2 3 MORRISON & FOERSTER LLP 4 By Ms. Jean Nguyen 4 By Mr. Mehran Arjomand 708 Wilshire Boulevard 60th Floor Los Angeles, California 90017 jnguyen@mofo.com marjomand@mofo.com Appeared on behalf of the Petitioner; 8 ARNOLD & PORTER KAYE SCHOLER, LLP 9 By Mr. Jonathan Swisher Ms. Kathleen Duffy Three Embarcadero Center 10th Floor San Francisco, California 94111 jonathan.swisher@arnoldporter.com kathleen.duffy@arnoldporter.com Appeared on behalf of the Patent Owner. 13 ***** 14 15 16 17 18 19 20 21 22 23 24	Page 4 1 THE VIDEOGRAPHER: Good morning. We are 2 going on the record at 9:03 a.m. on September 27, 3 2023. 4 Please note the microphones are sensitive 5 and may pick up whispering and private conversations. 6 Please mute your phones at this time. Audio and 7 video recording will continue to take place unless 8 all parties agree to go off the record. 9 This is Media Unit 1 in the video-recorded 10 deposition of Dr. Kevin Lynch taken in the matter of 11 Lululemon Athletica Canada, Incorporated, versus 12 Nike, Incorporated. 13 Location of this deposition is being held in 14 the offices of Arnold & Porter located at 70 West 15 Madison Street, Chicago, Illinois. 16 My name is Nick Page representing Veritext. 17 I am the videographer. The court reporter is Beth 18 Radtke, also from the firm Veritext. 19 I am not related to any parties in this 20 action, nor am I financially interested in the 21 outcome. 22 If there are any objections to the 23 proceedings, please state them at the time of your 24 appearance.
Page 3 1 INDEX 2 3 WITNESS PAGE 4 KEVIN LYNCH, PH.D. Examination By Mr. Swisher 5 5 6 EXHIBITS 7 Exhibit 1001 U.S. Patent 8,620,413 47 Exhibit 1009 Lynch declaration 47 8 Exhibit 1014 Response to Office Action 105 Exhibit 1015 Notice of Allowance and 127 9 Fee(s) Due Exhibit 1002 Amano reference 162 10 Exhibit 1003 Matsumoto reference 167 Exhibit 1004 Lubell reference 244 11 ***** 12 13 14 15 16 17 18 19 20 21 22 23 24	Page 5 1 Counsel and all present will now please 2 state their appearances and affiliations for the 3 record, beginning with the noticing attorney. 4 MR. SWISHER: No, go ahead. 5 MS. NGUYEN: Jean Nguyen and Mehran Arjomand 6 for Petitioner, Lululemon. 7 MR. SWISHER: And Jonathan Swisher from 8 Arnold & Porter on behalf of patent owner, Nike, and 9 I also have Katey Duffy from Arnold & Porter on 10 behalf of patent owner Nike. 11 THE VIDEOGRAPHER: Thank you. 12 MR. SWISHER: Good morning, Dr. Lynch. 13 THE VIDEOGRAPHER: Will the court reporter 14 please swear in the witness. 15 (Witness sworn.) 16 KEVIN LYNCH, PH.D., 17 having been first duly sworn, was examined and 18 testified as follows: 19 EXAMINATION 20 BY MR. SWISHER: 21 Q. Good morning, Dr. Lynch. 22 A. Good morning. 23 Q. Can you please state your full name for the 24 record?

Page 6 1 A. Kevin Lynch. 2 Q. And where do you reside, Dr. Lynch? 3 A. In Chicago. 4 Q. Have you been deposed before? 5 A. Yes. 6 Q. I thought so, but just so we're on the same 7 page, I'm going to go over a few ground rules for the 8 deposition, just so we're on the same page for the 9 proceedings today. 10 So I'll ask if we can please both speak up 11 so that the court reporter can take down the words 12 that we're saying. 13 Also, it would be great if we could try not 14 to speak over each other so that the court reporter 15 can understand who's speaking. 16 Also, it would be great to answer audible -- 17 in audible ways, not using body gestures or things 18 like that. 19 Also, if I ask a question, is it fair that, 20 if you don't ask me for any sort of clarification or 21 to repeat it, for me to assume that you understood 22 what the question was? 23 Does that make sense? 24 A. Yes.	Page 8 1 believe, in 2018, possibly 2017. 2 Q. The most recent time this year, was that 3 another IPR involving Nike? 4 A. Yes. 5 Q. And for the previous times that you were 6 deposed, did those involve patent cases? 7 A. Yes. 8 Q. So you've never been deposed in a 9 non-patent-related case, is that right? 10 A. Correct. 11 Q. Okay. For the two previous times, so 12 setting aside the other Nike IPR this year, the two 13 previous times you were deposed, what technology was 14 at issue in those cases? 15 A. So the 2020 deposition with Powerbond 16 related to haptic feedback received from an exercise 17 bicycle, so while a user is riding an exercise 18 bicycle, how to make it feel like that rider is going 19 up and down hills, for example. That was the 20 Powerbond case. 21 And then the earlier case, the Scientific 22 Gains case, the technology related to the design of 23 automatic card shufflers as used in casinos. 24 Q. And in those two previous cases, did you
Page 7 1 Q. And if you do need me to repeat the 2 question, you'll let me know, right? 3 A. Yes. 4 Q. Okay. Is there any reason why you can't 5 testify truthfully and accurately today? 6 A. No. 7 Q. Okay. Now at some point, we'll be taking 8 some breaks during the deposition, and I'd ask you 9 just to let me know if there's ever a point when you 10 need to take a break. My only stipulation would be 11 if there is a question pending, I'll ask you to go 12 ahead and answer that question, but after that, we 13 can go ahead and figure out the best time to take a 14 break. 15 Does that sound fair? 16 A. Yes. 17 Q. Okay. Okay, Dr. Lynch, so you mentioned 18 you've been deposed before. 19 Can you tell me about those times that you 20 have been deposed before, please? 21 A. Sure. I have been deposed three times 22 before. Once was earlier this year as part of an IPR 23 proceeding with Morrison & Foerster; once was in 2020 24 in a case involving Powerbond; and once was, I	Page 9 1 also submit any expert reports? 2 A. Yes. 3 Q. In both of them? 4 A. Yes. 5 Q. And starting with the first one, with 6 Powerbond, were you representing the patentee or the 7 party being sued for infringement? 8 A. I was working on behalf of the plaintiff. 9 Q. The plaintiff, okay. 10 And for that case, with Powerbond, what 11 subject matter was involved in the expert report or 12 reports that you prepared? 13 A. So again, that case related to haptic 14 feedback provided by an exercise bike, and so the 15 subject matter had to do with reviewing computer code 16 and reviewing mechanical design of exercise bikes and 17 how those two might work together. 18 Q. I guess I was asking -- sorry for my 19 inartful question. 20 Did you submit a report on the validity of 21 the patent? 22 A. So I have not looked at that in three years, 23 but there was a validity analysis as part of my 24 report.

Page 10 1 Q. Okay. And did you also submit any opinions 2 relating to infringement? 3 A. It's been a while since I looked at it, so 4 the topics that I commented on, opined on in my 5 report related to infringement, so I can say that. 6 Q. Okay. So I guess I can clarify a little bit 7 there. 8 So in that case, did you look at the 9 defendant's products and issue opinions about how 10 those products allegedly infringed the plaintiff's 11 patent? 12 A. Yes. 13 Q. Okay. And then for validity, did you issue 14 opinions about how the plaintiff's patent was valid? 15 A. I'm sorry, it's been a while since I 16 reviewed my report for that. 17 Q. That's okay. So you just can't recall 18 today, is that -- 19 A. I don't remember everything that was in my 20 report, and so I'm afraid I would mischaracterize it 21 and I don't want to speculate. 22 Q. Okay. That's okay. 23 For the second case involving automatic card 24 shufflers, just kind of curious, same questions	Page 12 1 A. No. 2 Q. Okay, did I miss some other cases? 3 A. I think I mentioned the Powerbond case. 4 Q. Ah, okay. Let me -- maybe I misworded the 5 question. 6 So I was asking if you had issued opinions 7 relating to invalidity of a patent, not the validity 8 of a patent. 9 Does that help? 10 A. I haven't looked at it in three years, so if 11 you put it in front of me, I could be clearer on 12 this, but... 13 Q. Yeah, no, no, I think I can clear it up. 14 I thought you said in the Powerbond case, 15 you were working on behalf of the patentee, right? 16 A. Yes. 17 Q. So I assume your opinions were supporting 18 the validity of the patent; you weren't arguing that 19 the -- or you weren't opining that the -- your 20 client's patents were invalid, right? 21 A. That's correct. 22 Q. Okay. So with that clarification, then, 23 does that help clear up that the card-shuffling case 24 is the only other time, setting aside the other Nike
Page 11 1 there. Did you issue any reports in that case? 2 A. Yes. 3 Q. Okay. And in that case were you working on 4 behalf of the plaintiff or the defendant? 5 A. It was a complicated case, but I believe the 6 portion that I was working on, we were the defendant. 7 Q. Okay. So did you issue any opinions in that 8 case relating to the invalidity of a patent? 9 A. Yes. 10 Q. And do you recall what types of invalidity 11 opinions you discussed in your report? For example, 12 were there anticipation opinions, obviousness, 13 Section 112 issues? Any of those? 14 A. Certainly I considered anticipation and 15 obviousness, but without the report in front of me, I 16 would hesitate to characterize the details. 17 Q. And did you also offer any opinions about 18 noninfringement in that case? 19 A. Yes. 20 Q. Okay. So it sounds like, other than the 21 other Nike IPR that's been at issue this year, the 22 card shuffling case is the only other time that you 23 issued any opinions relating to the invalidity of a 24 patent; is that fair?	Page 13 1 IPR this year, that you issued expert opinions 2 relating to the invalidity of a patent? 3 A. No, that's not true. 4 I have been involved in other cases, too. 5 The ones that I mentioned are the ones where I was 6 deposed. 7 Q. Thank you for that clarification. 8 So there have been some cases where you 9 issued an expert report but were not deposed; is that 10 right? 11 A. I certainly submitted opinions in other 12 cases, but was not deposed, yes. 13 Q. Okay. Can you describe those cases for me? 14 A. Perhaps not well, because it's been a while. 15 I should mention that recently I was 16 involved in another case where my portion of it was 17 to work with the attorneys, and clarify or work with 18 them to understand meanings of terms in prior art, 19 but I did not ever issue a report. 20 And then there's been other cases before the 21 ones that we've talked about where I did issue 22 reports but was not deposed. 23 Q. Okay, so let's start with the most recent 24 one that you mentioned then.

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Page 14 1 What was that case about? 2 A. That case involved robotic technology used 3 to store and retrieve parcels or packages in a 4 three-dimensional grid structure. 5 Q. Do you remember the names of the parties in 6 that case? 7 A. Yes. I was working on behalf of Ocado 8 Group, and in opposition was AutoStore. 9 Q. And was Ocado Group the patentee in that 10 case? 11 A. So my involvement, I reviewed patents and I 12 reviewed prior art for that case, but I never issued 13 a report; it was all discussion with the lawyers 14 representing Ocado. 15 Q. I guess let me ask that question a little 16 bit differently. 17 Were the patents that you reviewed Ocado's 18 patents, or were they AutoStore's patents? 19 A. They were at least AutoStore's patents and 20 other patents, and I don't recall at the moment if 21 there were Ocado patents. 22 Q. Okay. So what was your assignment in 23 reviewing the AutoStore patents? 24 A. I was working with a firm in the UK, and my	Page 16 1 to discuss those. 2 Q. When you say you read the patents, were you 3 focusing on the entire patent, or were you looking 4 primarily at the specification disclosure or 5 something else? 6 A. So for the AutoStore patent or patents, I'm 7 not sure at the moment if it was more than one. 8 Certainly the entire disclosure, as well as the 9 claims, the claim language, and then for the other 10 prior art, I don't remember at the moment. 11 Q. Okay. For the AutoStore patents, did they 12 ask you to offer any opinions about the meanings of 13 any claims or claim terms? 14 MS. NGUYEN: Objection. 15 Dr. Lynch, I would just advise you not to 16 answer anything that's confidential with respect to 17 that matter, the AutoStore matter. 18 BY THE WITNESS: 19 A. So I never issued a report, and so given 20 Jean's comments here, I'm not sure what is publicly 21 allowable. 22 BY MR. SWISHER: 23 Q. Yeah, I don't want you to reveal any 24 information that you are required to keep
Page 15 1 job there was to review certain patents, including at 2 least AutoStore and at least patents by others, as 3 well as other prior art, and to help them understand 4 how prior art or other patents relate to the 5 AutoStore patents. 6 Q. Okay. So is it fair to say you were sort of 7 acting as an expert consultant in this case? 8 A. Yes. 9 Q. Okay. And you were working on behalf of 10 Ocado, right? 11 A. Correct. 12 Q. Okay. So is it fair to characterize the 13 assignment as Ocado asked you to look at another 14 party's patents and some prior art to consider 15 validity issues for those AutoStore patents? 16 A. So my engagement with the law firm never got 17 to those words. It was helping them understand what 18 the technology means. 19 Q. I see. So let's just unpack that a little 20 bit. 21 So what did you do, broadly speaking to 22 accomplish that assignment, as you understood it? 23 A. I read the patents and the prior art that 24 they provided me with, and I had meetings with them	Page 17 1 confidential for some reason, so you don't have to 2 give any details. 3 But I just wanted to know, generally 4 speaking, if you're able to answer, did you 5 investigate the meanings of any claims or claim terms 6 in that engagement? 7 A. Sure. I was interpreting what they were 8 teaching, and then in the -- in the specification, 9 and then how that gets turned into claims, claim 10 language. 11 Q. Okay. So it sounds like you're saying you 12 took a look at some of the claim language and then 13 went to the specification to see if there was 14 anything related to that claim language; is that 15 right? 16 A. So it was not a sequential thing like you're 17 saying. I read the specifications, I read the 18 claims, read the claims, read the specifications, so 19 I certainly iterated going back and forth quite a 20 bit. 21 Q. In the course of this work, did you also 22 review any prosecution history for the AutoStore 23 patents? 24 A. For that case, no. I don't believe so. I

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Page 18 1 can't be -- can't be certain. I don't believe so. I 2 don't recall. 3 Q. And in conjunction with trying to understand 4 or interpret the claims or claim language, did you 5 look at any extrinsic evidence? Evidence outside of 6 the patent? 7 A. So I brought to my reading of the patent the 8 knowledge of a POSITA, and I was looking at other 9 prior art at the same time that I was looking at the 10 patent or patents in question. So that is what I 11 did. 12 Q. Okay, let's set aside the other prior art 13 you were talking about. 14 Did you look at any other extrinsic 15 evidence, such as dictionaries, textbooks, treatises, 16 materials like that? 17 A. I don't recall. 18 Q. Okay. So turning from the claim 19 interpretation issue to the prior art that you looked 20 at, broadly speaking, what was your assignment in 21 looking at the prior art that you reviewed in 22 conjunction with the AutoStore patents? 23 MS. NGUYEN: Objection. 24 Again, Dr. Lynch, I would just warn you not	Page 20 1 and interpret both what was in the patent or patents 2 at issue, as well as the prior art, to help them do a 3 mapping. 4 Q. Okay. So do you mean it was more -- strike 5 that. 6 Your role was more helping them understand 7 the technology that was discussed in the prior art? 8 A. Trying to understand how the prior art might 9 relate to the claim elements of the patent or patents 10 that they were interested in. 11 Q. Okay. All right. What did you do, 12 Dr. Lynch, to prepare for today's deposition? 13 A. I reread my own declaration, as well as the 14 exhibits that I used to prepare my declaration, and 15 the institution decision, so that's new since I 16 prepared my declaration. The report of Dr. Bergeron, 17 and portions -- no, and also the patent owner 18 response. So those things I reviewed before. 19 Q. And when did you do this review? 20 A. Since Thursday of last week when I began 21 looking at these materials. 22 Q. Okay. Before Thursday of last week, when 23 was the last time that you reviewed your declaration? 24 Start with that, with your declaration.
Page 19 1 to disclose anything confidential. 2 BY THE WITNESS: 3 A. My understanding is that the case that I was 4 working on was settled before I ever issued a report, 5 so I did not get to the end of the process, and their 6 process is a little different in that they spent a 7 lot of time just talking to me, understanding what 8 the prior art meant and what the patents meant. 9 BY MR. SWISHER: 10 Q. What do you mean by "what the prior art 11 meant"? 12 A. Just understanding what is disclosed in the 13 prior art and how it may or may not map to claim 14 elements. 15 Q. Okay. So you were looking to see if there 16 were any disclosures in the prior art that would have 17 anticipated the AutoStore claims; is that fair? 18 MS. NGUYEN: Objection, form. 19 BY THE WITNESS: 20 A. No. 21 BY MR. SWISHER: 22 Q. Okay. Can you describe for me, then, what 23 your assignment -- or what your work was? 24 A. My primary job was to help them understand	Page 21 1 MS. NGUYEN: Objection, form. 2 BY THE WITNESS: 3 A. I believe the last time I reviewed my 4 declaration was right before and right after it was 5 submitted in January. 6 BY MR. SWISHER: 7 Q. And before Thursday of last week, when was 8 the last time you reviewed any of the other exhibits 9 and papers in this IPR? 10 A. Before submitting my declaration. To my 11 knowledge. I don't remember any other time. 12 Q. Okay. Did you do anything else to prepare 13 for the deposition today? 14 A. I met with the two lawyers from Morrison & 15 Foerster, Jean Nguyen and Mehran Arjomand. 16 Q. How many times did you meet with them? 17 A. Virtually via Zoom or in person, I believe 18 every day since Thursday of last week. 19 Q. Okay. So today is -- oh, go ahead. 20 A. Yeah. 21 Q. So how many days is that? 22 A. Five. 23 Q. Five days including today? 24 A. No, not including today.

Page 22 1 Q. Okay. 2 A. So that would be -- if we included today, 3 that would be seven, so maybe six. Thursday, Friday, 4 Saturday, yeah. 5 Q. Oh, wow. You got some weekend time there 6 too. 7 A. Yes. 8 Q. Okay. How much time, approximately, do you 9 think you spent with your attorneys preparing? 10 A. Double digits hours. I don't have a more 11 precise accounting. Not single, not triple. 12 Q. So somewhere between 10 and 99? 13 A. Certainly in that range. 14 Q. Is it closer to 20 or closer to 80? 15 A. Definitely closer to 20, but I don't -- I 16 don't have a precise number. 17 Q. Okay. Just to get a little bit of 18 nomenclature right, you understand that this 19 deposition is involving an IPR that's been numbered 20 2023-00438? Does that sound familiar? 21 A. I don't know the number. 22 Q. Okay. But do you know that this IPR 23 involves a patent that has the last three digits 24 '413?	Page 24 1 the claim elements in the view of a person of 2 ordinary skill in the art who has read the file 3 history and the '413 patent. 4 Q. Okay. And POSITA, that stands for person of 5 ordinary skill in the art; is that right? 6 A. That's correct. 7 Q. Okay. We'll get back to the patent and the 8 claims in just a bit, but first, I wanted to ask, 9 other than preparing the declaration that you 10 submitted in this IPR, have you conducted any other 11 work for this IPR? 12 MS. NGUYEN: Same objection. 13 BY THE WITNESS: 14 A. Sorry, can you ask the question one more 15 time? 16 BY MR. SWISHER: 17 Q. Yes. 18 Other than the -- preparing the declaration 19 that you submitted, have you performed any other 20 analyses for this IPR? 21 A. So I think your first question was work. So 22 I obviously worked prepping for the deposition, but 23 those are the two things I've done: Prepare the 24 declaration and prep for the deposition.
Page 23 1 A. Yes. 2 Q. Okay. So just so we're on the same page, 3 that patent is U.S. Patent No. 8,620,413, and if I 4 just refer to that as the '413 patent, you'll know 5 what I'm talking about; is that fair? 6 A. Yes. 7 Q. Okay. Can you describe for me what your 8 assignment was in assisting with the IPR for the '413 9 patent? 10 MS. NGUYEN: Objection. 11 Just, Dr. Lynch, advise you not to disclose 12 anything confidential or privileged. 13 BY THE WITNESS: 14 A. So with the caveat that I may not know 15 exactly what's confidential and privileged, 16 generally, what I did for this IPR proceeding is to 17 read the '413 patent specification and its claims, 18 read its file history, all from the view of a POSITA, 19 look at prior art, and map claim elements from the 20 '413 patent to the prior art, or vice versa. 21 BY MR. SWISHER: 22 Q. What do you mean by "vice versa"? 23 A. Well, what I mean is that I was examining 24 the content of the prior art and seeing how it fits	Page 25 1 Q. Okay. And does the declaration that you 2 submitted include all of your opinions as of today as 3 it relates to this IPR? 4 A. I have certainly formed other opinions that 5 don't appear in the -- in the declaration, but 6 perhaps were not relevant to my declaration. 7 Q. Okay. Yeah, let me unpack that a bit. 8 So do you still stand by all of the opinions 9 in your declaration that you submitted? 10 A. Yes. 11 Q. Okay. Are there any corrections or changes 12 that you want to make to that declaration? 13 A. No. 14 Q. Okay. And what did you mean by other 15 opinions that you formed outside of that declaration? 16 MS. NGUYEN: Objection, form. 17 BY THE WITNESS: 18 A. Well, I didn't bother to write every thought 19 that I had during the process, so I wrote down what I 20 thought was relevant. 21 BY MR. SWISHER: 22 Q. Understood. 23 Okay. So would it be fair to say, though, 24 that any of these other opinions you have are

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Page 26 1 consistent with what's in your declaration? 2 A. No opinion I have is inconsistent with 3 what's in the declaration. 4 Q. Dr. Lynch, are you being compensated for 5 your work in this IPR? 6 A. Yes. 7 Q. And is that something like an hourly rate? 8 A. Yes. 9 Q. Okay. And what is your hourly rate? 10 A. \$400 an hour. 11 Q. Do you know so far how many hours you've 12 spent working on this IPR? 13 A. I certainly don't know. I don't even know 14 exactly how long I prepped for the deposition. 15 Q. Do you know approximately how many hours 16 you've billed for payment in this IPR so far? 17 A. No. 18 Q. Is it more than 100? 19 A. That I've billed already, I doubt it, but 20 again, I don't have my records here, but I can't 21 imagine that it is. 22 Q. Sure. An approximation is fine. Just 23 trying to get a sense. Is it more like 50? 24 A. It's less than a hundred that I've billed.	Page 28 1 deposition today, right? 2 A. That includes that I am aware of some things 3 that might have been in there because I did read the 4 institution decision. 5 Q. Okay. So do you know what unpatentability 6 grounds are asserted in the petition? 7 A. I'm not sure how to answer that question. 8 Q. Do you know what an unpatentability ground 9 is? 10 A. So it sounds like a legal term. I am not a 11 lawyer, so any definition I give would be imprecise, 12 so I prefer not to do so, but -- I'll stop there. 13 Q. Sure, that's fair enough. I'm happy to 14 explain. 15 Well, let me ask it this way: Have you ever 16 heard of a ground before as it relates to an IPR? 17 A. Yes. 18 Q. Okay. And do you understand that that is a 19 -- a category of a type of invalidity contention 20 that's made in an IPR petition? 21 A. I'm not sure I understood that question. 22 I believe grounds -- again, if I try to 23 define it, I'll give a bad definition, so I won't. 24 Q. Okay. Well, let me just -- I'm trying to
Page 27 1 Q. Okay, fair enough. 2 And are you receiving any other financial 3 benefits for your work in this IPR, other than the 4 hourly rate that we just talked about? 5 A. No. 6 Q. Okay. So you mentioned a minute ago that, 7 in preparing for the deposition today, you did review 8 the IPR petition again; is that correct? 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. I did not say that, and I did not do that. 12 BY MR. SWISHER: 13 Q. Ah, okay. Sorry if I had that incorrect. 14 So let me ask it this way: Did you review 15 -- strike that. 16 Have you ever reviewed the IPR petition for 17 the '413 patent? 18 A. I have seen it, but I have never read it. 19 Q. Okay. So by "seen it," does that mean that 20 you've just seen the title page or have you skimmed 21 it in any way? 22 A. I don't have -- I'm aware of it, but I have 23 never read it. 24 Q. And that includes in preparation for your	Page 29 1 get us on the same page. 2 So you've heard that some challenges in an 3 IPR are anticipation challenges to the claims, others 4 involve obviousness; you've heard of those, right? 5 A. Yes. 6 Q. So if an IPR petitioner puts down in the 7 petition certain claims are invalid as anticipated by 8 a single prior art reference, have you heard of that 9 being referred to as one of the grounds of 10 unpatentability for that petition? 11 A. For this petition? 12 Q. I'm just speaking generally. 13 A. I'm sorry, could you rephrase the question? 14 Q. Yeah, and I can shortcut it. 15 I think we're on the same page, but you've 16 heard that, sometimes in an IPR petition, claims are 17 challenged as anticipated by a single reference, 18 right? 19 A. Yes. 20 Q. And have you ever heard of that being 21 referred to as a ground? Petition with a number next 22 to it, for instance, ground one? 23 MS. NGUYEN: Objection, form. 24

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Page 30 1 BY THE WITNESS: 2 A. That language would not surprise me. 3 BY MR. SWISHER: 4 Q. Okay. I can just represent to you that, you 5 know, the types of challenges in an IPR petition are 6 often referred to as grounds. 7 So for example, if one type of challenge to 8 the claims is anticipation based on a single 9 reference, that might be ground one. If another type 10 of challenge is based on obviousness, that might be 11 ground two, et cetera. It's just a way of 12 categorizing the different challenges. 13 Are we on the same page there? Does that 14 make sense? 15 A. Yes. 16 Q. Okay. Sort of with that understanding in 17 mind, are you aware of what grounds are in the IPR 18 petition for challenging the '413 patent? 19 A. I am -- I have some awareness of them. I 20 don't know what they are exactly. 21 Q. Okay. So let's just start with what is your 22 awareness? 23 MS. NGUYEN: Objection, form. 24	Page 32 1 anticipation. 2 Q. And do you know which claims of the '413 3 patent those anticipation arguments are applied to? 4 MS. NGUYEN: Objection, form. 5 BY THE WITNESS: 6 A. Can I have a copy of the patent? 7 BY MR. SWISHER: 8 Q. Sure, we'll get to that in a moment. Do you 9 need a copy to answer that question? 10 A. I don't think I'd be able to answer the 11 question even with a copy, but I'm fairly certain 12 claim 1 is being challenged based on anticipation 13 arguments with Amano and Matsumoto, but I don't know 14 all of the claims that would be challenged. 15 Q. Is that because you haven't reviewed the 16 petition? 17 A. Even if I had read the petition, I probably 18 would not have tried to memorize that, but -- I'll 19 stop there. 20 At least because I haven't read the 21 petition, I don't know, but even if I had read it, I 22 still might not. 23 Q. Were you asked to perform any analysis of 24 anticipation for any of the claims of the '413
Page 31 1 BY THE WITNESS: 2 A. I am aware that there are -- there are 3 arguments in the petition that relate to anticipation 4 and obviousness. 5 Does that answer your question? 6 BY MR. SWISHER: 7 Q. Yes. 8 And do you know what the anticipation 9 arguments are? 10 A. I can't answer that question in full 11 specificity. I -- I'm not sure. 12 So I am aware that certain references are 13 being used for anticipation arguments. 14 Q. And do you know -- I'm sorry, I didn't mean 15 to interrupt. 16 A. But I'm -- I don't know which claims. And I 17 am aware that certain references are being used for 18 obviousness arguments. 19 Q. Okay. Do you know what the anticipation 20 references are? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. I believe there are arguments that use the 24 Amano reference and the Matsumoto reference for	Page 33 1 patent? 2 MS. NGUYEN: Objection. 3 Dr. Lynch, I instruct you not to answer if 4 it discloses any information, communications between 5 yourself and me. 6 BY THE WITNESS: 7 A. So my job was to read the '413 patent, its 8 specification and the claim language, and the file 9 history, the Exhibits 1010 to 1015, I believe, as 10 well as other exhibits, read those from the view of a 11 POSITA, and then to look at prior art, and in my 12 understanding of the claim elements from having read 13 the specification, the claims, and the file history 14 of the '413 patent, map prior art to elements of the 15 claims in the '413 patent. 16 BY MR. SWISHER: 17 Q. So -- strike that. 18 Does your declaration include any opinions 19 that any claims of the '413 patent are anticipated by 20 any prior art references? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. So my job was what I just mentioned to you, 24 to do the mapping to elements.

Page 34 1 BY MR. SWISHER: 2 Q. So is that a no, your declaration does not 3 include any opinions that any claims of the '413 4 patent are anticipated by any prior art references? 5 MS. NGUYEN: Same objection. 6 BY THE WITNESS: 7 A. I'm not a lawyer, and I understand that the 8 kind of argument that you're talking about is a legal 9 conclusion. 10 And so my job was to, as a POSITA, look at 11 the patent, its file history, and the prior art, and 12 to map elements, map the prior art to elements of the 13 claim language for several of the claims. 14 BY MR. SWISHER: 15 Q. All right. So I think I'm asking a slightly 16 different question. 17 Does your declaration include any opinions 18 that a claim of the '413 patent is disclosed by a 19 single prior art reference? 20 MS. NGUYEN: Same objection. 21 BY THE WITNESS: 22 A. So I'm lot a lawyer, and I don't provide any 23 legal conclusions in my declaration. 24 My job was what I said before. I can say it	Page 36 1 elements, and not necessarily an entire claim. 2 So for example, I believe claim 1 -- I don't 3 have it in front of me, if you want to give it to me. 4 But claim 1 has some other things in there 5 that I never address in my analysis, perhaps because 6 I didn't think that they were relevant. 7 Q. When you say you didn't think they were 8 relevant, what -- relevant with respect to what? 9 A. I didn't think they were at issue, that they 10 would be questions. 11 Q. Okay. So then it's correct to -- strike 12 that. 13 It's correct that your declaration does not 14 include any opinions that an entire claim is 15 disclosed by a single prior art reference, right? 16 MS. NGUYEN: Objection, form. 17 BY THE WITNESS: 18 A. I don't believe that my declaration ever 19 says an entire claim is disclosed by a single prior 20 reference. 21 BY MR. SWISHER: 22 Q. And a moment ago, we were talking about 23 obviousness. 24 Do you remember that?
Page 35 1 again, but -- 2 BY MR. SWISHER: 3 Q. Yeah, no, I understand. I'm not asking you 4 to make any legal conclusions. 5 So I'm referring to whether or not the 6 limitations of a claim are disclosed by a prior art 7 reference. 8 Do you follow me so far? 9 A. Yes. 10 Q. Okay. So that would involve, for example, 11 looking at all the limitations and seeing if they 12 existed as arranged in that claim in a single 13 reference that predates the patent. 14 Do you follow that? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. Yes. 18 BY MR. SWISHER: 19 Q. Okay. So with that understanding in mind, 20 does your declaration include any opinions that an 21 entire claim is disclosed as it is arranged in that 22 claim in any of the prior art references that you 23 reviewed? 24 A. My declaration focused on specific claim	Page 37 1 A. Yes. 2 Q. Okay. So I want to ask sort of the same 3 questions about your declaration and obviousness. 4 Does your declaration include any opinions 5 that an entire claim is rendered obvious by the prior 6 art that you assessed? 7 MS. NGUYEN: Objection, form. 8 BY THE WITNESS: 9 A. So again, just to emphasize, my job was to 10 read the entire patent and its file history as a 11 POSITA, look at prior art, and to map the prior art 12 to claim elements, and not necessarily to look at an 13 entire claim. I don't believe I have a statement in 14 there of the form that claim 1 is obvious, for 15 example. 16 BY MR. SWISHER: 17 Q. Okay. So the answer to my question is no, 18 then, correct? 19 MS. NGUYEN: Same objection. 20 BY THE WITNESS: 21 A. I don't remember the question at this point. 22 BY MR. SWISHER: 23 Q. I'll ask it again. 24 Does your declaration include any opinions

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Page 38 1 that an entire claim is rendered obvious by the prior 2 art that you assessed? 3 MS. NGUYEN: Same objection. 4 BY THE WITNESS: 5 A. As I mentioned before, my analysis focuses 6 on certain claim elements, and other claim elements I 7 don't believe would be controversial. 8 BY MR. SWISHER: 9 Q. Okay. Can I just ask you to answer my 10 question, though? So let me ask it one more time. 11 Does your declaration include any opinions 12 that an entire claim is rendered obvious by the prior 13 art that you assessed? 14 MS. NGUYEN: Same objection. 15 BY THE WITNESS: 16 A. My declaration focuses on particular claim 17 elements and not other claim elements that I believe 18 would be uncontroversial. 19 BY MR. SWISHER: 20 Q. Okay. So can you answer my question, then 21 -- can you answer it yes or no, whether it does or 22 doesn't include the -- an opinion about an entire 23 claim? 24 MS. NGUYEN: Same objection.	Page 40 1 What is your Ph.D. in? 2 A. My Ph.D. is in robotics. 3 Q. And were there any specific -- strike that. 4 Was there any specific robotics area that 5 your Ph.D. work focused on? 6 MS. NGUYEN: Objection, form. 7 BY THE WITNESS: 8 A. So yes, I had to write a thesis. That's 9 pretty specific. 10 BY MR. SWISHER: 11 Q. Yeah, so what was the subject matter of your 12 thesis? 13 A. The subject matter of the thesis, which is 14 now a long time ago, was robotic manipulation 15 programing and designing robots to be able to 16 manipulate objects. 17 Q. And do you currently teach any classes at 18 Northwestern? 19 A. Yes. 20 Q. And what is the subject matter of those 21 classes? 22 A. So I've taught many classes over the years. 23 The current classes that I'm teaching are a 24 robotics introduction where you learn about the
Page 39 1 BY THE WITNESS: 2 A. There's no explicit statement to the effect 3 that an entire claim is obvious in my declaration. 4 BY MR. SWISHER: 5 Q. All right. We'll turn to the patent and 6 your declaration a bit more in a second, but first, I 7 wanted to ask you a few questions about your 8 background. 9 What is your current employment, Dr. Lynch? 10 A. I am a professor of mechanical engineering 11 at Northwestern University and the director of the 12 Center for Robotics and Biosystems at Northwestern. 13 Q. And how long have you been a professor at 14 Northwestern? 15 A. Since 1997. 16 Q. And before 1997, were you employed in an 17 academic capacity anywhere else? 18 A. Well, since 1997, I have had visiting 19 appointments other places, but my primary appointment 20 has always been at Northwestern. 21 Before 1997, I was a postdoctoral fellow at 22 a government research lab in Japan, and before that, 23 I was at Ph.D. student at Carnegie Mellon University. 24 Q. And what was the -- strike that.	Page 41 1 mechanics and kinematics of robots, and a 2 freshman-level course on system dynamics. 3 Q. Have you ever taught any classes that relate 4 to fitness tracking devices? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. So as I mentioned, I am a professor of 8 engineering, so I'm often teaching students both in 9 and outside the classroom, and a big focus of my 10 research is on human/robot systems, so that is 11 getting humans and robots to physically collaborate 12 with each other, and to make that collaboration a 13 safe and productive one, we have to understand the 14 human sensory motor control system. And so my work 15 in this area is performed at a medical facility and 16 published in journals like Journal of Biology, 17 Neuroscience, Neurophysiology, and Biomedical 18 Engineering, among others. 19 So I do teach about sensors, including EMG 20 sensors, heart rate sensors, force torque sensors, 21 motion tracking sensors, and many others, because our 22 students are using them in the devices that they use 23 for their research. 24 Q. So does any of this work involve human

Page 42 1 subjects in combination with these various sensors 2 that you described? 3 A. Yes. We're instrumenting humans with all 4 the kinds of sensors I just mentioned, plus others. 5 Q. Does any of your research relate to exercise 6 physiology? 7 A. Well, my research relates to the human 8 sensory motor control system, which is the same 9 system used in exercise, so in that respect, yes. 10 Q. Okay. But apart from the sensory motor 11 control system aspect, does your work, for example, 12 study human exercise techniques? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. So I'll give one example. We work on 16 exoskeletons for the lower body. This is where a 17 human straps on a robot to help their legs move, 18 perhaps because of injury or to help them train, and 19 at the same time, we have put sensing devices on the 20 human, like EMG sensors, to detect muscle activity, 21 or heart rate sensors to detect elevated pulse rates, 22 as well as force plates and accelerometers and motion 23 trackers and other devices, so that we can monitor 24 the human's interaction with the robot and physical	Page 44 1 BY MR. SWISHER: 2 Q. Okay. So let me ask it this way: As far as 3 fields that you work in that involve human subjects, 4 are there any others, other than the human/robot work 5 that we were just talking about? 6 MS. NGUYEN: Objection, form. 7 BY THE WITNESS: 8 A. Yes. So we have humans interacting with 9 other systems that are not robots, for example, while 10 we track their performance. 11 BY MR. SWISHER: 12 Q. Okay. And what types of systems are you 13 referring to there? 14 A. It would be difficult for me to give all of 15 them, but one example would be a passive linear rail 16 with weights attached to it while we track how the 17 human lifts the weight in contact -- while they are 18 in contact with this guiding rail. So that's another 19 example, and that you would not call a robot. 20 Q. Do you have any medical education? 21 A. So I work in a medical facility with my 22 students, but I personally have only taken courses 23 related to human physiology and not received a degree 24 in that topic.
Page 43 1 exertion. 2 BY MR. SWISHER: 3 Q. Okay. Does any of your work involve 4 athletic training? 5 A. My research does not involve training 6 athletes. 7 Q. How about does any of your work involve 8 various techniques for exercise or athletic training? 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. Well, I mentioned I have many other examples 12 of where we connect humans to robots and ask the 13 humans to perform specific tasks while we monitor 14 their performance. So there's quite a few examples 15 of that. 16 BY MR. SWISHER: 17 Q. Okay. So just outside of the human and 18 robot context -- strike that. 19 So it sounds like you're saying most of your 20 work relates to humans and robots interacting 21 together, is that fair? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. No, that is one field that I work in.	Page 45 1 Q. Do you do any research in human physiology? 2 A. Yes, some of the work I was just mentioning. 3 Neurophysiology is broader. 4 Q. Do you have any education in cardiology? 5 A. So I -- I have been an athlete myself for 6 many years, so I've seen it from that side, I've seen 7 it working with trainers, I am a member of our 8 faculty oversight committee on athletics and 9 recreation at Northwestern, so I am familiar with 10 training techniques there. So my familiarity with 11 cardiology comes through those venues. 12 Q. Okay. So you don't have any formal 13 education in cardiology, is that fair? 14 A. I don't have any degrees in that. 15 Q. And what about pulmonology, do you have any 16 formal training in pulmonology? 17 MS. NGUYEN: Objection, form. 18 BY THE WITNESS: 19 A. Well, I'd say it's a similar answer, that my 20 research does touch on these things, and my own 21 experience as an athlete touches on these things. 22 But I haven't -- or I haven't gotten a degree in 23 pulmonology. I work with people who have that 24 expertise.

Page 46 1 BY MR. SWISHER: 2 Q. Do you have any formal training in exercise 3 science? 4 MS. NGUYEN: Objection, form. 5 BY THE WITNESS: 6 A. My primary expertise there comes from my own 7 experience as a two sport college athlete, and my 8 general familiarity of how things are done at 9 Northwestern through my role on the committee. 10 BY MR. SWISHER: 11 Q. Okay. So no formal training in exercise 12 science, is that right? 13 MS. NGUYEN: Same objection. 14 BY THE WITNESS: 15 A. Could you please define "formal training"? 16 BY MR. SWISHER: 17 Q. Sure. Any university-level coursework in -- 18 strike that. 19 Have you ever taken any university-level 20 coursework in exercise science? 21 A. I've taken university-level coursework on 22 human physiology, but not specifically exercise. 23 MS. NGUYEN: We're at about an hour, 24 Counsel. Can we take a break?	Page 48 1 A. Yesterday. 2 Q. And by "review," does that mean you read the 3 whole patent cover to cover or something else? 4 A. I have read the whole patent cover to cover. 5 Q. And when's the most recent time that you 6 read the whole patent that way, cover to cover? 7 A. Within the past week. 8 Q. Okay. So in reviewing the patent that way, 9 that means you also reviewed the claims at the end, 10 correct? 11 A. That's correct. 12 Q. Okay. Let's turn to those claims, then. 13 So I'm going to direct you to column 18 of 14 Exhibit 1001, which is also what's been marked at the 15 bottom of the exhibit as page 17. 16 Actually, you may not have the page numbers 17 on yours; I apologize for that. 18 Column 18, do you see that? 19 A. Yes. 20 Q. Okay. Now when you analyzed the claims, 21 Dr. Lynch, did you analyze the complete claims to 22 understand their entire scope? 23 MS. NGUYEN: Objection, form. 24
Page 47 1 MR. SWISHER: Sure, that's fine. 2 THE VIDEOGRAPHER: Off the record at 10:01. 3 (A short break was taken.) 4 THE VIDEOGRAPHER: Back on the record at 5 10:13. 6 BY MR. SWISHER: 7 Q. All right, Dr. Lynch, I'm going to hand you 8 what has already been marked in this IPR as 9 Exhibit 1001, which is the '413 patent, and also 10 Exhibit 1009, which is the declaration of Dr. Kevin 11 Lynch. 12 MR. SWISHER: I just realized this doesn't 13 actually have that exhibit number on it, the patent, 14 but I think we're all on the same page that this was 15 Exhibit 1001 in the IPR. 16 There you go. 17 BY MR. SWISHER: 18 Q. All right, Dr. Lynch. You testified earlier 19 that you reviewed the '413 patent, is that correct? 20 A. That's correct. 21 Q. And remind me, when was the last time -- or 22 strike that. 23 When was the most recent time that you 24 reviewed the '413 patent?	Page 49 1 BY THE WITNESS: 2 A. I read the complete claims. 3 BY MR. SWISHER: 4 Q. So you just read the claims; is that right? 5 A. I read the claims and the specification and 6 the file history with the view of a POSITA. 7 Q. Okay. So let's just focus on the claims 8 then for a moment, okay? 9 Did your analysis of the claims go beyond 10 just reading them? 11 A. I'm sorry, can you be more specific? I 12 don't understand the question. 13 Q. Yeah. So you said you read the claims, 14 right? 15 A. Yes. 16 Q. What else did you do to understand what the 17 claims mean, if anything? 18 A. I read the specification and the file 19 history from the viewpoint of a POSITA. 20 Q. Okay. And in reading the specification and 21 the file history, were you attempting to come to an 22 understanding of the full scope of the claimed 23 invention? 24 MS. NGUYEN: Objection, form.

Page 50 1 BY THE WITNESS: 2 A. So I was attempting to understand and 3 interpret the claims particularly with respect to 4 prior art that discloses certain elements of the 5 claims. 6 BY MR. SWISHER: 7 Q. Okay. So you only focused on certain 8 elements of the claims, is that right? 9 A. So claim 1, for example, talks about an 10 apparatus comprising a processor. So I certainly 11 read that and I understood that, but I don't believe 12 I addressed it in any depth -- well, I certainly 13 mention it in my declaration that it has -- that some 14 prior art has a processor, but I don't go into detail 15 on that, since it's a well-understood concept. 16 But every claim I read in its entirety, 17 interpreted in its entirety. So the claim elements 18 are also being interpreted in the context of the 19 entire claim and the entire specification and the 20 patent file history. 21 Q. Okay, I think I asked a slightly different 22 question, though. 23 Did you -- strike that. 24 In your analysis of claim 1, as an example,	Page 52 1 sure if I follow you. 2 What do you mean by saying that something is 3 an example of the claim? 4 A. Can you define to me what you mean by the 5 full scope of the claim? I'm trying to understand 6 what you're getting at. 7 Q. Yeah, I'm getting at what the -- well, 8 strike that. 9 Do you understand that, in patent law, the 10 invention is defined by the claims? 11 MS. NGUYEN: Objection, form. 12 BY THE WITNESS: 13 A. In the context of the specification and the 14 file history. 15 BY MR. SWISHER: 16 Q. Right, but do you understand that it's the 17 claims that actually define the invention? 18 A. In the context of the file -- file history 19 and the specification, yes. 20 Q. Right. So when I'm speaking about the full 21 scope of the claims, what I'm getting at is an 22 understanding of all of the elements in a claim and 23 how they, together, define the scope of the claimed 24 invention.
Page 51 1 did you arrive at an understanding of the complete 2 scope of claim 1? 3 A. So if, by saying the complete scope of 4 claim 1, you are saying that I understood everything 5 in the universe that satisfies claim 1 and everything 6 that does not, that was not part of my analysis. 7 Q. Okay. So you didn't come to an 8 understanding of how the entire claim, with all of 9 its elements, operates together; is that right? 10 MS. NGUYEN: Objection, form. 11 BY THE WITNESS: 12 A. That's incorrect. 13 BY MR. SWISHER: 14 Q. Okay. What was incorrect about that? 15 A. I understand the claim and what it means in 16 the context of the specification and the file 17 history. 18 Q. Okay. So for claim 1, you understand what 19 the entire scope of the claimed invention means; is 20 that right? 21 A. As I said before, part of my analysis was 22 not trying to say everything that is an example of 23 this claim and everything that is not. 24 Q. Okay. Let me unpack that, because I'm not	Page 53 1 Do you follow me there? 2 MS. NGUYEN: Objection, form. 3 BY THE WITNESS: 4 A. Is there a question? 5 BY MR. SWISHER: 6 Q. Yeah, do you follow that understanding? 7 A. I believe you're asking -- so correct me if 8 I'm wrong. 9 I believe you're asking me if I understand 10 everything in the universe that's an example of this 11 claim and everything that's not. 12 Q. No -- 13 A. But instead my analysis was to look at 14 specific prior art and understand if the prior art is 15 disclosing or is an example of what is being 16 described in the claim. 17 So I did not look at everything in the 18 universe. 19 Q. Okay. No, I did have a slightly different 20 meaning, so let me try to explain a little bit 21 better. 22 Did you -- strike that. 23 You just testified that you looked at 24 specific prior art to understand that the prior art

Page 54 1 is disclosing what's described in the claim, right? 2 A. I looked at prior art and I mapped it to 3 elements of the claims. 4 Q. Okay. So when you were doing that 5 comparison, were you just looking at elements of the 6 claims in isolation? 7 A. No. In the context of the entire patent, 8 which includes all of the claim language, as well as 9 the file history. 10 Q. Okay, so let's just focus on the claims and 11 set aside the specification for a moment. 12 So I'm asking -- and we can use claim 1 as 13 an example. When you were looking at the prior art 14 to understand what it discloses, were you then 15 comparing it to isolated elements of claim 1, or 16 claim 1 in its entirety? 17 MS. NGUYEN: Objection, form. 18 BY THE WITNESS: 19 A. I'm considering claim 1 in its entirety, and 20 I am providing opinions on specific elements as it 21 relates to specific prior art. 22 BY MR. SWISHER: 23 Q. Okay. Now did you perform an analysis where 24 you looked at the claims on a limitation by	Page 56 1 art and the file specification and the prosecution 2 history. 3 BY MR. SWISHER: 4 Q. Is that analysis reflected -- strike that. 5 Is that analysis included in your 6 declaration? 7 A. As I mentioned earlier, I focused on the 8 elements that -- that needed analysis. So, for 9 example, a processor does not need much analysis. 10 Q. Yeah, so I think I'm just asking you a 11 slightly different question still, so let me try and 12 understand. 13 You're testifying that you did perform an 14 analysis of claim 1 on a limitation by limitation 15 basis to find out where those limitations were 16 allegedly disclosed in the prior art; is that what 17 you're testifying to? 18 MS. NGUYEN: Objection, form. 19 BY THE WITNESS: 20 A. In the context of the entire claim, yes, I 21 performed an analysis like that, but in my 22 declaration, I focused on the specific elements for 23 my opinions. 24
Page 55 1 limitation basis? 2 MS. NGUYEN: Objection, form. 3 BY THE WITNESS: 4 A. So the analysis I performed was to read the 5 patent, its file history, from a POSITA's viewpoint, 6 and then look at prior art, and in the context of the 7 entire claim, opine on where prior art satisfies 8 particular elements of the claim, but not in 9 isolation, in the context of the entire claim, file 10 history, and the specification from a POSITA's 11 viewpoint. 12 BY MR. SWISHER: 13 Q. Okay, I understand. I think you've heard 14 you testify on that point several times now. 15 So I was asking a slightly different 16 question, and so I can repeat it; just let me know if 17 you don't understand what I'm asking. 18 So I asked: Did you perform an analysis 19 where you analyzed the claims on a limitation by 20 limitation basis? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. I did perform an analysis of a -- on a 24 limitation by limitation basis in view of the prior	Page 57 1 BY MR. SWISHER: 2 Q. Okay. So help me understand sort of how 3 that process works. 4 So you're saying you went out and you looked 5 at a prior art reference and you tried to find where 6 every limitation of claim 1 was disclosed in that 7 reference; is that right? 8 A. That's an example of what I did. 9 Q. Okay. So you did that analysis where you 10 looked for every element of claim 1 in a prior art 11 reference? 12 A. I did do an analysis like that. 13 Q. And did you include any opinions relating to 14 that analysis in your declaration? 15 A. Yes. 16 Q. Can you point me to where in your 17 declaration you performed an analysis of every 18 element of claim 1? 19 A. That wasn't the question you just asked, but 20 I don't list claim limitation by claim limitation in 21 my analysis, if that -- in my declaration. 22 So you asked a different question, was there 23 any. Yes, there was any opinions related to that 24 analysis in my declaration.

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Page 58 1 Q. Does your declaration include an opinion 2 that discusses an entire element by element analysis 3 of claim 1? 4 MS. NGUYEN: Objection, form. 5 BY THE WITNESS: 6 A. My declaration does not go down element by 7 element through a particular claim and point to the 8 prior art in a sequential manner in any place. 9 BY MR. SWISHER: 10 Q. Okay, that's what I'm trying to understand. 11 So it sounds like you're saying you 12 performed that analysis, though, right? It's just 13 not in your report? Not in your -- strike that. 14 It's not in your declaration? 15 A. As I mentioned before, my declaration is 16 focusing on particular elements that were part of 17 that larger analysis. 18 Q. Okay. So I think we're on the same page, 19 but you agree that your declaration does not include 20 an element by element analysis of claim 1, correct? 21 A. I don't agree with that. 22 If you want to ask a more specific question, 23 then maybe I could. But I don't agree with what you 24 just said.	Page 60 1 you're making. 2 Are you saying that your declaration 3 includes an analysis where the elements are addressed 4 nonsequentially? 5 A. So -- 6 MS. NGUYEN: Objection, form. 7 BY THE WITNESS: 8 A. -- this would require reading the entire 9 declaration, but sitting here, I can't say that each 10 element is or is not addressed in the declaration. 11 BY MR. SWISHER: 12 Q. Okay. So sitting here today, you don't know 13 whether or not your declaration includes an element 14 by element analysis of claim 1 in its entirety? 15 A. I performed an analysis element by element, 16 and then in my declaration, I provided opinions on 17 specific elements, and whether the union of those is 18 every element, I can't say sitting here right now. 19 Q. Okay. So you're testifying that you did 20 perform an analysis of every -- strike that. 21 You did perform an analysis of every element 22 of claim 1, but you don't know if that entire 23 analysis made it in to your declaration; is that 24 right?
Page 59 1 Q. So you're saying your declaration does 2 include an element by element analysis of claim 1? 3 MS. NGUYEN: Objection, form. 4 BY THE WITNESS: 5 A. I am not saying that either. 6 BY MR. SWISHER: 7 Q. All right, so help me here. I'm confused. 8 So does it have that analysis in the 9 declaration -- strike that. 10 Does your declaration have a claim by claim 11 analysis of claim 1 or not? 12 A. As I mentioned earlier, there's no place 13 where I lay out one after the other and address them 14 in sequence, but I'm addressing many of the claim 15 elements throughout the -- throughout the 16 declaration. 17 Q. Okay. So you agree that your declaration 18 does not include an element by element analysis of 19 claim 1 in its entirety, right? 20 A. No. I am saying that my analysis, my 21 declaration does not include a linear recitation of 22 the elements that then addresses them each 23 individually sequentially. It does not include that. 24 Q. Okay. So help me understand the distinction	Page 61 1 MS. NGUYEN: Objection, form. 2 BY THE WITNESS: 3 A. What I'm saying is, as is evident from 4 looking at the declaration, I did not write it in a 5 linear fashion, claim by claim, element by element. 6 Instead, I addressed different art and 7 opined on how the art meets the -- the meaning of the 8 claim elements. 9 BY MR. SWISHER: 10 Q. Why would you have omitted an opinion 11 relating to a claim element from your declaration? 12 MS. NGUYEN: Objection, form. 13 BY THE WITNESS: 14 A. So my job was not to provide legal 15 conclusions, but rather to do an expert analysis of 16 the patents, including the specification, the file 17 history, and the prior art, and to provide opinions 18 on elements of the claims. 19 BY MR. SWISHER: 20 Q. So your job was only to provide analysis of 21 certain elements of the claims; is that right? 22 A. My job is to do the entire analysis, was to 23 do the entire analysis, but not to write legal 24 conclusions.

Page 62 1 Q. Okay. Yeah, I'm not asking you about legal 2 conclusions. 3 So we can agree that your declaration 4 includes some opinions, right? 5 A. Right. 6 Q. And you have some opinions in there about 7 the prior art references that you looked at, right? 8 A. Right. 9 Q. So I'm just asking if you have any opinions 10 that analyze an entire claim of the '413 patent? 11 MS. NGUYEN: Objection, form. 12 BY THE WITNESS: 13 A. I think I've answered that several times. 14 Do you want me to try to -- 15 BY MR. SWISHER: 16 Q. I'm not sure you have. 17 So I understand you're saying you performed 18 an analysis of a claim -- strike that. 19 I understand you're testifying that you 20 performed an analysis of an entire claim on an 21 element by element basis, but I don't understand 22 whether or not your declaration, in your mind, 23 includes any such analysis. 24 MS. NGUYEN: Same objection.	Page 64 1 that some of the claim elements may be 2 uncontroversial and therefore not needing an expert's 3 opinion. 4 BY MR. SWISHER: 5 Q. What do you mean by "uncontroversial"? 6 A. Not contested by both sides. 7 Q. Do you mean that your understanding was that 8 certain elements of the '413 patent claims are 9 admitted to be disclosed in a specific prior art 10 reference? 11 MS. NGUYEN: Objection, form. 12 BY THE WITNESS: 13 A. Sorry, I didn't understand the question. 14 BY MR. SWISHER: 15 Q. Yeah, I'm just trying to understand what you 16 mean by uncontroversial or not contested by both 17 sides. 18 A. Can I explain? 19 Q. Sure. 20 A. So for example, in claim 1, there's a 21 processor and there is memory storing instructions. 22 So those are things that I think are well-understood, 23 and would not merit real estate in my declaration. 24 I'm not saying that it could not have been
Page 63 1 BY MR. SWISHER: 2 Q. So I'll ask the question again. 3 Does your declaration include any opinions 4 addressing an entire claim on an element by element 5 basis? 6 MS. NGUYEN: Same objection. 7 BY THE WITNESS: 8 A. So my answer, again, is that there's nowhere 9 in my declaration that, for a particular claim, I 10 step through element by element and provide 11 references to the prior art. 12 But I do provide opinions on many of these 13 elements, the union of which may or may not cover the 14 entire claim. 15 I'd have to read through the whole thing to 16 answer that definitively, but that was not what I was 17 asked to do. 18 BY MR. SWISHER: 19 Q. Okay. So why would you have decided not to 20 include opinions about certain elements in your 21 declaration? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. I think I used this word before, but I think	Page 65 1 done, but that's not what I did. 2 Q. Okay. 3 MS. NGUYEN: Counsel, can we take a break? 4 MR. SWISHER: Sure. 5 THE VIDEOGRAPHER: Off the record at 10:36. 6 (A short break was taken.) 7 (The following proceedings were had on the 8 record, outside the presence of the 9 deponent, and were not video-recorded.) 10 MS. NGUYEN: So, Mr. Swisher, we are aware 11 that your motion for pro hac vice admission has not 12 been granted. We wanted to not waive any rights we 13 have regarding the admissibility of this deposition 14 proceeding because the motion has not been granted. 15 So we are open to you contacting the Board 16 today to see if you can get that motion granted. 17 MR. SWISHER: Okay. So I understand, 18 though, when I filed my motion, you guys did not 19 object to my admission, right? 20 MS. NGUYEN: Correct. 21 MR. SWISHER: Okay. So do we really have a 22 substantive dispute about the admissibility of the 23 testimony today, or... 24 MR. ARJOMAND: Well, I think whether we

Page 66 1 oppose or didn't oppose your motion is not relevant, 2 ultimately, in that the Board has to decide whether 3 it will be admitted into this proceeding, and yes, 4 you know, if you are not admitted to this proceeding, 5 we want to reserve all our rights that this 6 deposition is not admissible. 7 MR. SWISHER: Okay. So you're saying that 8 if the Board approves my admissibility after today, 9 you would object to today's testimony? Or would you 10 agree to stipulate to, you know, sort of swearing 11 back the -- my admissibility to today for purposes of 12 the deposition? Just trying to understand if there 13 is a dispute there. 14 MR. ARJOMAND: I don't think we can say that 15 either way. I think you need to first become 16 admissible, admitted to this proceeding, and then we 17 can proceed. I don't think we can do a backdating 18 operation. 19 MR. SWISHER: But would you oppose, if the 20 Board backdated my admissibility to today, admission 21 to today? 22 MR. ARJOMAND: I think we'd have to consider 23 that, but at this point, I think the better course of 24 conduct is to see if you can contact the Board and	Page 68 1 Do you understand that you are still under 2 oath? 3 A. Yes. 4 Q. All right. So before the break, we were 5 talking about some of the claims of the '413 patent. 6 Do you remember that? 7 A. Yes. 8 Q. And you still have in front of you 9 Exhibit 1001, which is the '413 patent, and 10 Exhibit 1009 which is your declaration, right? 11 A. Yes. 12 Q. Okay. I believe you testified earlier that 13 you reviewed all of the claims of the '413 patent; is 14 that correct? 15 A. Yes. 16 Q. And do you know which claims of the '413 17 patent are being challenged in this IPR? 18 A. I know some of them. I'm not sure that I 19 can give an exhaustive list. 20 Q. Okay. Do you understand that some of the 21 claims in the '413 patent are not being challenged in 22 the IPR? 23 A. Yes. 24 Q. Okay. Dr. Lynch, are you familiar with what
Page 67 1 see if your admission -- your motion is granted. 2 MR. SWISHER: Okay. 3 I think that -- that's fine, you know, we 4 can do that. I just think for practical purposes 5 today, I'm just trying to understand if there's 6 actually a dispute. I don't think anybody wants to 7 do another deposition of Dr. Lynch, take more of your 8 time, his time, correct? So -- 9 MS. NGUYEN: That's why we recommend pausing 10 for a moment and calling the Board. 11 MR. SWISHER: That's fine. Let's go off the 12 record. 13 (A break was taken.) 14 THE VIDEOGRAPHER: We are back on the record 15 at 11:50. 16 MS. NGUYEN: So we took a break during the 17 deposition due to the fact that Mr. Swisher's motion 18 for pro hac vice admission had not been granted. 19 We understand that the Board has tentatively 20 granted the motion. 21 Petitioner reserves its rights as to the 22 admissibility of this deposition. 23 BY MR. SWISHER: 24 Q. All right, welcome back, Dr. Lynch.	Page 69 1 -- strike that. 2 Are you familiar with the terminology in 3 patent law that there are independent claims and 4 dependent claims? 5 A. Yes. 6 Q. Okay. And so you understand that dependent 7 claims include the limitations that are recited in 8 the independent claims from which they depend? 9 A. Yes. 10 Q. And you reviewed the -- sorry, strike that. 11 You reviewed the dependent claims in the 12 '413 patent, right? 13 A. Yes. 14 Q. So, for example, let's take a look at 15 claim 2, column 18. 16 That's a dependent claim that recites: The 17 apparatus of claim 1 wherein the first heart rate 18 measurements and the second heart rate measurements 19 are received in a plurality of encoded messages. 20 Right? 21 A. Yes. 22 Q. When you reviewed dependent claim 2, were 23 you also doing so in the context of the elements that 24 are recited in claim 1?

Page 70 1 A. In the full context of the patent and the 2 file history, yes. 3 Q. Okay, I'm just asking you just about the 4 claims for now. 5 So when you were analyzing, for example, 6 claim 2, which includes and recites the apparatus of 7 claim 1, were you doing that analysis in view of the 8 elements that are also recited in claim 1? 9 A. Yes. 10 Q. Okay. If I could direct your attention, 11 Dr. Lynch, to your declaration, Exhibit 1009 at 12 page 1, if you can look at paragraph 1. 13 A. Yes. 14 Q. Are you there? 15 A. Yes. 16 Q. Okay. So the second sentence of paragraph 1 17 says: I have been asked to analyze how a person of 18 ordinary skill in the art (POSITA) would have 19 understood certain references before April 17, 2003, 20 and whether a POSITA would have modified or combined 21 them. 22 Did I read that correctly? 23 A. Yes. 24 Q. Okay. So what I'm trying to understand is	Page 72 1 one, okay? 2 So in analyzing how a POSITA would have 3 understood certain references, are you referring to 4 them just standing alone, the references standing 5 alone? 6 MS. NGUYEN: Objection, form. 7 BY THE WITNESS: 8 A. Everything that I did was in view of a 9 POSITA's reading of the patent and its file history. 10 So when I was looking at certain references before 11 April 17, 2003, I had that view on them. 12 BY MR. SWISHER: 13 Q. You had the view of how a POSITA would have 14 understood the '413 patent? 15 A. I'm not sure I understand the question. 16 Q. Yeah, so I'm trying to understand what you 17 mean here. 18 So you say you were asked to analyze how a 19 POSITA would have understood certain references. 20 Do you follow me so far? 21 A. Yes. 22 Q. Okay. Then the second piece of the sentence 23 says: And whether a POSITA would have modified or 24 combined them. Right?
Page 71 1 this: The opinions in your declaration, are they 2 just about how a POSITA would have understood the 3 references and whether a POSITA would have modified 4 or combined them as stated here in paragraph 1, or 5 are your opinions something else? 6 MS. NGUYEN: Objection, form. 7 BY THE WITNESS: 8 A. I'm sorry, I didn't understand, are they 9 something else. 10 So my work includes what I said in sentence 11 two here of paragraph 1. 12 BY MR. SWISHER: 13 Q. Does it include anything other than what is 14 stated in sentence two of paragraph 1? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. I'm not sure that sentence two characterizes 18 everything I did. 19 BY MR. SWISHER: 20 Q. Well, here's what I'm getting at: So you 21 say here that you were asked to analyze how a POSITA 22 would -- sorry, strike that -- would have understood 23 certain references. 24 So let's take that piece and start with that	Page 73 1 A. Correct. 2 Q. Okay. So what I'm trying to understand is, 3 did you go look at a reference and just say, here's 4 how I think a person of ordinary skill in the art 5 would have understood this reference, or did you 6 perform that analysis in relation to something else? 7 A. So to look at some prior art, you could look 8 at it with different viewpoints, but the viewpoint 9 that I was looking at them was a POSITA who has read 10 the '413 patent and its file history. 11 Q. Okay. Now it doesn't say anything about the 12 '413 patent or the file history in that sentence that 13 we just read in paragraph 1, right? 14 A. No. 15 Q. Okay. Did you also analyze the prior art 16 references in view of the claims of the '413 patent? 17 A. The entire '413 patent, so that includes the 18 claims. 19 Q. Okay. So I'm asking specifically about the 20 claims, though. 21 When you were looking at the prior art 22 references, were you looking for things in relation 23 to the claims of the '413 patent, or in relation to 24 the specification of the '413 patent?

Page 74 1 MS. NGUYEN: Objection, form. 2 BY THE WITNESS: 3 A. So I understand that the invention, the 4 '413, is encapsulated in the claims. 5 So the claims as informed by file history 6 and the specification are how I was viewing the prior 7 art. 8 BY MR. SWISHER: 9 Q. Okay. So let me just unpack that for a 10 moment. 11 So how did this process work? Did you look 12 at the claims and then go see if could you find 13 something related to those claims in the prior art? 14 Is that what you did? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. I was analyzing the prior art to map it on 18 to claim elements. 19 BY MR. SWISHER: 20 Q. And is that analysis contained in your 21 declaration? 22 A. Much of it is. 23 Q. You mean there's some part of your analysis 24 that's not included in your declaration?	Page 76 1 what the meanings of the claims and claim terms were 2 in conducting your analysis? 3 MS. NGUYEN: Same objection. 4 BY THE WITNESS: 5 A. So in conducting my analysis, when reading 6 the claims and the limitations in the claims, I 7 interpreted the words in those claims according to 8 the specification and the file history as somebody 9 with a -- somebody who is POSITA. 10 BY MR. SWISHER: 11 Q. Did you conduct a claim construction 12 analysis of any claim terms in the '413 patent 13 claims? 14 A. I ascribed plain and ordinary meaning, 15 according to a POSITA, in view of the specification 16 and file history. 17 Q. Does your declaration state what your view 18 of the plain and ordinary meaning is for any claim 19 terms in the '413 patent? 20 A. Just give me a moment. 21 So that suggests in paragraph 43 of my 22 declaration, which says: I have been instructed to 23 perform my analysis with the understanding that the 24 terms of the challenged claims should be afforded
Page 75 1 A. As I mentioned before, not everything that I 2 thought ended up in the declaration. 3 Q. So -- go ahead. Sorry. 4 A. The things in the declaration are the things 5 that I thought were important to highlight. 6 Q. Did you intentionally leave out some 7 portions of your analysis? 8 MS. NGUYEN: Objection, form. 9 BY THE WITNESS: 10 A. To the extent that I didn't write about 11 everything that I did, that was intentional. 12 BY MR. SWISHER: 13 Q. All right. When you were reviewing the 14 prior art -- or strike that. 15 When you were analyzing the prior art, as 16 you said in view of the '413 patent, what meaning, if 17 any, did you attach to the claims and claim 18 limitations? 19 MS. NGUYEN: Objection, form. 20 BY THE WITNESS: 21 A. I'm sorry, I don't know how to answer that 22 question. 23 BY MR. SWISHER: 24 Q. Did you perform any analysis to understand	Page 77 1 their plain and ordinary meaning. However, should 2 patent owner and/or patent owner's expert choose to 3 construe additional claim terms or challenge the ones 4 herein, I reserve the right to provide my opinion 5 regarding patent owner's constructions, as well as 6 the meaning a POSITA would have ascribed to those 7 claim terms. 8 Q. Okay. I understand paragraph 43 essentially 9 sets forth your understanding of the legal standard 10 for claim construction, but does your declaration 11 actually include any discussion of the plain and 12 ordinary meaning of any claim terms? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. I can't answer that question without 16 reviewing the entire declaration. 17 BY MR. SWISHER: 18 Q. So you just don't remember without reviewing 19 the whole declaration whether you included any 20 opinions about the plain and ordinary meaning of any 21 claim terms? 22 A. Correct. 23 Q. Okay. Let's take a look at the section of 24 your declaration titled Overview of the '413 Patent,

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Page 78 1 which begins on page 13 of Exhibit 1009, starting at 2 paragraph 22. 3 Do you see paragraph 22? 4 A. Yes. 5 Q. And this section B, Overview of the '413 6 Patent, continues until paragraph 39, which appears 7 on page 17. 8 Do you see that? 9 A. Yes. 10 Q. Now taking a look at those paragraphs, 11 paragraphs 22 to 39 of your declaration, are there 12 any opinions there about the plain and ordinary -- 13 plain and ordinary meaning of any claim terms? 14 A. So I'm only skimming it now, but I believe 15 I'm using the plain and ordinary meanings, but not 16 providing explicit opinions on them, on what the 17 plain and ordinary meaning is. 18 Q. Okay. So this section of your declaration, 19 titled Overview of the '413 Patent, doesn't contain 20 any opinions about the plain and ordinary meanings of 21 any claim terms, correct? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. Certainly does implicitly, because I'm using	Page 80 1 A. That's correct. 2 Q. And that's a portion of the specification, 3 right? 4 A. That's right. 5 Q. Okay. So you are not actually referring to 6 a claim element in paragraph 25, right? 7 A. I'm referring -- 8 MS. NGUYEN: Objection, form. 9 BY THE WITNESS: 10 A. I'm referring to terms used in claim 11 elements. 12 BY MR. SWISHER: 13 Q. Okay. So are there any instances in 14 section B where you refer to a claim limitation, as 15 opposed to just a claim -- a term, I'm sorry, that's 16 used in a claim? 17 MS. NGUYEN: Objection, form. 18 BY THE WITNESS: 19 A. And so when you say "a claim limitation," 20 are you referring to a specific claim limitation? 21 BY MR. SWISHER: 22 Q. No. Just any claim limitation. 23 A. Can I have a moment to review? 24 Q. Sure.
Page 79 1 the plain and ordinary meanings to a POSITA who has 2 read the specification and the file history. 3 BY MR. SWISHER: 4 Q. Okay. Can you point me to where in 5 section B you discuss any claims or claim terms? 6 A. So for example, I use the words "heart 7 rates," and "heart rate" appears in the claim -- 8 claims. That's an example. 9 Q. And where are you getting that example from, 10 what specific paragraph? 11 A. So one place is paragraph 25 talks about the 12 heart rate sensor, so that is a term that's used in 13 the claims. 14 Q. Do you know -- 15 A. That's one example. 16 Q. Okay. Which claims does heart rate sensor 17 appear in? 18 A. So heart rate appears at least in claim 1. 19 Q. Oh, just heart rate, not heart rate sensor? 20 A. That's what I said, heart rate, and then I 21 read the longer passage that said heart rate sensor. 22 Q. Okay. Paragraph 25, the part you're just 23 referring to, heart rate sensor 303, that's citing to 24 column 6 of the '413 patent, right?	Page 81 1 A. So column -- or sorry, paragraph 24 talks 2 about a processor, which is, I believe, a claim 3 limitation in claim 1. 4 Q. In paragraph 24, are you specifically 5 referring to a claim limitation there? 6 A. I'm using the words that are in the claim 7 limitation. 8 Q. But you're quoting from the specification, 9 correct? 10 MS. NGUYEN: Objection, form. 11 BY THE WITNESS: 12 A. Processor is used in both the specification 13 and the claim. 14 BY MR. SWISHER: 15 Q. And what section of the patent are you 16 citing in paragraph 24? Is it the specification, or 17 are you citing the claims? 18 A. So there's a citation at the end of that 19 sentence to column 5 of the specification. 20 Q. So you are not citing to the claims, 21 correct? 22 A. I'm citing a term that's used in the 23 specification and in the claims. 24 Q. Okay. Anywhere else in section B where you

Page 82 1 -- strike that. 2 Can you find any citations in section B of 3 your declaration to an entire claim element of the 4 '413 patent? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. So I am aware from reading the institution 8 decision that claim 1 has been broken into claim 9 elements by both the petitioner and, I believe, the 10 same claim element listing is used by Nike. 11 So I am aware of those claim elements being 12 enumerated, but I do not enumerate claim elements in 13 my declaration. 14 BY MR. SWISHER: 15 Q. Okay. And does your declaration provide any 16 opinions about the plain and ordinary meaning of any 17 specific claim element? 18 A. Just that I'm ascribing the plain and 19 ordinary meaning to a POSITA who has read the patents 20 and the file history. 21 Q. Okay. So you're just saying that, in 22 general, you ascribe plain and ordinary meanings, 23 right? 24 MS. NGUYEN: Objection, form.	Page 84 1 BY MR. SWISHER: 2 Q. But I'm just trying to understand if you 3 actually had a meaning in mind, not just the concept 4 of a plain and ordinary meaning, but an actual 5 meaning. 6 Do you understand the difference I'm getting 7 at? 8 MS. NGUYEN: Objection, form. 9 BY THE WITNESS: 10 A. I am able to ascribe meaning to the words in 11 the claims because I've read the file history and the 12 specification and I understand a POSITA. 13 BY MR. SWISHER: 14 Q. So you're saying you had some meaning in 15 your mind about what the words of the claims mean as 16 you conducted your analysis? 17 A. Yes. 18 Q. Okay. Now what I'm asking is, is there 19 anything in your declaration that says what those 20 meanings were that you had? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. I'm sorry, you're asking me if there's 24 anywhere in my declaration that I do something?
Page 83 1 BY THE WITNESS: 2 A. I ascribed plain and ordinary meanings to 3 the words in the claims according to a POSITA who's 4 read the file history and the specification. 5 BY MR. SWISHER: 6 Q. But you didn't offer any specific plain and 7 ordinary meaning opinion with respect to any claim 8 element, correct? 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. I'm implicitly using those plain and 12 ordinary meanings, just to be able to write what I've 13 written. 14 BY MR. SWISHER: 15 Q. Well, let me ask you this way: Are you 16 saying that you had in your head an idea of what the 17 plain and ordinary meaning is for a certain claim 18 term? 19 MS. NGUYEN: Objection, form. 20 BY THE WITNESS: 21 A. For all claim terms, I am putting myself in 22 the shoes of a POSITA who's read the patent, file 23 specification -- sorry, the file history. 24	Page 85 1 BY MR. SWISHER: 2 Q. Yeah, is there anywhere in your declaration 3 where you say, in my view, the meaning of claim term 4 X is A B C, and then you say what the meaning is. 5 Is there anything like that in your 6 declaration? 7 MS. NGUYEN: Objection, form. 8 BY THE WITNESS: 9 A. I'd have to review my entire declaration to 10 say with any definitiveness. 11 BY MR. SWISHER: 12 Q. So you don't know right now -- I'm sorry, 13 strike that. 14 You can't tell me without reviewing the 15 whole declaration whether you offered any opinions 16 where you set forth the plain and ordinary for a 17 claim term? 18 MS. NGUYEN: Objection, form. 19 BY THE WITNESS: 20 A. I'm using plain and ordinary meanings 21 throughout, and so certainly they are implicit. 22 BY MR. SWISHER: 23 Q. I'm just trying to understand if anything in 24 your declaration says what those plain and ordinary

Page 86 1 meanings are. 2 A. Can you give me an example of what it would 3 say? 4 Q. Yeah. So let's take a look at the '413 5 patent, claim 1. 6 Let's take a look at the limitation C, as 7 it's been termed, which begins with "Prompt a user to 8 exercise at a plurality of successive exertion 9 levels, wherein an exertion level is based on a level 10 of physical fitness of a user." 11 Do you see that limitation? 12 A. I do. 13 Q. So using that one as an example, is there 14 any place in your declaration where you offer a plain 15 and -- strike that -- where you offer an opinion 16 about what the plain and ordinary meaning of that 17 limitation is? 18 MS. NGUYEN: Objection, form. 19 BY THE WITNESS: 20 A. I am not aware, sitting here now, that I 21 recited that entire claim limitation in my 22 declaration, but to be definitive, I would have to 23 read the whole thing. 24	Page 88 1 Q. Okay. And is there any place in your 2 declaration where you discuss the complete language 3 of that limitation? 4 MS. NGUYEN: Objection, form. 5 BY THE WITNESS: 6 A. I ascribe meanings to these terms that a 7 POSITA would have, based on specification and file 8 history. 9 But I don't ever, as far as I remember, 10 sitting here now, write the entire claim element out, 11 nor do I have the enumeration that I have seen in the 12 institution decision anywhere in my declaration. 13 BY MR. SWISHER: 14 Q. Okay. So you ascribed a meaning to 15 limitation D as part of your analysis, is that right? 16 MS. NGUYEN: Objection, form. 17 BY THE WITNESS: 18 A. To clarify, D, I don't have an enumeration 19 in front of me. Which is D? 20 BY MR. SWISHER: 21 Q. That's the limitation we just read, so the 22 one that begins with "Determine the plurality." 23 A. Okay. 24 Q. Okay.
Page 87 1 BY MR. SWISHER: 2 Q. Okay. So you don't know whether you recited 3 the entire limitation in your declaration, right? 4 A. Sitting here now, I don't know. I'd have to 5 read through it. 6 Q. Okay. And sitting here now, do you know if 7 you offered any opinion about what the plain and 8 ordinary meaning of limitation C in claim 1 is? 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. I didn't write down what this limitation 12 means in different words. I think the words here are 13 sufficient to understand what the specification and 14 the file history for a POSITA means. 15 BY MR. SWISHER: 16 Q. Okay. So we were just talking about 17 limitation C of claim 1 as an example. 18 Let's take a look at the next limitation D: 19 "Determine a plurality of heart rate zones based on 20 first heart rate measurements received from a sensor 21 while the user exercises at the plurality of 22 successive exertion levels." 23 Do you see that limitation? 24 A. I do.	Page 89 1 A. And so sorry, what was the question? 2 Q. My question was, you testified that you 3 ascribed meanings to the terms, including 4 limitation D as part of your analysis, right? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. I ascribed the plain and ordinary meaning to 8 a POSITA. 9 BY MR. SWISHER: 10 Q. And what is that plain and ordinary meaning 11 for limitation D? 12 MS. NGUYEN: Same objection. 13 BY THE WITNESS: 14 A. I would use the same words, because I don't 15 have a different set of words to write it. That's 16 not something that I've written down. 17 BY MR. SWISHER: 18 Q. Okay. So your opinion is that the plain and 19 ordinary meaning of limitation D is just the words 20 that are recited in limitation D; is that right? 21 A. From the viewpoint of a POSITA who has read 22 the entire patent and the file history. 23 Q. Now is that opinion different for any other 24 limitations that are in claim 1?

Page 90 1 And what I mean by that is, are there any 2 limitations of claim 1 where, in your opinion, the 3 plain and ordinary meaning is something other than 4 the words that are recited in the claim? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. Nowhere do I rewrite the claim elements of 8 claim 1 in different words to say that these are the 9 words that those other words meant. Nowhere do I do 10 that in my declaration. 11 BY MR. SWISHER: 12 Q. Okay. That's just what I'm trying to 13 understand. 14 So there's no opinions in your declaration 15 that any claim limitations of the '413 patent have 16 some sort of meaning that's different from what your 17 view is of what the plain words are, right? 18 MS. NGUYEN: Objection, form. 19 BY THE WITNESS: 20 A. So I'm ascribing the viewpoint of a POSITA 21 who has read the patent and the file history, and 22 that's -- so those words plus that, and I have not 23 tried to write those words in a different way to mean 24 the same thing.	Page 92 1 You didn't offer any interpretation of the 2 claim limitations in claim 1, right? 3 A. I'm not sure what that means. 4 Q. Yeah, there's no part -- sorry, strike that. 5 There's no portion of your declaration where 6 you say, for example, in my opinion, limitation C 7 means something, and then you explain what that 8 meaning is, right? 9 A. As I mentioned before, I don't even have an 10 enumeration of claim elements in my declaration. 11 Q. Well, let's set aside the enumeration of 12 claim elements. I'm just trying to use a shorthand. 13 For example, let's refer to limitation C, 14 which the actual language is "Prompt a user to 15 exercise at a plurality of successive exertion levels 16 wherein an exertion level is based on a level of 17 physical fitness of a user." 18 You follow me? 19 A. Yes. 20 Q. Okay. Is it fair that we can refer to that 21 phrase as limitation C? 22 A. Sure. 23 Q. Okay. So all I was asking is, is there any 24 place in your declaration where you offer an opinion
Page 91 1 BY MR. SWISHER: 2 Q. Right, so maybe we're talking past each 3 other. 4 I'm just trying to understand if the 5 meanings that you ascribe to the limitations, is it 6 something different than what's written in the 7 claims? 8 A. No. It's what the POSITA would read these 9 claims to mean, if they'd read the patent and the 10 file history. 11 Q. So in your view, all of the claim terms of 12 the -- sorry, strike that. 13 In your opinion, all the limitations of 14 claim 1 just mean what the plain words in the claims 15 are; is that right? 16 Let me ask you a different question: You 17 didn't offer any sort of interpretation that there's 18 a meaning that requires the usage of other words that 19 aren't in the claims, right? 20 MS. NGUYEN: Objection, form. 21 BY THE WITNESS: 22 A. I'm sorry, could you ask the question again? 23 BY MR. SWISHER: 24 Q. Yeah.	Page 93 1 about an interpretation of what you think that 2 limitation means to a person of ordinary skill in the 3 art? 4 MS. NGUYEN: Objection, form. 5 BY THE WITNESS: 6 A. I don't try to rewrite that claim element in 7 different words. 8 BY MR. SWISHER: 9 Q. So the answer to my question is no? 10 MS. NGUYEN: Objection, form. 11 BY THE WITNESS: 12 A. I think I answered your question. 13 BY MR. SWISHER: 14 Q. I don't think you did. 15 Let me ask it again: Is there any place in 16 your declaration where you offer an opinion on an 17 interpretation that you think the limitation should 18 have to a person of ordinary skill in the art? 19 MS. NGUYEN: Same objection. 20 BY THE WITNESS: 21 A. I'm using these terms throughout my 22 declaration, so obviously they have an implicit 23 meaning, and that meaning is what a person of 24 ordinary skill in the art would ascribe to them based

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Page 94 1 on reading the patent and the file history. 2 BY MR. SWISHER: 3 Q. Well, we can come back to that, because I 4 don't think you can point me to a place in your 5 declaration where you actually use limitation C or 6 refer to the language of limitation C, right? 7 MS. NGUYEN: Objection, form. 8 BY THE WITNESS: 9 A. I do use language from limitation C, but I 10 don't believe I ever enumerate it and write the 11 entire claim element out. 12 BY MR. SWISHER: 13 Q. Okay. 14 A. In one place. 15 Q. Understood. 16 Okay. So with that understanding, can you 17 not answer my question? I'm just asking, is there 18 any place in your declaration where you offer an 19 interpretation of limitation C? 20 MS. NGUYEN: Same objection. 21 BY THE WITNESS: 22 A. There's nowhere in my declaration that I 23 rewrite claim C in different words. 24	Page 96 1 So that paragraph 43 doesn't refer to 2 limitation C, correct? 3 A. Nowhere refers to limitation C. 4 Q. Okay. And paragraph 43 doesn't say anything 5 about what you think limitation C means, right? 6 A. Just that I'm ascribing its plain and 7 ordinary meaning to a POSITA. 8 Q. Okay. But you don't set forth any opinion 9 about what that plain and ordinary meaning is, right? 10 A. Again, I don't try to rewrite claim 11 element C in different words. 12 Q. Okay. Now did the prosecution history of 13 the '413 patent impact your understanding of the 14 meaning of any claim elements? 15 A. So the file history was part of my 16 interpretation of the claim -- of the claim elements. 17 Q. In what way? 18 A. Well, I reviewed the file history, as well 19 as the specification, through the eyes of a POSITA to 20 better understand or to better interpret the claim 21 elements. 22 Q. Okay. So I understand that general 23 explanation. 24 Let's talk about specifics. Was there
Page 95 1 BY MR. SWISHER: 2 Q. When you say "rewrite," are you talking 3 about something different than an interpretation? Is 4 there any reason why you can't answer my question? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. I believe I did answer your question. I'm 8 trying to make your question concrete. 9 BY MR. SWISHER: 10 Q. Well, so in your view, "rewrite" means the 11 same thing as "interpret"? 12 A. There's nowhere in my declaration where I 13 say -- I give different words for claim element C. 14 Q. Right. So I'm just trying to find out, or 15 trying to confirm that your declaration doesn't offer 16 any opinions about the meaning of limitation C, 17 right? 18 MS. NGUYEN: Objection, form. 19 BY THE WITNESS: 20 A. Again, I would refer to paragraph 43 of my 21 declaration, which tells me -- tells you how I read 22 the claims. 23 BY MR. SWISHER: 24 Q. I understand that.	Page 97 1 anything specific in the file history that impacted 2 your interpretation of the claim limitations? 3 MS. NGUYEN: Objection, form. 4 BY THE WITNESS: 5 A. I think you're asking if I had not read the 6 file history, would I have interpreted the claims the 7 same way? 8 Maybe I shouldn't ask your questions for 9 you, but I didn't quite understand the question. 10 BY MR. SWISHER: 11 Q. Yeah, I think that's probably a fair way of 12 getting at it. 13 So did reading the file history have any 14 impact on your interpretation of the claim elements, 15 or like you said, would it have been the same whether 16 you had read the file history or not? 17 MS. NGUYEN: Objection, form. 18 BY THE WITNESS: 19 A. So there are two things: There are the 20 opinions that I put in this declaration, which were 21 not impacted, and then there's just the general 22 understanding of the entire history of the patent, 23 which is impacted. 24

Page 98 1 BY MR. SWISHER: 2 Q. Okay. Well, let's take those in turn. 3 The opinions that you put in this 4 declaration you say were not impacted by the file 5 history, right? 6 A. I said that I would have written -- that 7 these -- what I have written here is -- is not 8 changed by the file history. 9 Q. Okay. Well, let me ask it a slightly 10 different way. 11 Setting aside whether it changed your mind 12 in any way, let me ask you this: Did the file 13 history influence your interpretation of any claim 14 limitations from the perspective of a person of 15 ordinary skill in the art? 16 MS. NGUYEN: Objection, form. 17 BY THE WITNESS: 18 A. Did the file history influence my -- I don't 19 want to say the question for you. 20 What was the question? 21 BY MR. SWISHER: 22 Q. Yeah, so you testified before that you 23 reviewed the claims in view of the specification and 24 the file history, right?	Page 100 1 patent that affected my opinions in this 2 declaration." Correct? 3 A. Yes. 4 Q. Okay. So that's what I'm trying to 5 understand. 6 So setting aside your opinions, was there 7 any other part of your analysis that was affected by 8 the prosecution history of the '413 patent? 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. I found the prosecution history to 12 illuminate the evolution of the claims over time, 13 after two rejections. 14 BY MR. SWISHER: 15 Q. Okay. So -- strike that. 16 A. So I saw that the claims had changed. 17 Q. Did the prosecution history illuminate to 18 you the meaning of the claims? 19 MS. NGUYEN: Objection, form. 20 BY THE WITNESS: 21 A. That and the specification were included in 22 my understanding of the claims. 23 BY MR. SWISHER: 24 Q. Okay. So the -- so that just seems
Page 99 1 A. Yes. 2 Q. Okay. So what I'm trying to understand is, 3 did the file history have any impact on your 4 understanding of the claim limitations? 5 MS. NGUYEN: Same objection. 6 BY THE WITNESS: 7 A. The file history primarily informed me as to 8 the evolution of the claim language. 9 BY MR. SWISHER: 10 Q. Did the file history inform you as to the 11 meaning of any claim language? 12 A. It was all included in my -- in my analysis 13 of the claim language, that and the specification. 14 Q. Are you referring to a specific portion of 15 your declaration when you're talking about your 16 analysis? 17 A. Not sure how to answer that. 18 I think all of this in my declaration 19 results from analysis. 20 Q. Okay. So just look at paragraph 40 of your 21 declaration on page 17. 22 A. Okay. 23 Q. The second sentence says: "I did not see 24 anything in the prosecution history of the '413	Page 101 1 inconsistent what you said, so I'm just trying to 2 understand. 3 So something about the prosecution history 4 did impact your understanding of the meaning of the 5 claims, is that right? 6 MS. NGUYEN: Objection, form. 7 BY THE WITNESS: 8 A. So the claims evolved during the prosecution 9 history, and so I read the back-and-forth and why 10 claim elements were changed. 11 BY MR. SWISHER: 12 Q. Okay. So let's focus on why claim elements 13 were changed, okay? 14 Are you with me? 15 A. Sure. 16 Q. Okay. So did that process of the changes to 17 claim elements -- strike that. 18 Is it fair that we refer to the changing of 19 the claim elements as claim amendments? Have you 20 heard that term before? 21 A. Yes. 22 Q. Okay. So did the claim amendment process, 23 as reflected in the file history, impact your 24 understanding of the meaning of any claim terms?

Page 102 1 MS. NGUYEN: Objection, form. 2 BY THE WITNESS: 3 A. So reading the evolution of the claims, I 4 saw the rationale behind adding new limitations to 5 the claim elements. 6 BY MR. SWISHER: 7 Q. And did those rationales impact your 8 understanding of the meaning of any claim elements? 9 A. They were part of the full review of the 10 prosecution history and the specification. 11 Q. Okay. So I just want to ask something -- 12 strike that. 13 I'm asking sort of more specifically. So I 14 understand generally you're saying that your analysis 15 was influenced by your review of the prosecution 16 history and the specification, right? 17 Okay, so let's set aside that general piece 18 of your analysis and talk more about specifics. 19 So you follow me on specifics? 20 A. I'm waiting. 21 Q. Okay. So was there anything specific, any 22 specific opinion that you generated in your analysis 23 of the claim elements that was influenced by your 24 review of the prosecution history?	Page 104 1 history. Is there anything like that in your 2 declaration? 3 MS. NGUYEN: Objection, form. 4 BY THE WITNESS: 5 A. So it's difficult for me to answer questions 6 like that, is there anything in your declaration that 7 looks like this, because I have no easy way to search 8 the whole thing. 9 BY MR. SWISHER: 10 Q. So you don't remember, without reviewing the 11 whole thing, if you offered any opinions about the 12 file history? 13 A. So in paragraph 40 I do, and then I just 14 stated that, sitting here now, I am not aware of 15 further reference to the prosecution history after 16 paragraph 40, but I also can't be definitive about 17 that. 18 Q. Okay. 19 MS. NGUYEN: Counsel, can we take a lunch 20 break? 21 MR. SWISHER: Sure. Let's go off the 22 record. 23 THE VIDEOGRAPHER: Off the record at 12:35. 24 (A lunch break was taken.)
Page 103 1 MS. NGUYEN: Objection, form. 2 BY THE WITNESS: 3 A. So my understanding of the claim elements 4 depended, in part, on the prosecution history. 5 BY MR. SWISHER: 6 Q. Okay. But you can't point me to anything 7 specific as an example of that, right? 8 Like do you have an opinion in your 9 declaration that says, in view of this piece of the 10 file history, my opinion is this claim element means 11 X? 12 MS. NGUYEN: Objection, form. 13 BY THE WITNESS: 14 A. I don't believe I talk about the prosecution 15 history after paragraph 40, but again, to make that 16 definitive, I'd have to look at the whole thing. 17 BY MR. SWISHER: 18 Q. Right, right. So that's just what I'm 19 trying to understand. So I think maybe now we're on 20 the same page. 21 So I understand that you reviewed the file 22 history. I'm just asking, do you have any opinions 23 where you say my opinion is this because of the file 24 history, or my opinion was impacted by the file	Page 105 1 THE VIDEOGRAPHER: We are back on the record 2 at 1:15. 3 BY MR. SWISHER: 4 Q. Dr. Lynch, I'm going to hand you what has 5 been marked as Exhibit 1014 in the IPR. 6 All right, you can see Exhibit 1014 is 7 titled Response to Office Action. 8 Do you see that? 9 A. Yes. 10 Q. And right below that, it says: "This paper 11 is responsive to the Office Action mailed on June 13, 12 2013." Right? 13 A. Yes. 14 Q. Okay. And you can take a look and flip 15 through it if you need to, but do you recognize this 16 as one of components of the '413 patent prosecution 17 history that you reviewed in conducting your 18 analysis? 19 A. Yes. 20 Q. And you understand this Exhibit 1014 21 includes a response from the patent applicant, right? 22 A. Yes. 23 Q. Okay. And in this response, the patent 24 applicant is making a submission to the Patent

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Page 106 1 Office, right? 2 A. Yes. 3 Q. If you could please turn to page 3 of 4 Exhibit 1014. 5 And do you see at the top of the page there 6 is a heading that says Amendments to the Claims? 7 A. Yes. 8 Q. Okay. I'd like for us to focus on claim 1 9 for a moment. 10 Do you see on claim 1 that there's some 11 material that's underlined and some material that's 12 crossed out? 13 A. Yes. 14 Q. Okay. And do you understand that the 15 underlined material are proposed amendments made by 16 the applicant? 17 MS. NGUYEN: Objection, form. 18 BY THE WITNESS: 19 A. I believe the underlined are additions to 20 the claim limitations that they are proposing. 21 BY MR. SWISHER: 22 Q. Right. So you understand that the 23 underlined portions represent additions to the 24 claims, and that the crossed-out portions represent	Page 108 1 forward to page 7. 2 A. Okay. 3 Q. All right. Let's focus on the very last 4 paragraph on the bottom of page 7. 5 Now do you understand that, in this section 6 of Exhibit 1014, that the applicant was making 7 certain remarks related to its claim amendments? 8 A. Yes. 9 Q. And in the last paragraph here on page 7, 10 the applicant is stating "Lubell does not disclose," 11 and then it quotes some claim language, "prompt[ing] 12 a user to exercise at a plurality of successive 13 exertion levels, wherein an exertion level is based 14 on a level of physical fitness of a user." 15 And then it says, as recited in claim 1 -- 16 I'm sorry, "As recited in amended claim 1." 17 Do you see that? 18 A. Yes. 19 Q. And then right after that, do you see where 20 the applicant is referencing some portions of the 21 application, specifically paragraphs 71, and then 22 turning to page 8, it references paragraph 73 and 75 23 of the instant application? 24 A. Yes.
Page 107 1 deletions to the claim language, right? 2 A. Yes. 3 Q. Okay. All right, and so you can see here in 4 Exhibit 1014 that -- strike that. 5 I want to focus on the first element of 6 claim 1 that has some changes to it, okay? 7 A. Yes. 8 Q. And do you see that limitation begins with 9 "prompt a user to exercise"? 10 A. Yes. 11 Q. Okay. So we can agree that, in this 12 amendment, the applicant added the language "A 13 plurality of successive exertion levels, wherein an 14 exertion level is based on a level of physical 15 fitness of a user," correct? 16 A. Yes. 17 Q. Okay. Now in forming your opinions in your 18 declaration, you reviewed this exhibit? 19 A. Yes. 20 Q. And you reviewed these additions to the 21 claim language that are shown on page 3 of 22 Exhibit 1014? 23 A. Yes. 24 Q. Okay. I just want to turn a few pages	Page 109 1 Q. Okay. All right, and then further in that 2 paragraph, the applicant stated that "Lubell is 3 directed to a prescribed exercise test," with 4 prescribed in italics. 5 Do you see that? 6 A. Yes. 7 Q. Okay. And the applicant is making a point 8 before in that sentence where it says: In contrast, 9 Lubell is directed to a prescribed exercise test. 10 Right? 11 A. Yes. 12 Q. And then in the next sentence, the applicant 13 states: "In other words, Lubell automatically 14 executes a predefined exercise test protocol that is 15 not based on a level of physical fitness of a user." 16 Do you see that? 17 A. I see that. 18 Q. Okay. Now, Dr. Lynch, in conducting your 19 analysis that's reflected in your declaration, did 20 this paragraph of the file history in Exhibit 1014 21 have any effect on your understanding of this claim 22 amendment that was added to the patent? 23 MS. NGUYEN: Objection, form. 24

Page 110 1 BY THE WITNESS: 2 A. So this is providing a reason to add the new 3 language. In the applicant's viewpoint, they're 4 adding new language to try to overcome the prior 5 rejection. 6 BY MR. SWISHER: 7 Q. Did you consider the portions of the 8 applicant's statement where the applicant was 9 contrasting to the disclosures of Lubell? 10 A. I considered all of it. 11 Q. Okay. And what impact did that portion of 12 the applicant statement have on your analysis, if 13 any? 14 MS. NGUYEN: Objection, form. 15 BY THE WITNESS: 16 A. Along with everything else, the patent and 17 the rest of the prosecution history, it goes to 18 informing the reading of the claims. 19 BY MR. SWISHER: 20 Q. Okay. And so what I'm getting at is 21 specifically let's focus on the amended additional 22 claim language that's highlighted in the last 23 paragraph -- I'm sorry, that's underlined in the last 24 paragraph on page 7, okay?	Page 112 1 A. Everything related to this patent, file 2 history, and the specification and the claim 3 language. 4 Q. Okay. So I'm trying to pick apart and drill 5 down to some details, so I understand the general 6 point that you just made. 7 Can we talk about some details now? Is that 8 okay? 9 A. Sure. 10 Q. Okay. So I'm just trying to understand if, 11 starting with the paragraph that begins on the bottom 12 of page 7 and goes to the top of page 8 in 13 Exhibit 1014, did that paragraph specifically have 14 any impact on your understanding of the meaning of 15 the underlined claim limitation that was added in 16 this amendment? 17 MS. NGUYEN: Objection, form. 18 BY THE WITNESS: 19 A. This helps me understand how the patent 20 owners were trying to get over the rejection for 21 certain, and I understand why they added this. 22 BY MR. SWISHER: 23 Q. Okay. So you don't have any specific 24 opinion on how this portion of the file history
Page 111 1 A. Yes. 2 Q. So what I'm trying to understand is if this 3 portion of the file history in Exhibit 1014 had any 4 impact on your understanding of that underlined 5 language? 6 MS. NGUYEN: Objection, form. 7 BY THE WITNESS: 8 A. This was all part of my analysis, so that 9 paragraph and the rest of it all was folded into my 10 understanding of the patent and its claims. 11 BY MR. SWISHER: 12 Q. So you can't tell me if this paragraph had 13 any specific impact on your understanding of the 14 underlined claim language? 15 A. I'm not sure how to answer that. 16 Q. What wasn't clear about that question? 17 I can rephrase it, just let me know what -- 18 what was unclear. 19 A. This paragraph, as well as the rest of it, 20 had an impact on my reading of the claim language. 21 Q. Right. So I think I understand so far 22 you're saying that everything you read was factored 23 in to your understanding of the claim language; is 24 that accurate?	Page 113 1 impacts the meaning of that claim limitation that's 2 underlined? 3 A. Well, this portion of the file history is 4 talking about claim element -- what is now called 1C. 5 So certainly it relates to my understanding of claim 6 element 1C. 7 Q. Okay. So let's focus on the portion of the 8 underlined addition to this claim that recites 9 "wherein an exertion level is based on a level of 10 physical fitness of a user." 11 Do you see that? That's in that same 12 paragraph on the bottom of page 7. 13 A. Yes. 14 Q. What is your understanding of what that 15 phrase means? 16 A. Just reading the applicant's response on 17 page 8, they're saying that because Lubell's exercise 18 test protocol is predetermined, it is not adaptive to 19 the physical fitness of a user. 20 So I understand the addition of this 21 language to try to address making the test protocol 22 adaptive to the physical fitness of a user. 23 Q. Okay. And what is your understanding of 24 what is meant by a level of physical fitness of a

Page 114 1 user? 2 A. So level of physical fitness of a user is 3 obviously a very broad term that relates to a 4 person's ability to perform physical exercise and 5 relates to characteristics of that person, like their 6 body mass index or their weight or their age or their 7 stride length or many other aspects. So physical 8 fitness is a very broad term. 9 Q. Okay. And what you just described, what did 10 you consult -- strike that. 11 Where did you come up with that 12 understanding of what a level of physical fitness of 13 a user means? 14 MS. NGUYEN: Objection, form. 15 BY THE WITNESS: 16 A. So that, as all of the rest of the terms, is 17 interpreted as a POSITA who has read the file 18 specification -- sorry, the file history and the 19 specification of the patent. 20 BY MR. SWISHER: 21 Q. So you drew the description that you just 22 provided for your understanding of this term from the 23 file history and the specification? 24 A. Viewed as a POSITA.	Page 116 1 MS. NGUYEN: Objection, form. 2 BY THE WITNESS: 3 A. That would be a POSITA. 4 BY MR. SWISHER: 5 Q. What do you mean, "that would be a POSITA"? 6 A. Well, of course I'm bringing other things to 7 my reading, and those other things are a person of 8 ordinary skill in the art's understanding of what 9 that phrase might mean. 10 Q. Okay. And what makes you say that that's 11 something that a person of ordinary skill in the art 12 would understand this term to mean? Like what are 13 you basing that on, is what I'm trying to understand. 14 MS. NGUYEN: Objection, form. 15 BY THE WITNESS: 16 A. So what am I basing on level of physical 17 fitness being a very broad term that encapsulates 18 many different things? 19 BY MR. SWISHER: 20 Q. Yeah, I'm just trying to understand where 21 you came up with your understanding of that term as 22 you just explained what your understanding is. 23 So what inputs went in to your understanding 24 to develop the output of your explanation that you
Page 115 1 Q. Okay. So can you point me to what you're 2 talking about in this portion of the file history 3 that supports that interpretation that you just 4 provided? 5 For example -- let me strike that. Let me 6 ask you something more specific. Maybe that will 7 help. 8 So for example, you testified that the level 9 of physical fitness of a user relates to 10 characteristics that may include body mass index, 11 weight, age, and stride length, right? That's what 12 you said? 13 A. I believe so. 14 Q. Well, if I got it wrong, just tell me and we 15 can... 16 A. It sounds right. 17 Q. Okay. So what I'm asking -- and then you 18 said that you developed your understanding of this 19 term based on your review of the specification and 20 the file history, right? 21 A. As a POSITA. 22 Q. Okay. So where in the file history did you 23 see anything talking about body mass index, weight, 24 age, and stride length?	Page 117 1 just gave for what you think it means? 2 MS. NGUYEN: Objection, form. 3 BY THE WITNESS: 4 A. So I -- just give me a minute, please. 5 So in paragraph 41 of my declaration, I 6 describe a POSITA as somebody who has a bachelor's 7 degree in engineering, computer science, industrial 8 design, biomechanics or a related field, and at least 9 two years of experience researching, developing, 10 designing, and/or testing fitness or physiological 11 sensors, wearable devices, physiological or 12 biomechanical devices, remotely controlled systems or 13 interfaces, wired and wireless communication 14 network-based applications and/or equipment, or the 15 equivalent experience or education. 16 So those are a lot of inputs. 17 BY MR. SWISHER: 18 Q. So you're just referring to a POSITA's 19 general knowledge? Is that what you mean? 20 MS. NGUYEN: Objection, form. 21 BY THE WITNESS: 22 A. Can you ask a full question? I don't 23 understand the question. 24

Page 118 1 BY MR. SWISHER: 2 Q. So you just read paragraph 41, right? 3 A. Yes, of my declaration. 4 Q. Now does paragraph 41 refer to any specific 5 reference or teaching or some sort of a document or 6 anything that provides or supports what a POSITA 7 would understand? 8 A. I just read paragraph 41, and it's talking 9 about training in engineering, computer science, 10 industrial design, biomechanics, or a related field, 11 plus two years of experience. 12 So those aren't specific documents. 13 Q. Right. Okay. So when you said your 14 understanding was informed by how a POSITA would 15 understand it, you're referring just to education, 16 training, and experience? 17 A. As well as a reading of the file history and 18 the specification. 19 Q. Okay. But you couldn't point me to anything 20 in the file history that referred to those physical 21 attributes that you were referring to, right? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. I -- at the moment I can't, but I only have	Page 120 1 Q. Yeah. 2 A. Again, though, I haven't -- I don't have a 3 photographic memory of the entire document. 4 Q. Okay. Let's take a look back at 5 Exhibit 1014 on page 8. 6 A. Okay. 7 Q. And let's look at the second full paragraph, 8 or I should say the first full paragraph on that page 9 that begins with "Lubell's prescribed exercise test." 10 Do you see that? 11 A. I do. 12 Q. Okay. And so here, the applicant is saying 13 that Lubell's prescribed exercise test will 14 incrementally increase a running speed from 4 miles 15 per hour with a test subject increasing his or her 16 speed in response to predetermined pacing tones, 17 right? 18 A. Right. 19 Q. And then it says: "Accordingly, Lubell 20 exercise test protocol is not based on a level of 21 physical fitness of a user. For example, Lubell's 22 prescribed 4 miles per hour starting speed may, for 23 some users, be considered difficult to achieve, or 24 may, in other instances, be beyond the capabilities
Page 119 1 a part of it in front of me, and I can't be 2 exhaustive. 3 BY MR. SWISHER: 4 Q. Do you know if the '413 patent refers to 5 components like weight, body mass index, age, and 6 stride length as being related to a level of physical 7 fitness of a user? 8 A. I'm not aware sitting here. 9 Q. And do you know if the file history refers 10 to physical attributes including body mass index, 11 weight, age, and stride length with respect to a 12 level of physical fitness of a user? 13 A. I am not aware sitting here. 14 Q. Did you look at the specification during the 15 course of your analysis to see whether it referred to 16 those items? 17 MS. NGUYEN: Objection, form. 18 BY THE WITNESS: 19 A. I was looking at the specification 20 constantly. 21 BY MR. SWISHER: 22 Q. Okay. So if they were in there, you would 23 have found it, is that right? 24 A. I suppose.	Page 121 1 of some users." Right? 2 A. Yes. 3 Q. Okay. So here, you would agree that the 4 applicant was talking about the concept that running 5 at a given speed may be difficult for some users, may 6 not be difficult for other users, right? 7 MS. NGUYEN: Objection, form. 8 BY THE WITNESS: 9 A. I think the sentence, as you read it is -- 10 characterizes it. 11 BY MR. SWISHER: 12 Q. Yeah, and you agree with that, right? 13 A. Agree with what? 14 Q. The sentence that I just read. Or do you 15 disagree? 16 MS. NGUYEN: Objection, form. 17 BY THE WITNESS: 18 A. I agree the sentence is written that way in 19 this exhibit. 20 BY MR. SWISHER: 21 Q. Okay. Well, I'm going to ask a different 22 question then. 23 A. Okay. 24 Q. So do you agree that describing a -- strike

Page 122 1 that. 2 Do you agree that the level of physical 3 fitness of a user has something to do with how 4 difficult it is for that user to run, let's say, at a 5 given speed? 6 A. So as I mentioned earlier, level of physical 7 fitness is a very broad term, so there are many 8 indicators of physical fitness, many aspects, many 9 characteristics of it, and so one could be their 10 capability to run at a certain speed. 11 Q. Okay. And are there any others that you -- 12 in your understanding, could be indicators of 13 physical fitness? 14 MS. NGUYEN: Objection, form. 15 BY THE WITNESS: 16 A. Many. 17 BY MR. SWISHER: 18 Q. Can you name any of them now? 19 A. Well, I named some earlier: Body mass 20 index, weight, age, stride length. If you considered 21 -- well, I'll stop there, but there's many. 22 So if I talk about somebody's level of 23 physical fitness, it's a very broad term. There's no 24 way to measure and say their physical fitness is 7.2.	Page 124 1 BY MR. SWISHER: 2 Q. And you arrived at those example 3 characteristics by studying the file history and the 4 specification? 5 A. By being a POSITA who read those things. 6 Q. Even though -- 7 A. There's many others. There's many others, 8 but I gave some examples. 9 Q. Okay. And you agree, you don't remember 10 whether those attributes are mentioned anywhere in 11 the patent or in the specification, right? 12 MS. NGUYEN: Objection, form. 13 BY THE WITNESS: 14 A. Again, it's difficult for me to answer the 15 question like that. 16 BY MR. SWISHER: 17 Q. Okay. So sitting here right now, though, 18 you can't tell me one way or the other if they are in 19 the patent or the file history? 20 A. Sitting here, without reading it, I'm not 21 sure where or if. 22 Q. Okay. Let's turn back to exhibit -- 23 actually, I just want to return for one more moment 24 to Exhibit 1014, this portion of the file history.
Page 123 1 Q. Right. So I'm just trying to understand 2 again. 3 So where you refer to body mass index, 4 weight, age, stride length again, right? What's the 5 source of those attributes? 6 Like where did you come up with those 7 attributes as being part of a level of physical 8 fitness of a user. 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. Again, from the viewpoint of a POSITA 12 reading the specification and the file history. 13 BY MR. SWISHER: 14 Q. Okay. So you read the specification and you 15 read the file history, right? 16 A. Yes. 17 Q. And then you thought, aha, level of physical 18 fitness of a user, that means things like weight, 19 age, stride length, and body mass index; is that what 20 you're saying? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. Those are example characteristics, but 24 there's many others.	Page 125 1 Okay? 2 Do you still have that in front of you? 3 A. Yes. 4 Q. So back on page 8 again. 5 A. Yes. 6 Q. Okay. Now I asked you about the paragraph 7 that started on page 7 a moment ago. 8 Now I'm going to ask you about the first 9 full paragraph on page 8 that begins with "Lubell's 10 prescribed exercise test." Okay? 11 A. Yes. 12 Q. Now did anything in that paragraph have any 13 impact on your understanding of what a level of 14 physical fitness of a user means, as that term is 15 used in the '413 patent? 16 A. I took that into consideration along with 17 other considerations a POSITA would. 18 Q. Okay. Can you describe any impact that it 19 had on your understanding? 20 A. I'm not sure I can separate it from all the 21 other things that had an impact on my understanding. 22 Q. Okay. So you can't attribute any specific 23 portion of your understanding of the claim term to 24 what's written here on page 8 of Exhibit 1014?

Page 126 1 MS. NGUYEN: Objection, form. 2 BY THE WITNESS: 3 A. I'm sorry, is the term you're referring to a 4 level of physical fitness? 5 BY MR. SWISHER: 6 Q. Yes. 7 A. That was informed by many things, both in 8 the specification, file history, and training of a 9 POSITA. 10 Q. Okay. So I'm just asking a slightly 11 different question. 12 I'm just asking, did anything in this 13 paragraph, the first full paragraph on page 8 of 14 Exhibit 1014, did anything in that paragraph 15 specifically impact your understanding of the meaning 16 of a level of physical fitness of a user, as that 17 term is recited in the '413 patent? 18 A. I would not be able to separate out any 19 impact from this specific paragraph on my or a 20 POSITA's understanding of a level of physical 21 fitness. 22 Q. Okay. Dr. Lynch, I'm going hand you what 23 has been marked as Exhibit 1015 in the IPR. 24 All right. Do you see at the top of	Page 128 1 of what's written here, can you tell me whether or 2 not anything in paragraph 2 had any impact on your 3 understanding of the meaning of an exertion level 4 that's based on the level of physical fitness of a 5 user, as that term is recited in the '413 patent? 6 A. So that entire phrase, exertion levels to 7 the user? 8 Q. Yeah, the phrase I read was, and the claim 9 term I read -- strike that. 10 So I'm referring to what ended up in 11 limitation 1C of the -- the issued claims, and the 12 part I'm referring to is "wherein an exertion level 13 is based on a level of physical fitness of a user." 14 So in reference to that portion of 15 limitation 1C in the issued claims, did the material 16 in paragraph 2 of Exhibit 1015 have any impact on 17 your understanding of the meaning of that claim 18 element? 19 A. Sorry, you want me to look at claim 1C in 20 the patent, and then look back at paragraph 2 of 21 examiner's -- 22 Q. Yeah, so let me try to make this easier. 23 I'm referring to the same limitation we were 24 just discussing with Exhibit 1014, so if you want to
Page 127 1 Exhibit 1015 it's titled Notice of Allowance and 2 Fee(s) Due? 3 A. Yes. 4 Q. All right. And you understand this is the 5 notice where the Patent Office allowed the claims of 6 the '413 patent? 7 A. Yes. 8 Q. And did you review this Notice of Allowance 9 in conducting your analysis? 10 A. I did. 11 Q. All right. I want to turn to page 8. Well, 12 page 8 as of the pagination on the bottom of this 13 exhibit, but it says page 2 at the top. 14 Do you see that? 15 A. Yes. 16 Q. Okay. And do you see at the bottom of 17 page 8, it recites reasons for allowance, and then 18 there is a paragraph below there that starts with 19 number 2? 20 A. Yes. 21 Q. Okay. And did you review this paragraph in 22 conducting your analysis? 23 A. Yes. 24 Q. Okay. And before we get into the specifics	Page 129 1 pull that one up and have it side by side, that could 2 be helpful. 3 So if you look at Exhibit 1014, paragraph -- 4 sorry, page 7, the bottom of page 7, there is a 5 portion that's underlined. 6 Do you see that? 7 A. Yes. 8 Q. Okay. So I'm talking about the portion 9 that's underlined that recites "Wherein an exertion 10 level is based on the level of physical fitness of a 11 user." Right? 12 A. Yes. 13 Q. Okay. And you understand that that element 14 became part of the issued claims; in fact, it became 15 part of limitation 1C is what we've been calling it 16 in the issued claims? 17 A. Yes. 18 Q. Okay. So looking at that part that we just 19 talked about in Exhibit 114 -- sorry, Exhibit 1014 20 that's underlined, now I'm asking did anything in 21 Exhibit 1015, paragraph 2, impact your understanding 22 of that claim limitation 1C? 23 MS. NGUYEN: Objection, form. 24

Page 130 1 BY MR. SWISHER: 2 Q. Do you follow my question? 3 A. I think so. 4 Q. Okay. 5 A. So paragraph 2 of this examiner's amendment 6 or statement under Reasons for Allowance, did that -- 7 exertion levels -- citing, it says exertion levels 8 are based on a level of physical fitness of the user, 9 which is nearly the same as the language in the 10 amendment. 11 Did that help me understand the claim? Is 12 that -- 13 Q. Yeah. Did this statement from the examiner 14 in Exhibit 1015 have any impact on your understanding 15 of the claim limitation? 16 A. Again, it was part of the full review. I 17 don't ascribe any specific impact of this over other 18 things that I read as a POSITA looking at the full 19 patent and the file history. 20 Q. Okay, you can set that one aside. 21 Let's take a look again at Exhibit 1001, the 22 '413 patent. 23 A. Okay. 24 Q. And I'd like to direct your attention to	Page 132 1 So the first sentence says: "Accordingly, 2 in addition to simply measuring a user's heart rate, 3 various heart rate monitors will also allow a user to 4 designate one or more various heart rate zones and 5 alert an athlete when his or her measured hate rate 6 goes above or falls below a selected heart rate zone. 7 With these heart rate monitors, however, an athlete 8 must calculate the parameters of these zones himself 9 or herself." 10 Do you remember that these two sentences 11 here of column 15 are talking about prior or 12 alternative approaches to what the '413 patent is 13 directed to? 14 MS. NGUYEN: Objection, form. 15 BY THE WITNESS: 16 A. This is not in the prior art review section, 17 but there's a text here that says "these heart rate 18 monitors, however," which seems to indicate that it's 19 not the one that they're talking about. 20 BY MR. SWISHER: 21 Q. Right. And so the next sentence says: 22 "This typically requires an athlete to deploy a 23 mathematical formula incorporating the athlete's 24 sitting heart rate, the athlete's age, and a general
Page 131 1 column 15. 2 A. Yes. 3 Q. Okay. Now I know you said earlier that you 4 reviewed the entire patent, right? 5 A. Yes. 6 Q. Okay. I just want to ask you some questions 7 about what's written in column 15 of the 8 specification specifically. 9 So let's start with the first full paragraph 10 in column 15 which starts with the words 11 "Accordingly, in addition." 12 Do you see that? 13 A. Yes. 14 Q. Okay. Now do you remember reviewing this 15 paragraph when you were conducting your analysis? 16 A. I did review this paragraph. 17 Q. Okay. And before we get into it, can you 18 think of anything off the top of your head from this 19 paragraph that impacted your analysis in any way? 20 A. I'm sorry, I did not separate out specific 21 paragraphs and their impact on my analysis. 22 Q. Okay. So let's start with the beginning. 23 I'm going to read a few of these sentences and then 24 I'll have some questions about it.	Page 133 1 estimate of the athlete's fitness condition. Thus, 2 these formulas are typically difficult for an athlete 3 to calculate." 4 Do you see that? 5 A. Yes. 6 Q. And do you see here that the applicant lists 7 the athlete's sitting heart rate, the athlete's age, 8 and a general estimate of the athlete's fitness 9 condition as distinct items? 10 A. Yeah, I see them listed separately. 11 Q. Okay. Now in your mind, do you view there 12 being a distinction between the term "fitness 13 condition" and "level of physical fitness of a user"? 14 Do you see any commonalty in those terms? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. Well, they're both referring to an athlete's 18 fitness or a person's fitness, I guess, as an 19 athlete. 20 BY MR. SWISHER: 21 Q. Right, right. I'm just trying to make sure 22 we're kind of talking about the same thing. 23 So would you agree that talking about an 24 athlete's fitness condition is equivalent to talking

Page 134 1 about their physical fitness level? 2 A. Well, as I mentioned before, physical 3 fitness level is a very broad term. So in the sense 4 that it's very broad, it can encompass a lot of 5 things. 6 Q. Yeah, so I'm just asking you, is an 7 athlete's fitness condition is that a similar concept 8 as their physical fitness level? 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. So level of physical fitness is a very broad 12 term, so an athlete's fitness condition could be 13 included within the scope of level of physical 14 fitness, potentially. 15 BY MR. SWISHER: 16 Q. Okay. And in this portion of the 17 specification, the applicant uses fitness condition 18 and age as distinct components, right? 19 MS. NGUYEN: Objection, form. 20 BY THE WITNESS: 21 A. So it refers to three things: Sitting heart 22 rate, athlete's age, and a general estimate of the 23 athlete's physical fitness condition. Sorry. And so 24 because they are all listed, they're not the same	Page 136 1 weight, age, stride length, BMI, that can be aspects 2 or characteristics. 3 Similarly, if I have a running exercise, a 4 lifting exercise, a biking exercise, then performance 5 on those could be indicators or characteristics of 6 physical fitness. 7 So exercise ability here, particular 8 exercise ability, could be referring to performance 9 ability on one of these tests, for example. 10 BY MR. SWISHER: 11 Q. Okay. 12 A. And be one of the many indicators or 13 characteristics of fitness. 14 Q. Now anywhere here in column 15, do you see 15 any references to weight, stride length, or BMI? 16 A. Not in -- well, not in the first paragraph 17 of column 15. I haven't read the entire column 15. 18 Q. Okay. 19 A. Right now. 20 Q. And you agreed a minute ago that in -- in 21 the first paragraph of column 15, the applicant 22 listed the athlete's age as a different item than 23 athlete's fitness condition, right? 24 MS. NGUYEN: Objection, form.
Page 135 1 things. 2 BY MR. SWISHER: 3 Q. Right. And so further in this paragraph, 4 the applicant states: "Further, when a user attempts 5 to shoot for a number that they have seen on a heart 6 rate chart or have calculated using a heart rate 7 equation, the heart rate values reached using these 8 techniques may be appropriate for a few individuals 9 by," and I think that's a typo in the patent, it says 10 by probably meaning but, "they are often inaccurate 11 for many users, because they cannot take into account 12 an individual's particular exercise ability." 13 Do you see that? 14 A. I do see that. 15 Q. Now there is a similar phrase here at the 16 end of this sentence similar to fitness condition 17 where the applicant is referring to an individual's 18 particular exercise ability. 19 Do you agree that those are similar 20 concepts? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. As I mentioned before, physical fitness is a 24 very broad term, and I mentioned some things, like	Page 137 1 BY THE WITNESS: 2 A. I said they're not the same thing. 3 BY MR. SWISHER: 4 Q. Now what makes you say that a person's 5 weight could be -- well, strike that. 6 Let me ask you this: Is it your opinion 7 that just a person's weight could be a level of 8 physical fitness of a user? 9 A. Certainly not. 10 Q. Okay. 11 A. It's one of many characteristics or aspects 12 of one's level of physical fitness. 13 Q. So do you mean that a person's weight may 14 impact what a person's physical fitness is? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. No. 18 BY MR. SWISHER: 19 Q. So what do you mean by what you were just 20 talking about with weight? 21 A. So as I mentioned before, level of physical 22 fitness is a very broad multifaceted idea, and so 23 there are many indicators or characteristics, aspects 24 of that; there's no single number that says this is

Page 138 1 your physical fitness. 2 If I have a 150-pound distance runner and a 3 150-pound wrestler, both Olympians, they're going to 4 have very different performances on different 5 physical exercises, and it's going to be hard for me 6 to say that one is -- has a higher level of physical 7 fitness than other. 8 So these are all indicators or aspects or 9 characteristics of physical fitness. 10 Q. So do you see any distinction in your mind 11 between indicators or aspects of physical fitness on 12 the one hand and a level of physical fitness on the 13 other? 14 MS. NGUYEN: Objection, form. 15 BY THE WITNESS: 16 A. I'm sorry, I'm not sure I understand the 17 question. 18 BY MR. SWISHER: 19 Q. Yeah, so let's look at claim 1 in column 18. 20 Now limitation 1C includes the element a 21 level of physical fitness of a user, correct? 22 A. Yes. 23 Q. So this limitation doesn't refer to 24 indicators of physical fitness, right?	Page 140 1 A. I do. 2 Q. Okay. So this paragraph is talking about an 3 exercise regimen that it refers to as easy, and if we 4 go down to line 51 of column 15, the specification 5 says: "It also displays the word easy during this 6 time period to indicate to the user that he or she 7 should be exercising at an easy level. As will be 8 appreciated by those of ordinary skill in the art, 9 easy level of exercise is one that only slightly 10 elevates the user's heart rate. This level of 11 exercise should not feel challenging, but should 12 instead feel as if the user is performing a warm-up 13 routine so that the user feels at ease. The user 14 should be able to maintain this workout intensity for 15 approximately 30 minutes to 1 hour with his or her 16 breathing only slightly greater than when the user 17 began exercising." 18 Do you see that? 19 A. I do. 20 Q. Okay. And did you review this paragraph 21 when you were forming your opinions in this IPR? 22 A. Yes. 23 Q. Okay. And so you would agree with me that 24 this paragraph of column 15 refers to the user's
Page 139 1 A. It refers to a level of physical fitness. 2 Q. Okay. It doesn't refer to characteristics 3 of physical fitness, correct? 4 A. It's referring to a level of physical 5 fitness, which is related to these characteristics 6 that I mentioned before. 7 Q. Right. So what I'm getting at is I'm trying 8 to understand if, in your opinion, there's any 9 difference between a level of physical fitness of a 10 user and the characteristics that you were referring 11 to earlier, like weight, age, stride length? 12 A. So a level of physical fitness, as I said 13 before, is a very broad term and there's no way to 14 provide a definitive calculation of somebody's level 15 of physical fitness. 16 So what do we do? We look to indicators or 17 aspects of that physical fitness, and there are many, 18 many. 19 Q. Okay. Let's take a look back at column 15 20 then. 21 I want to look at the paragraph that begins 22 on line 44, which starts with the language "When the 23 user is ready." 24 Do you see that?	Page 141 1 heart rate when they are exercising and to the user's 2 breathing while they're exercising, right? 3 A. Correct, it refers to those two things. 4 Q. Okay. And the specification is explaining 5 that a given person's heart rate and their breathing, 6 those are indicators of how challenging exercising at 7 this easy level is for that person, right? 8 A. Yeah, it's saying that if your heart rate is 9 only slightly elevated and if your breathing is not 10 labored in any way, then that could correspond to 11 being easy. 12 Q. Right. So you would agree, for example, 13 that a person for whom running at this easy pace was 14 extremely difficult may have what you would call a 15 lower level of physical fitness, right? 16 MS. NGUYEN: Objection, form. 17 BY THE WITNESS: 18 A. So again, physical fitness is a multifaceted 19 broad term, and the example I gave you before, the 20 distance runner might find something easy that the 21 wrestler finds harder, but I don't think I would say 22 the wrestler has a lower level of physical fitness. 23 BY MR. SWISHER: 24 Q. Okay. So when you're talking about physical

Page 142 1 fitness in that context, are you referring about what 2 the claim language in claim 1 -- let me strike that. 3 The example you just gave about a distance 4 runner and a wrestler, now is that example applicable 5 to the context of how this term is used in claim 1? 6 MS. NGUYEN: Objection, form. 7 BY MR. SWISHER: 8 Q. What I'm getting at is, are you just talking 9 about sort of a general example that you might just 10 think about at random, or does it have a connection 11 to what the claim language is in claim 1? 12 MS. NGUYEN: Same objection. 13 BY THE WITNESS: 14 A. It's connected, and it's illustrating the 15 multifaceted nature of what physical fitness must be, 16 that there are many characteristics, there are many 17 measurements, many performances, and all of those 18 might inform what we think the physical fitness of a 19 user is. 20 BY MR. SWISHER: 21 Q. All right. So the full limitation of 22 claim 1C recites: "Prompt a user to exercise at a 23 plurality of successive exertion levels, wherein 24 exertion level is based on a level of physical	Page 144 1 A. Yes, I see those. 2 Q. So did you consider these easy, medium, and 3 hard levels that are described in the specification 4 when you were trying to understand what limitation 1C 5 means? 6 A. So in understanding limitation -- the answer 7 is yes, I considered everything. 8 Q. I know you were going to say that. Yeah, go 9 ahead. Go ahead. 10 A. So in the column 1C -- or sorry, element 1C, 11 the term "exertion level" is used, and I understand 12 exertion level to be, again, a broad term where the 13 level of exertion goes up with the level of intensity 14 of the exercise. 15 Q. Okay. 16 A. So those would be related to each other. 17 Q. Now you would agree that, for example, 18 exertion levels like easy -- sorry, strike that. I'm 19 blending my words together. 20 Exertion levels like easy, medium, and hard 21 are relative terms, right? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. Could you be more specific what you mean by
Page 143 1 fitness of a user." Right? 2 A. Right. 3 Q. Okay. So now the claims of course are not 4 limited to this, but talking about -- referring back 5 to the examples we were just going in, talking about, 6 I'm sorry, in column 15, column 15 refers to this 7 easy level of workout, right? 8 A. Yes. 9 Q. So you would agree that, for example, one 10 possible exertion level is an easy level of exertion, 11 right? 12 And then there's others, like -- if this 13 makes it easier for you, column 16, right? Refers to 14 a medium level of exertion, the top of column 16, 15 further down, it refers to a hard level of exertion. 16 Do you see those? 17 MS. NGUYEN: Objection, form. 18 BY THE WITNESS: 19 A. Hard level exercise, medium level exercise, 20 and then I do see medium level of exertion. 21 BY MR. SWISHER: 22 Q. Yes. 23 A. And hard or difficult level of exertion. 24 Q. Yeah.	Page 145 1 "relative terms"? 2 BY MR. SWISHER: 3 Q. Yeah, what I'm getting at is if you tell 4 someone to go run at an easy pace, that's not 5 referring to a specific mile per hour, right? 6 MS. NGUYEN: Objection, form. 7 BY MR. SWISHER: 8 Q. It's not objective, what it means to be 9 easy? 10 A. I'm not going to answer that, but if you ask 11 two people to run at an easy pace, they may choose 12 different speeds. 13 Q. Right. So it may be subjective to the 14 specific user what easy is? 15 A. They will have their own interpretation, 16 yes. 17 Q. Okay. And then where the second part of 18 claim 1C refers to that exertion level being based on 19 the level of physical fitness of a user, that's kind 20 of getting at what you were just stating, right? 21 Which is that a person may have their own 22 interpretation of the exertion level, how it feels 23 for them, right? 24 MS. NGUYEN: Objection, form.

Page 146 1 BY THE WITNESS: 2 A. I don't see that here, but I see exertion 3 level, which I described earlier, which is the 4 exertion level increases with the intensity of the 5 exercise by the user. And so that's how I answered 6 for the exertion level, and level of physical fitness 7 I've already described multiple times. 8 BY MR. SWISHER: 9 Q. Yeah, well, I'm just trying to understand 10 the connection between the two, right? So... 11 Right. So you would agree that, for 12 example, whether a person had a low or high level of 13 physical fitness would impact an exertion level that 14 felt easy to them, right? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. So both exertion level and -- well, level of 18 fitness is a very broad term, very multifaceted term, 19 and so if you ask the 150-pound Olympic weightlifter 20 to lift weights versus running a mile, they might 21 have a different subjective experience of what the 22 exertion is, even if the fitness level is not clearly 23 different. 24 So I'm not sure I fully understood your	Page 148 1 easily measurable level of physical fitness. 2 Q. Yeah, so I'm asking just a slightly 3 different question, so maybe that's why we're having 4 disconnect here. 5 So I'm asking does a person's weight, does 6 that equate to a level of physical fitness? 7 A. It certainly doesn't equate. It's an aspect 8 of it. 9 Q. Okay. And is a person's age a level of 10 physical fitness? 11 MS. NGUYEN: Objection, form. 12 BY THE WITNESS: 13 A. It's one characteristic or aspect of this 14 broad concept. 15 BY MR. SWISHER: 16 Q. And does a person's sex or gender equal a 17 level of physical fitness? 18 A. Certainly doesn't equal a level of physical 19 fitness. 20 Q. Is a person's sex or gender a level of 21 physical fitness? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. I wouldn't say that a person's gender is a
Page 147 1 question, so maybe I shouldn't be talking until I 2 better understand what you're asking. 3 BY MR. SWISHER: 4 Q. That's okay. 5 I'm just trying to understand what your 6 understanding is of a level of physical fitness of a 7 user. So let me maybe ask it a different way. 8 So if someone were to ask you -- well, 9 strike that. 10 Is it your understanding of what a level of 11 fitness of a user means, could that be exemplified by 12 this example that I'm about to give you, okay? 13 Someone said, I want to know what this 14 person's level of physical fitness -- strike that. 15 I want to know what this person's level of 16 physical fitness is. Would you answer, they weigh 17 150 pounds? 18 MS. NGUYEN: Objection, form. 19 BY MR. SWISHER: 20 Q. Is that -- would that be an example of a 21 level of physical fitness? 22 A. I would say that that's one aspect of many, 23 many, as I've said several times. The weight would 24 be one -- because there is no single, you know,	Page 149 1 level of physical fitness. 2 MS. NGUYEN: Counsel, can we take a break? 3 MR. SWISHER: I'm in the middle of a few 4 questions, but I can be done pretty quickly. 5 MS. NGUYEN: Thank you. 6 BY MR. SWISHER: 7 Q. Is a person's height a level of physical 8 fitness? 9 A. By itself, height is not a level of physical 10 fitness. 11 Q. And is a person's stride length a level of 12 physical fitness? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. Again, it's a characteristic of the physical 16 fitness, but it's not equated. 17 BY MR. SWISHER: 18 Q. Is a person's body mass index, or BMI, a 19 level of physical fitness? 20 A. It is not, it's just a characteristic of a 21 level of physical fitness. 22 MR. SWISHER: Okay, we can go ahead and take 23 a break. 24 MS. NGUYEN: Thank you.

Page 150 1 THE VIDEOGRAPHER: Off the record at 2:10. 2 (A short break was taken.) 3 THE VIDEOGRAPHER: Back on the record at 4 2:20. 5 BY MR. SWISHER: 6 Q. Dr. Lynch, I'm going to turn back to your 7 declaration for a while, Exhibit 1009, if you can 8 bring that in front of you. 9 First, looking at the table of contents on 10 page Roman numeral I and II, on page II, there is a 11 section numbered 8 that's titled Obvious 12 Combinations. 13 Do you see that? 14 A. Yes. 15 Q. Okay. So does your declaration include some 16 opinions about combining various references for 17 obviousness? 18 MS. NGUYEN: Objection, form. 19 BY THE WITNESS: 20 A. Yes. 21 BY MR. SWISHER: 22 Q. Okay. Now is there anywhere in your table 23 of contents here that talks about an anticipation 24 section?	Page 152 1 A. Yes. 2 Q. And you understand that's also a legal 3 concept, obviousness? 4 A. Yes. 5 Q. Yeah, okay. So yeah, I understand that 6 obviousness is a legal concept and that anticipation 7 is a legal concept. 8 So let me ask it in a slightly different way 9 and see if this helps: Do you offer any opinions in 10 your declaration that any entire claim of the '413 11 patent is disclosed in a single prior art reference 12 as it's arranged in the claims? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. So to my understanding, Amano and Matsumoto 16 are, as you said earlier, used in anticipation 17 grounds. 18 Am I saying that correctly? 19 BY MR. SWISHER: 20 Q. Yes, I believe you are. 21 And you're talking about in the petition 22 they're used in anticipation grounds, right? 23 A. Well, I haven't seen the petition, or 24 haven't read the petition. I've seen it, but I
Page 151 1 MS. NGUYEN: Objection, form. 2 BY THE WITNESS: 3 A. I don't have a section titled anticipation, 4 or even using that -- no, I'm sorry, I do. 5 Section 3B. Sorry. Section 3B has anticipation in 6 the title. 7 BY MR. SWISHER: 8 Q. And that's under the Understanding of 9 Relevant Legal Principles section, right? 10 A. Yes. 11 Q. So setting aside that instance of 12 anticipation -- well, I'm getting at something else. 13 Let me just ask you, do you offer any 14 opinions in your declaration that any reference 15 anticipates any claim of the '413 patent? 16 MS. NGUYEN: Objection, form. 17 BY THE WITNESS: 18 A. I understand that anticipation is a legal 19 term, and I am not a lawyer, so I do not give 20 opinions in here that concludes anticipation. 21 BY MR. SWISHER: 22 Q. Yeah, I'm asking something a little 23 different. You have a section titled Obvious 24 Combinations, right?	Page 153 1 haven't read it. But my understanding is that Amano 2 and Matsumoto are used as anticipatory references. 3 So if -- coming back to your original 4 question, the sections on Amano and Matsumoto would 5 be relevant. 6 Q. Yeah, so I'm just asking, does your 7 declaration include any opinions that any entire 8 claims of the '413 patent are disclosed by Amano or 9 Matsumoto? 10 MS. NGUYEN: Objection, form. 11 BY THE WITNESS: 12 A. I believe the opinions I give are relevant 13 to that analysis, but I don't go through element by 14 element any claims. 15 BY MR. SWISHER: 16 Q. Okay. Yeah, that's what I'm getting at. 17 So your declaration doesn't go through any 18 claim element by element for the Amano reference, 19 correct? 20 MS. NGUYEN: Same objection. 21 BY THE WITNESS: 22 A. So it's providing opinions that are relevant 23 to the elements, but they're not laid out in a linear 24 sequential fashion.

Page 154 1 BY MR. SWISHER: 2 Q. Yeah, so let's set aside the issue of 3 whether they're linear or sequential, all of that. 4 What I'm asking you about is a claim in its 5 entirety, meaning all of the elements of a claim. 6 A. Mm-hmm. 7 Q. You follow me? 8 A. Mm-hmm. 9 Q. So under that understanding, your 10 declaration doesn't go through an entire claim, 11 including all elements of that claim, for the Amano 12 reference, right? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. That's not the way I wrote it, but I can't 16 say sitting here that all of the elements are not 17 addressed in what I wrote for a particular claim. 18 BY MR. SWISHER: 19 Q. All right. Well, you know, I'm not trying 20 to belabor this, but I'm just trying to confirm 21 what's in your declaration here. 22 So for example, if we turn to page 30, 23 beginning at paragraph 70. 24 Do you see that?	Page 156 1 So you're on page 34? 2 A. Yes. 3 Q. Okay. So you see the Matsumoto section 4 beginning with paragraph 77, ending on page 36 at 5 paragraph 81. 6 Do you see that? 7 A. I do. 8 Q. So this section D, Matsumoto, that's the 9 only place in your declaration where you talk about 10 Matsumoto by itself, right? 11 A. As far as I know, it's the only section 12 where I only talk about Matsumoto. 13 Q. Right, okay. So let's turn back to page 30 14 and look at the Amano section, okay? 15 Now take a look if you need to, but within 16 paragraphs 70 through 76, do you offer any opinions 17 that an entire claim of the '413 patent is disclosed 18 in Amano? 19 A. So in paragraphs 70 through 76, I'm 20 describing the Amano -- Amano device or disclosure. 21 So I'm giving a description of it and citing relevant 22 passages. 23 Q. Correct. 24 So you agree that this section discussing
Page 155 1 A. Yes. 2 Q. Okay. And then let's flip to page 33 where 3 it ends in paragraph 76. 4 Do you see that? 5 A. Sorry, I'm just -- 6 Q. Yeah, go ahead. 7 A. Yes. 8 Q. So I'm just setting -- trying to ask some 9 set-the-stage questions here. 10 So those paragraphs we just looked at, 11 paragraph 70 through 76, those discuss the Amano 12 reference, right? 13 A. Those are describing the Amano reference. 14 Q. Okay. And there isn't any other section of 15 your declaration where you discuss Amano just by 16 itself, correct? 17 MS. NGUYEN: Objection, form. 18 BY THE WITNESS: 19 A. Not an entire section. 20 BY MR. SWISHER: 21 Q. Yeah. 22 A. Not as far as I'm aware. 23 Q. Okay. And the same is true for Matsumoto 24 beginning on page 34, right?	Page 157 1 Amano is citing passages of Amano, right? 2 A. That's correct. 3 Q. Okay. 4 MS. NGUYEN: Objection. 5 BY MR. SWISHER: 6 Q. Are there any citations in section C to the 7 '413 patent? 8 A. Based on a quick scan, I do not believe so. 9 Q. Okay. I'll ask you the same questions about 10 the Matsumoto section, beginning at paragraph 77 of 11 page 34. 12 So in this Matsumoto section, you're citing 13 to portions of the Matsumoto reference, right? 14 A. I believe all citations in this section are 15 to Matsumoto. 16 Q. Okay. So there are no citations in the 17 Matsumoto section to the '413 patent, correct? 18 A. I don't see any. 19 Q. Okay. 20 A. So this is describing how Matsumoto works. 21 Q. All right. Let's turn back to the Amano 22 section beginning at paragraph 70. I want to ask you 23 some more questions about the Amano reference, okay? 24 A. Okay.

40 (Pages 154 - 157)

Page 158 1 Q. In doing your analysis of Amano, did you 2 consider whether Amano discloses different 3 embodiments? 4 MS. NGUYEN: Objection, form. 5 BY THE WITNESS: 6 A. In doing my analysis, did I consider whether 7 Amano -- sorry, could you repeat the question? 8 BY MR. SWISHER: 9 Q. Yeah. 10 In conducting your analysis of Amano, did 11 you consider whether Amano discloses more than one 12 embodiment? 13 A. I noticed sections titled Embodiment 1, 14 Embodiment 2, et cetera. So I noticed those 15 sections. 16 Q. Okay. Does -- 17 A. Could I have a copy of Amano? 18 Q. Yeah, I was going to give you one in just a 19 second. 20 But first, just looking at what's in your 21 declaration, you agree that, within the Amano 22 Section C, there's some subsections, correct? 23 A. Correct. 24 Q. All right. So those include on page 30,	Page 160 1 multiple embodiments. 2 A. So my analysis in -- 2 and 3 is not 3 analysis, it's description of how it works. 4 Q. Okay. And what distinction are you making 5 between analysis and description, if I may ask? 6 A. Well, analysis -- I mean, here, description 7 is I'm summarizing what's in Amano, what I think are 8 the relevant pieces of Amano, because Amano is quite 9 a long reference. 10 Q. Okay. 11 A. As a patent. 12 Q. Are the -- is the material in these 13 paragraphs, paragraph 73, 74, 75, and 76, are these 14 opinions that you are offering? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. It's mostly summarizing, but obviously as a 18 POSITA reading this specification and the file 19 history, this is what I believe Amano's disclosing. 20 Sorry, not the file history, just the 21 specification of Amano. 22 BY MR. SWISHER: 23 Q. Okay. So I'm not trying to be tricky, but 24 I'm just wondering, if you're writing here the
Page 159 1 there's subsection 1, which is titled Hardware, 2 right? 3 A. Yes. 4 Q. And on page 32 there is a subsection titled 5 Calculating Heart Rate Zones, right? 6 A. Yes. 7 Q. And on page 33, there is a subsection titled 8 Prompting Exercise and Heart Rate Zones, right? 9 A. Yes. 10 Q. Okay. And so I want to ask you specifically 11 about subsections 2 and 3. 12 So beginning with subsection 2 titled 13 Calculating Heart Rate Zones, in your analysis in 14 that section, did you factor in whether or not Amano 15 discloses multiple embodiments or not? 16 MS. NGUYEN: Objection, form. 17 BY THE WITNESS: 18 A. So to be clear, section 2 and 3, which we're 19 talking about, are describing Amano, describing 20 what's written in there, summarizing. 21 BY MR. SWISHER: 22 Q. I understand. 23 I'm just asking if you factored in to your 24 analysis in sections 2 and 3 whether Amano discloses	Page 161 1 description of Amano, which includes some summarizing 2 done in your view of what a POSITA would understand, 3 would it be fair to characterize that as an analysis? 4 MS. NGUYEN: Objection, form. 5 BY THE WITNESS: 6 A. So I'm using my brain to decide what to 7 write, so in that respect, it is certainly an 8 analysis. 9 MS. NGUYEN: Sorry, Counsel, we're losing 10 internet connection, so we can't see her realtime. 11 THE COURT REPORTER: It did -- it should 12 come right back up right up. I saw it come up on the 13 screen. I'm on the firm's Wi-Fi, so it should be 14 coming back up. 15 MR. SWISHER: Mine's still up. Are you guys 16 up now? 17 MS. NGUYEN: It is. 18 THE COURT REPORTER: Yeah? 19 MS. NGUYEN: It is. 20 BY MR. SWISHER: 21 Q. Okay. It doesn't matter much whether we 22 call it, Dr. Lynch, your analysis or your 23 description, that's fine. 24 My question is just did you consider, in

Page 162 1 conducting your summary -- strike that. 2 In writing the summaries that are reflected 3 in paragraphs 73 through 76, did you consider whether 4 Amano discloses multiple embodiments? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. I noticed that sections were titled 8 Embodiment 1 and Embodiment 2. 9 BY MR. SWISHER: 10 Q. Do you say anything about that in sections 2 11 or 3 of the Amano sections? 12 A. In my write-up, I do not. 13 Q. I'm going to hand you what's been previously 14 marked as Exhibit 1002 in the IPR. This is the Amano 15 reference. 16 Again, I apologize; for some reason the 17 exhibit number is not on here, but we can all agree 18 this is Exhibit 1002. 19 All right. We're going to be looking at 20 both Exhibit 1002 and your declaration, Exhibit 1009, 21 kind of side by side. So if you can have those in 22 front of you, we can get started, okay? 23 A. Okay. 24 Q. So let's start with paragraph 73 of your	Page 164 1 Q. Okay. All right, so turning to 2 Exhibit 1002, the Amano reference, can I direct you 3 to column 6, which appears on page 51? 4 A. Yes. I don't have page numbers, but -- 5 Q. Oh, I'm sorry. Okay. Yeah, we'll just use 6 the column numbers then. It's even easier. 7 So column 6, are you there? 8 A. Yes. 9 Q. And you agree that column 6 and continuing 10 on to column 7 the next page, those appear under a 11 section that's titled Embodiment 1 of Amano, right? 12 A. Yes. 13 Q. Okay. Now going back to your declaration, 14 let's turn to paragraph 75 on page 33. 15 Now paragraph 75 is included in the same 16 subsection as paragraph 73, right? 17 A. Correct. 18 Q. And that's the subsection titled Calculating 19 Heart Rate Zones? 20 A. Yes. 21 Q. Okay. Now in paragraph 75, your 22 introductory sentence says: "From VO2 max, Amano 23 calculates heart rate zones." Right? 24 A. Yes.
Page 163 1 declaration. 2 All right. So the first sentence of 3 paragraph 73, you say that Amano first estimates the 4 maximum oxygen uptake, which is -- has the acronym 5 VO2 max, for an exerciser, right? 6 A. Right. 7 Q. Okay. And you go on and talk about some 8 portions of Amano here, including establishing a 9 straight line relationship between heart rate and 10 exercise intensity, right? 11 A. Right. 12 Q. Okay. And then a few lines further down, 13 you say that using physiological information about a 14 user and activity data, Amano calculates the exercise 15 intensity of a workout, right? 16 A. Right. 17 Q. Okay. So those portions that we were just 18 looking at in paragraph 73, you have some citations 19 to Exhibit 1002, right? 20 A. Yes. 21 Q. Okay. And you see that the citations are 22 all to material that starts at least in columns 6, 23 and then some that are in 7, right? 24 A. Yes.	Page 165 1 Q. Okay. So this paragraph is providing some 2 description of how Amano calculates heart rate zones, 3 right? 4 A. Yes. 5 Q. Okay. All right. And you provide some 6 details here, including that the device determines an 7 intensity calculated in terms of percentage of VO2 8 max; for example, choosing 50 percent as an optimal 9 workout -- sorry, optimal workout target, correct? 10 A. Yes. 11 Q. Okay. And from there, you also -- the next 12 sentence describes how there is a microcomputer that 13 computes heart rates that correspond to 20 percent 14 above and below a heart rate corresponding to this 15 workout target, right? 16 A. Yes. 17 Q. And for those descriptions, you're citing to 18 columns 19 and 20 of Amano, right? 19 A. That's right. 20 Q. All right. So if you turn over to 21 Exhibit 1002, I'd like to direct your attention to 22 column 19. 23 Just let me know when you're there. 24 A. Okay, I'm there.

Page 166 1 Q. Okay. Now columns 19 and 20, those appear 2 under a heading of Amano that's titled Embodiment 4, 3 right? 4 A. That's correct. 5 Q. Okay. So this disclosure that you're 6 describing in paragraph 75 of your declaration under 7 the heading Calculating Heart Rate Zones, that 8 relates to the fourth embodiment of Amano, right? 9 A. So at line 49 of column 19, it says that the 10 user estimates his own VO2 max in advance using the 11 methods explained in the first through third 12 embodiments. 13 So here it's saying use the method, for 14 example, in the first embodiment that you referred to 15 just a while ago, to get your own VO2 max, and then 16 from there, continue on with other things described 17 in this column. 18 Q. Okay. I understand, but I'm just asking, 19 does the material you cited in columns 19 and 20 of 20 Amano correspond to the fourth embodiment? 21 A. They are in a section titled Embodiment 4, 22 which I think we established. 23 Q. Okay. All right, let's turn to the next 24 paragraph, paragraph 76, and this is the third	Page 168 1 through 81. 2 Now in preparing the descriptions of the 3 Matsumoto reference in paragraph 77 through 81, did 4 you consider whether Matsumoto discloses more than 5 one embodiment? 6 MS. NGUYEN: Objection, form. 7 BY THE WITNESS: 8 A. There are no mentions of embodiments in my 9 description. 10 BY MR. SWISHER: 11 Q. Okay. Let's take a look at paragraph 79, if 12 you can turn to page 35 of your declaration. 13 Okay, beginning at the beginning of page -- 14 sorry, strike that. 15 Starting with the first sentence of 16 paragraph 79, you refer to the aspect of Matsumoto 17 where a user enters physiological information, such 18 as their weight, age, and sex, right? 19 A. Yes. 20 Q. And then you refer to a portion where the 21 machine uses this information to choose a workout 22 with several target pulses as it works the user from 23 warmup to full-fledged training. 24 Do you see that?
Page 167 1 heading which is titled Prompting Exercise in Heart 2 Rate Zones, right? 3 A. Yes. 4 Q. And in this paragraph, you opine that, 5 during subsequent exercise, the Amano device prompts 6 users to exercise while maintaining their heart rate 7 within the calculated zone. The device displays the 8 upper and lower limit pulse rates that correspond to 9 a desired workout intensity. 10 Did I read that right? 11 A. Yes. 12 Q. And for that description, you're citing to 13 column 21 of Amano, right? 14 A. Yes. 15 Q. Okay. If we turn back to Exhibit 1002, to 16 the twenty-first column, that column also appears in 17 embodiment 4 of Amano, right? 18 A. It's within a section entitled Embodiment 4. 19 Q. Dr. Lynch, I'm going to hand you what's been 20 premarked as Exhibit 1003. This is the Matsumoto 21 reference. Sorry about that. 22 Okay, I'm going to ask you some similar 23 questions about Matsumoto section of your 24 declaration, which appears in paragraph 77	Page 169 1 A. Yes. 2 Q. And in the next sentence, you say, during 3 this exercise, the machine displays something that 4 reads continue for XX minutes at a pulse of XXX P/M 5 and tells users to speed up or slow down if their 6 heart rate is below or above the target, right? 7 A. Yes. 8 Q. And for those descriptions that I just read, 9 you refer to column 5 of the Matsumoto reference, 10 right? 11 A. Yes. 12 Q. And if we turn to Exhibit 1003, let's start 13 with column 2 of Matsumoto. 14 A. Yes. 15 Q. Okay. And do you see under the title 16 Detailed Description, it mentioned, starting at about 17 line 17 or so, Matsumoto says: An embodiment of the 18 -- sorry, excuse me. Embodiment of the invention 19 will now be explained while referring to the figures. 20 A. Yes. 21 Q. Okay. And just kind of skimming down 22 column 2 there, do you see how it refers to Figure 1, 23 and then the next paragraph refers to Figure 3, and 24 then the next paragraph refers to Figure 4, right?

Page 170 1 A. Yes. 2 Q. Okay. And if we look back at, I think it's 3 the second page of Exhibit 1003, you can see a 4 depiction of Figure 3. 5 Just let me know when you're there. 6 A. Yes. 7 Q. So this shows a certain depiction of the 8 machine of Matsumoto's embodiment that's depicted in 9 Figure 3, right? 10 A. Sorry, I couldn't quite understand the 11 question. 12 Q. Yeah, sorry. So maybe that was worded 13 poorly. 14 Figure 3 depicts an embodiment of the 15 Matsumoto computer-assisted training device, right? 16 A. Figure 3 is an illustration that goes along 17 with column 2. 18 Q. Yeah. Okay, so that's the -- it goes with 19 the embodiment that's discussed in column 2, right? 20 Figure 3 does? 21 A. It goes with column 2, I'll say that. 22 Q. Okay. Yeah, and if we turn to column 5, if 23 you recall, column 5 is the source of your citations 24 that we referred to in the beginning of paragraph 79	Page 172 1 BY MR. SWISHER: 2 Q. Okay. Let's take a look at column 7 of 3 Matsumoto. 4 A. Yes. 5 Q. And if we go about halfway down the column, 6 starting at line 36. 7 A. Yes. 8 Q. Matsumoto says: Figure 10 illustrates 9 another embodiment of this invention with an outline 10 of the exercise management body, number 17. 11 Do you see that? 12 A. Yes. 13 Q. Okay. Let's turn back to the figures of 14 Matsumoto, if we can. 15 So if you scroll back a few pages, can you 16 let me know when you're at Figure 10? 17 A. Yes. 18 Q. Okay. And Figure 10 depicts a computerized 19 input device that's part of Matsumoto's workout 20 system, right? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. I believe this is a figure illustrating the 24 concepts of the invention. One of the concepts.
Page 171 1 of your declaration, right? 2 MS. NGUYEN: Objection, form. 3 BY MR. SWISHER: 4 Q. And -- yeah, just let me know when you're 5 there. 6 A. Column 5, or... 7 Q. Yeah, column 5. 8 A. I'm at column 5. 9 Q. Okay, yeah. And column 5 is describing the 10 same embodiment that starts in column 2, right? 11 MS. NGUYEN: Objection, form. 12 BY THE WITNESS: 13 A. So I recognize that embodiment is a legal 14 term, and I am not a lawyer, so I'm not providing an 15 opinion on what you just said. 16 BY MR. SWISHER: 17 Q. Yeah, I didn't ask if you had an opinion on 18 it. 19 I'm just wondering if you understand that 20 the material in column 5 is referring to the 21 embodiment of Matsumoto that begins in column 2? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. I don't know how to confirm that.	Page 173 1 BY MR. SWISHER: 2 Q. Right. And so Figure 10, as we just read 3 from column 7, illustrates another embodiment of this 4 invention, and Matsumoto says, in column 7, line 37, 5 that it's an outline of the exercise management body, 6 number 17, right? 7 MS. NGUYEN: Objection, form. 8 BY THE WITNESS: 9 A. That's what it says. 10 BY MR. SWISHER: 11 Q. Okay. So all I'm trying to get us on the 12 same page with is that the device that's depicted in 13 Figure 10 is a different device than the one that's 14 depicted in Figure 3; would you agree with that? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. No. I understand this whole patent to be an 18 invention, and so when you say it's a different 19 device, I don't -- I don't know what that means. 20 BY MR. SWISHER: 21 Q. So if you look back at the figures, Figure 3 22 and 10. 23 A. Mm-hmm. 24 Q. Does that help you understand my question?

Page 174 1 MS. NGUYEN: Same objection. 2 BY THE WITNESS: 3 A. As far as I can tell, these are 4 representative illustrations of how you might 5 implement the methods of the specification. 6 BY MR. SWISHER: 7 Q. Yeah, so I'm not sure if I follow this. 8 So you don't agree that Figures 3 and 10 are 9 depicting different physical devices? 10 MS. NGUYEN: Objection, form. 11 BY THE WITNESS: 12 A. Well, they're clearly different, but 13 different devices is not something I would say. 14 BY MR. SWISHER: 15 Q. What would you say? 16 A. Different illustrations of similar ideas. 17 The ideas of the invention. 18 Q. Okay. Now of course Matsumoto, in column 7, 19 refers to Figure 10 as another embodiment, right? 20 A. That's right. 21 Q. So you have no reason to doubt that the 22 components depicted in Figures 3 and 10 are different 23 embodiments, do you? 24 MS. NGUYEN: Objection, form.	Page 176 1 than the portions of column 7 of Matsumoto that you 2 cited in paragraph 79? 3 MS. NGUYEN: Objection, form. 4 BY THE WITNESS: 5 A. Again, my reading of this, as a person of 6 ordinary skill in the art, and when I see this in 7 column 7, line 51, approximate target pulse plus or 8 minus 5, it's immediately apparent that that can go 9 with the description in column 5. 10 And I notice also that column 8 here is 11 referring to saved data, which is also discussed in 12 column 6. 13 So as I read this as a POSITA, I see, you 14 know, concepts from lines 5, 6, 7, and 8 all 15 connecting to each other. 16 BY MR. SWISHER: 17 Q. All right. Let me ask you this: In 18 column 7, the description of Figure 10, it refers to 19 some of the components that are depicted in 20 Figure 10, right? With the little bolded numbers. 21 Do you see those? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. So beginning line 36, I see some bolded
Page 175 1 BY THE WITNESS: 2 A. I see the word here that says "another 3 embodiment," but I am also aware that embodiment is a 4 legal term and I can't provide a precise definition. 5 BY MR. SWISHER: 6 Q. Okay. Let's turn back to your declaration 7 in paragraph 79. 8 Now the last sentence of paragraph 79 reads: 9 "An LED indicates whether the user is above, below, 10 or within the target pulse zone, e.g. target pulse 11 plus or minus 5." Right? 12 A. Correct. 13 Q. Okay. And for that sentence, you're citing 14 to column 7 at line 48 of Matsumoto, right? 15 A. Yes. 16 Q. If we turn back to Exhibit 1003, column 7, 17 and look at line 48, that appears in the same 18 paragraph that starts with the description of 19 Figure 10 and illustrates another embodiment in this 20 invention, correct? 21 A. That is in the same paragraph. 22 Q. So do you have any reason to dispute that 23 the portion of column 7 cited in paragraph 79 of your 24 declaration is referring to a different embodiment	Page 177 1 numbers. 2 BY MR. SWISHER: 3 Q. Okay. And then if you can kind of put your 4 finger there and hold your place and look back at 5 Figure 10, do you see that those numbers are also 6 shown in Figure 10? 7 MS. NGUYEN: Objection, form. 8 BY THE WITNESS: 9 A. I see at least some of them. 10 BY MR. SWISHER: 11 Q. Okay. Yeah, I'm just trying to ask about -- 12 you know, let's talk about them to make sure we're on 13 the same page. 14 So starting at about line 48 of column 7, do 15 you see where it says 27 is an LED which can emit 16 green, red, or yellow light? 17 A. I do. 18 Q. Okay. And if you look back at Figure 10, do 19 you see the number 27.2 in aspect of Figure 10? 20 A. Yes. 21 Q. Okay. And does that appear to be pointing 22 to a component that has a heart symbol in a box? 23 A. That's right. 24 Q. And below that box is written target zone.

Page 178 1 Do you see that? 2 A. Yes. 3 Q. Okay. Now if we look back at Figure 3, do 4 you see any number 27 for Figure 3? 5 A. I do not. 6 Q. Do you see a heart symbol with a box and 7 target zone anywhere in Figure 3? 8 A. No. 9 Q. Okay. So earlier you said your 10 understanding was that the material that's disclosed 11 in columns 7 and 8 for this "another embodiment" of 12 Matsumoto can interact with the earlier embodiment of 13 Matsumoto, including what's in column 5; is that what 14 your testimony was? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. So as I read this, the idea of having a 18 pulse zone in column 7 can be applied to column 5 in 19 the same way that the data stored in column 6 can be 20 applied to column 8. 21 It seems like this is all describing aspects 22 of the same invention. 23 BY MR. SWISHER: 24 Q. Okay. Is there anything you can point me to	Page 180 1 Q. Okay. Can I ask you to take a look at 2 figures 5 and 11 and sort of compare those in your 3 mind for a second, and then I'll ask you about those. 4 A. Okay. 5 Q. Now those figures -- strike that. 6 Are figures 5 and 6 depicting block diagrams 7 for a computerized component -- I probably worded 8 that inartfully. 9 Are Figures 5 and 6 block diagrams? 5 and 10 11, I'm sorry. 11 MS. NGUYEN: Objection, form. 12 BY THE WITNESS: 13 A. I think they qualify as block diagrams. 14 BY MR. SWISHER: 15 Q. Okay. And you would agree that the block 16 diagram in Figure 5 is different than the block 17 diagram in Figure 11, right? 18 A. They seem to have the same components ROM, 19 RAM, CPU, timers, I/O, and external circuits. 20 So they're laid out a little bit 21 differently, but it seems like they have the same 22 basic components. So timer and oscillator/divider 23 are basically the same thing. 24 Q. Okay, fair enough.
Page 179 1 in Matsumoto that explains the connection between the 2 pulse zone in column 7 with the earlier embodiment of 3 Matsumoto? 4 MS. NGUYEN: Objection, form. 5 BY THE WITNESS: 6 A. So I understand column 5 to be describing 7 one way to prompt the user, and column 7 to be 8 another way to prompt the user. 9 BY MR. SWISHER: 10 Q. And those two different ways appear in 11 different embodiments of Matsumoto, right? 12 A. Again, I can't give a definition of 13 embodiment, but -- but the paragraph beginning 14 line 36 in column 7 says "another embodiment." 15 Q. Okay. And we also looked at figures 3 and 16 10, and those depict different devices, right? 17 MS. NGUYEN: Objection, form. 18 BY THE WITNESS: 19 A. I don't agree with that. 20 BY MR. SWISHER: 21 Q. Okay. 22 A. They're -- 23 Q. Well, let me ask you to take a look -- 24 A. They are different drawings.	Page 181 1 But do you -- is it your testimony that 2 there's no difference between the block diagrams in 3 Figures 5 and 11? 4 MS. NGUYEN: Objection, form. 5 BY THE WITNESS: 6 A. Clearly they're different drawings with a 7 different layout. 8 BY MR. SWISHER: 9 Q. So turning back to your declaration, I want 10 to ask you a few more questions about this Matsumoto 11 section. 12 Okay. So in paragraph 80 on page 35, can 13 you let me know when you're there? 14 A. I'm there. 15 Q. Okay. So again, this paragraph starts with 16 some descriptions referring to speed, pulse, 17 difference from target pulse, and distance are all 18 tracked throughout the exercise, citing to column 6 19 of Matsumoto, right? 20 A. Correct. 21 Q. Okay. And then the next sentence also cites 22 to column 6 of Matsumoto, right? 23 A. Yes. 24 Q. Okay. The following sentence, on the top of

Page 182 1 page 36 says: "Target pulses are calculated using an 2 exercise rating that is based on a user's pulse while 3 exercising, pulse at rest, and maximum pulse." 4 Right? 5 A. That's correct. 6 Q. And there, in that last sentence, you're 7 referring to columns 9 and -- and 8. 8 and 9, I 8 should say, of Matsumoto, right? 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. The last sentence of paragraph 8 is 12 referring to columns 8 and 9 of Matsumoto. 13 BY MR. SWISHER: 14 Q. Okay. So you agree that paragraph 80 15 includes some descriptions of Matsumoto from the 16 first embodiment of Matsumoto and some descriptions 17 from the second embodiment of Matsumoto, right? 18 MS. NGUYEN: Objection, form. 19 BY THE WITNESS: 20 A. The description at columns -- at the bottom 21 of column 8 beginning of column 9 are using saved 22 data, which is described in column 6. 23 BY MR. SWISHER: 24 Q. So it's your testimony that the saved data	Page 184 1 BY THE WITNESS: 2 A. So my understanding is that column 8 is 3 using saved data, and Matsumoto describes the saved 4 data in column 6. 5 BY MR. SWISHER: 6 Q. Okay. So is it your opinion that the 7 devices depicted in embodiments 1 and 2 can interact 8 with each other somehow? 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. So again, reading this as a POSITA, I am 12 looking for, you know, instruction on how to use the 13 invention, and that directs me to look at columns 5, 14 6, 7, and 8 for how they work together. 15 BY MR. SWISHER: 16 Q. Okay. So when you were forming your 17 opinions that are reflected in this Matsumoto section 18 of your declaration, did you know at the time that 19 Matsumoto describes different embodiments? 20 MS. NGUYEN: Objection, form. 21 BY THE WITNESS: 22 A. Again, I saw the words, but I did not try to 23 interpret them in a legal way. Instead, I tried to 24 follow the teaching of the columns that we were
Page 183 1 that's saved with respect to the device that's 2 illustrated in Figure 10 can be obtained from the 3 device that's depicted in Figure 3; is that right? 4 MS. NGUYEN: Objection, form. 5 BY THE WITNESS: 6 A. I just said something about saved data, I 7 didn't say anything about the devices in -- or those 8 figures that you cited, and I don't remember the 9 numbers right now. 10 BY MR. SWISHER: 11 Q. Well, my question was asking you whether 12 paragraph 80 refers to multiple embodiments, and your 13 response to that was talking about saved data. So 14 what did you mean by saved data? 15 A. Well, you were citing paragraph 80, which 16 cites Matsumoto at column 6, and then column 8, 17 because column 8 uses data that's recorded in 18 column 6. So that's why they're in the same 19 paragraph of my declaration. 20 Q. Right. So it's your testimony that the 21 saved data described in column 8 for the second 22 embodiment of Matsumoto originated with the first 23 embodiment of Matsumoto; is that right? 24 MS. NGUYEN: Objection, form.	Page 185 1 mentioning. 2 BY MR. SWISHER: 3 Q. Okay. So you didn't consider whether there 4 were any distinctions between the device depicted in 5 Figures 10 and 3? 6 MS. NGUYEN: Objection, form. 7 BY THE WITNESS: 8 A. Well, when I've written my own patents 9 before, we often give multiple illustrations of the 10 same concept, just to indicate different ways that 11 could be achieved. So I did not give more than that 12 kind of consideration to it. 13 BY MR. SWISHER: 14 Q. So you did consider whether there were any 15 distinctions between the devices depicted in 16 Figures 3 and 10? 17 MS. NGUYEN: Objection, form. 18 BY THE WITNESS: 19 A. I looked at Figures 3 and 10 as both 20 illustrating the same invention. 21 BY MR. SWISHER: 22 Q. Okay. So you looked at Figures 3 and 10, 23 and you came to the conclusion that they were 24 depicting the same device?

Page 186 1 A. I think that that's your word. I've been 2 saying invention. 3 Q. Okay. Does the Matsumoto section of your 4 declaration include any explanation of how the 5 depictions in Figures 3 and 10 can operate together? 6 MS. NGUYEN: Objection, form. 7 BY THE WITNESS: 8 A. So Figure 3 appears to be -- have a 9 description in column 2, and Figure 10 has a 10 description in column 7. 11 I'm not sure if those are exhaustive, but at 12 least those places. 13 MR. SWISHER: One moment. Apologies. There 14 we go. 15 MS. NGUYEN: Counsel, would it be a good 16 time to take a break? 17 MR. SWISHER: In just a few minutes. I want 18 to finish this line of questioning. 19 BY MR. SWISHER: 20 Q. Okay. So I see what you're referring to, 21 that Figure 3 has a description in column 2 and 22 Figure 10 has a description in column 7, but I'm 23 asking a different question. 24 Is there anything in your declaration that	Page 188 1 a break. 2 THE VIDEOGRAPHER: Off the record at 3:11. 3 (A short break was taken.) 4 THE VIDEOGRAPHER: Back on the record at 5 3:21. 6 BY MR. SWISHER: 7 Q. All right. Dr. Lynch, while we were talking 8 about Amano and Matsumoto, I want to shift gears a 9 little bit but stay partially on those references. 10 So I want to talk about the part of your 11 declaration covering obvious combinations involved 12 Amano and Matsumoto. 13 So that appears starting on page 45 of your 14 declaration. 15 A. What paragraph? 16 Q. Starting at page 45, paragraph 105 of 17 Exhibit 1009. 18 A. Okay. 19 Q. Now just to start off, do these opinions in 20 sections D, E, F, and G, so that's starting at 21 paragraph 105 and going to paragraph 108, do these 22 apply to any particular claims of the '413 patent? 23 MS. NGUYEN: Objection, form. 24
Page 187 1 describes how the items depicted in Figures 3 and 10 2 can operate together? 3 MS. NGUYEN: Objection, form. 4 BY THE WITNESS: 5 A. As far as I know, I do not cite Figures 3 6 and 10 in my declaration. 7 BY MR. SWISHER: 8 Q. So that would be a no? 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. I don't -- I don't cite Figures 3 and 10. 12 BY MR. SWISHER: 13 Q. Okay. So can you answer my question now? I 14 didn't ask if you cited Figures 3 and 10. I'll just 15 repeat my question. 16 Is there anything in your declaration that 17 describes how the items depicted in Figures 3 and 10 18 can operate together? 19 MS. NGUYEN: Same objection. 20 BY THE WITNESS: 21 A. I didn't cite Figures 3 or 10, so I 22 certainly didn't talk about how they work together or 23 even individually. 24 MR. SWISHER: Okay, we can go ahead and take	Page 189 1 BY THE WITNESS: 2 A. So I was asked to consider combinations with 3 respect to particular claims. 4 BY MR. SWISHER: 5 Q. Do you know which claims those were? 6 A. I don't have them written down, but I have a 7 sense, an idea. 8 Q. Okay. Is there any portion of your 9 declaration where you discuss those claims? 10 A. I don't believe I ever list claim numbers. 11 Again, I'd have to check to verify that, but sitting 12 here, I don't remember. 13 Q. Okay. Setting aside claim numbers, is there 14 any portion of your declaration where you discuss the 15 language of the claims that you have in mind? 16 MS. NGUYEN: Objection, form. 17 BY THE WITNESS: 18 A. So looking at paragraph 105 as an example, 19 the key term there is encoding communications, 20 encoded communication. 21 BY MR. SWISHER: 22 Q. Okay. And does that refer to a specific 23 claim in the '413 patent? 24 A. So at least claim 2 has the phrase "encoded

Page 190 1 messages," and that's why I was directed to consider 2 that combination. 3 Q. Okay. Any other claims that you were asked 4 to consider with respect to these combinations? 5 A. All of the combinations? 6 Q. Let's start with Amano and Gorman, 7 section D. 8 MS. NGUYEN: Objection, form. 9 BY THE WITNESS: 10 A. So the phrase "encoded messages" shows up 11 again elsewhere in the claims of the '413 patent, at 12 least in claim 13 and 18. 13 BY MR. SWISHER: 14 Q. Okay. 15 A. And maybe elsewhere, but at least there, in 16 addition to claim 2. 17 Q. Okay. You would agree, however, that 18 paragraph 105 doesn't refer to any quoted claim 19 language from the '413 patent, right? 20 MS. NGUYEN: Objection, form. 21 BY THE WITNESS: 22 A. It uses language from the claims. 23 BY MR. SWISHER: 24 Q. Does paragraph 105 use the language from any	Page 192 1 assessing the invention as a whole? 2 MS. NGUYEN: Objection, form. 3 BY THE WITNESS: 4 A. I have to understand better. I have a 5 listing here, my understanding of obviousness 6 analysis, but perhaps you're saying something outside 7 of that. 8 So in addition to my understanding of 9 obviousness, again, a caveat, I'm not a lawyer, so 10 what I've listed here is what I understand 11 obviousness to be. 12 BY MR. SWISHER: 13 Q. Okay. Let's take a look in paragraph 17. I 14 think you're there. 15 A. Yes. 16 Q. Do you see the subpoint 2? It says: "In 17 analyzing the obviousness of a claim, I understand 18 the following factors may be taken into account." 19 The second factor is the differences between 20 the prior art and the claims, right? 21 Do you see that? 22 A. Yes. 23 Q. Okay. Now turning back to page 45, starting 24 with paragraph 105, is there any portion of
Page 191 1 entire claim of the '413 patent? 2 MS. NGUYEN: Objection, form. 3 BY THE WITNESS: 4 A. It never cites an entire claim of the '413 5 patent. 6 BY MR. SWISHER: 7 Q. Okay. So you are not offering -- strike 8 that. 9 Let's just start with paragraph 105, Amano 10 and Gorman. You are not offering any opinion that 11 the combination of Amano and Gorman would render 12 obvious any specific claim from the '413 patent, 13 right? 14 A. The reason that I'm looking at encoded 15 communications is because of the claims, but I am not 16 directly addressing or dealing with the entirety of 17 any single claim in the 413. I am describing how 18 Gorman is obvious to combine with Amano to get 19 encoded communications. 20 Q. Okay. Do you require that one of the legal 21 requirements of an obviousness -- I'm sorry, strike 22 that. 23 Do you understand that one of the legal 24 requirements in an obviousness assessment is	Page 193 1 paragraph 105 where you compare Amano or Gorman to 2 any claim of the '413 patent? 3 MS. NGUYEN: Objection, form. 4 BY THE WITNESS: 5 A. So what I'm saying in paragraph 105, is a 6 POSITA would have known that, to communicate 7 information between two devices, you have to encode 8 it. 9 BY MR. SWISHER: 10 Q. Okay. 11 A. And so Gorman is an example of that. 12 Q. Okay. So this paragraph doesn't include any 13 opinions where you're assessing the differences 14 between Amano and Gorman and any claim of the '413 15 patent, right? 16 MS. NGUYEN: Objection, form. 17 BY THE WITNESS: 18 A. I'm sorry, that was a long question, and I'm 19 not sure I got the meaning. 20 BY MR. SWISHER: 21 Q. Okay. Is paragraph 105 -- strike that. 22 I think we already -- you already agreed 23 that paragraph 105 doesn't refer to any complete 24 claim of the '413 patent, right?

Page 194 1 MS. NGUYEN: Objection, form. 2 BY THE WITNESS: 3 A. It does not cite a complete claim from the 4 '413 patent. 5 BY MR. SWISHER: 6 Q. Okay. So at least because you didn't cite 7 or refer to a complete claim of the '413 patent, you 8 also didn't provide any opinions comparing Amano or 9 Gorman to a complete claim of the '413 patent, right? 10 MS. NGUYEN: Objection, form. 11 BY THE WITNESS: 12 A. So my opinion had to do with encoded 13 communications, so that's what I'm opining on here, 14 that it would be obvious to combine Amano's device 15 with an encoded communication method. 16 BY MR. SWISHER: 17 Q. Right, so I'm just asking a different 18 question. 19 I'm asking whether you assessed whether 20 there were any differences between a claim of the 21 '413 patent on the one hand and the disclosures of 22 Amano and Gorman on the other hand. 23 MS. NGUYEN: Objection, form. 24	Page 196 1 BY MR. SWISHER: 2 Q. Okay. So it was your understanding that the 3 portion of claim 2 reciting the apparatus of claim 1 4 was not important to understanding the meaning of 5 claim 2? 6 A. That's certainly not true. 7 MS. NGUYEN: Objection, form. 8 BY THE WITNESS: 9 A. That's certainly not true. But also, it's 10 not something that you need an expert to provide an 11 opinion on, as far as I know. 12 BY MR. SWISHER: 13 Q. Okay. So you don't need an expert to 14 provide an opinion on the meaning of the elements 15 that are in claim 1 to understand the full scope of 16 claim 2? 17 MS. NGUYEN: Objection, form. 18 BY THE WITNESS: 19 A. No, claim 1 has already been discussed, so 20 this is focusing on claim 2. 21 BY MR. SWISHER: 22 Q. And is there any portion of your declaration 23 where you discuss all of the elements as they are 24 arranged in claim 1?
Page 195 1 BY THE WITNESS: 2 A. So as I mentioned earlier, what I'm doing is 3 I'm reading the '413 patent as a POSITA and the file 4 history, and I'm looking at prior art, and I'm 5 mapping prior art to particular terms or claim 6 elements in the claims. 7 So here, the term I was mapping to was 8 encoded messages, at least in claim 2, and then 9 there's related ideas in claims 13, 18, and possibly 10 elsewhere. So that -- that's what I was doing. 11 BY MR. SWISHER: 12 Q. Okay. So you compared to certain terms that 13 you found in the claims of the '413 patent, is that 14 right? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. So as an example, if you look at claim 2, 18 there's the apparatus of claim 1, not very 19 interesting, wherein the first heart rate 20 measurements and the second heart rate measurements, 21 which have already been discussed, are received in 22 the plurality of encoded messages. 23 So in doing my mapping, I was focusing on 24 the encoded messages.	Page 197 1 A. I believe we discussed this already. 2 Q. The answer is no, right? 3 A. The answer is what I gave before. 4 Q. Is that no? Is that incorrect? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. I'm going to stick with my previous answer 8 so I don't have to say it again into the record. 9 BY MR. SWISHER: 10 Q. So you can't answer my question of whether 11 you -- 12 A. Okay. 13 MS. NGUYEN: Objection. 14 THE WITNESS: Can you ask the question again 15 then? 16 BY MR. SWISHER: 17 Q. Yeah. I'm just asking -- strike that. 18 I'm asking if your declaration contains any 19 opinions regarding all of the elements of claim 1 as 20 they are arranged in claim 1? 21 A. My declaration certainly includes any 22 opinions on elements related to claim 1. 23 I believe you asked -- we discussed before 24 about whether all of my opinions, taken as a union,

50 (Pages 194 - 197)

Page 198 1 would address every element of claim 1. I am 2 uncertain, sitting here. 3 Q. All right. You would agree with me that you 4 don't include any opinion in your declaration where 5 you opine that claim 2 is obvious under the 6 combination of Amano and Gorman, right? 7 MS. NGUYEN: Objection, form. 8 BY THE WITNESS: 9 A. Nowhere in my declaration do I say that 10 claim 2 is obvious under Amano and Gorman. 11 BY MR. SWISHER: 12 Q. Okay. And your declaration doesn't include 13 any opinions where you say any claim is obvious under 14 the combination of Amano and Gorman, right? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. Are you waiting for an answer? 18 BY MR. SWISHER: 19 Q. I'm waiting. 20 A. I provide many opinions, but none are 21 arranged element by element in a linear sequence at 22 any one place in the -- in the document. 23 Q. Okay. And that's true for the combination 24 of Amano and Flach in paragraph 106, right?	Page 200 1 claim X in my declaration where X is any number. 2 Q. Okay. And again, setting aside the number, 3 is there any reference in your declaration to the 4 words of claim 8, for example? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. So as an example, just a representative 8 example, claim 8 mentions a time channel. I use the 9 phrase time slot. 10 BY MR. SWISHER: 11 Q. Okay. So can you answer my question, 12 though? 13 Do you need me to repeat it? 14 A. Please. 15 Q. Okay. Is there any reference in your 16 declaration to the text of claim 8? 17 A. So I think I mentioned that I don't use the 18 term, or don't use the phrase claim X, where X is any 19 number, including 8. So -- 20 Q. Yeah, yeah, yeah. 21 A. -- so I don't think I ever say claim 8. 22 Q. Let me rephrase it. 23 So I'm not referring to the claim numbers, 24 I'm referring to the words that are contained within
Page 199 1 MS. NGUYEN: Objection, form. 2 BY THE WITNESS: 3 A. So the reason that a POSITA would use Flach 4 would be to get the TDMA capability, which was 5 certainly well-known at the time. 6 BY MR. SWISHER: 7 Q. Okay. If you don't mind, could you please 8 just answer my question? 9 So is it also true that your declaration 10 doesn't include any opinions analyzing any claim of 11 the '413 patent on an element by element basis for 12 the combination of Amano and Flach? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. So among other claims, Flach is relevant for 16 claim 8 in the '413 patent, and so the opinions that 17 I provide here about the obviousness of combining 18 Amano and Flach are directed towards an analysis of 19 claim 8, for example. 20 BY MR. SWISHER: 21 Q. Okay. Is there any reference to claim 8 in 22 paragraph 106? 23 A. I believe, and again without looking at the 24 entire thing right now, I believe I don't refer to	Page 201 1 the claims, okay? 2 So for example, if you are looking at 3 claim 8, claim 8 reads: "The apparatus of claim 7 4 wherein the instructions, when executed by the 5 processor, cause the apparatus to designate a time 6 channel for communicating with the distance sensor?" 7 Do you see that? 8 A. Yes. 9 Q. Is there any spot or any place in your 10 declaration where you talk about those words, the 11 entire -- strike that. 12 Is there any place in your declaration where 13 you offer an opinion about the full text of claim 8? 14 A. So to be clear, I never cite the full text 15 of claim 8. It never appears in my declaration. 16 Q. Okay. 17 A. So that answers your question. 18 Q. So if you didn't cite the full text, you 19 also didn't offer any opinions about the full text, 20 right? 21 A. That's incorrect. I offered opinions 22 related to bits of the text. 23 Q. Right. So my question was, did you offer 24 any opinions about the full text of claim 8? Not

Page 202 1 bits. 2 MS. NGUYEN: Objection, form. 3 BY THE WITNESS: 4 A. So the opinions that I offered map directly 5 on to claim 8, but I never cite the entire claim 6 language of that element -- sorry, that claim. 7 BY MR. SWISHER: 8 Q. Okay. And just to make this a little bit 9 easier, the same is true for all the remaining 10 dependent claims of the '413 patent, right? 11 A. I never write out the full claim, but I 12 provide opinions that are relevant to those claims 13 and map on to those claims. 14 Q. So none of the opinions in the next two 15 sections of your report, Matsumoto and Gorman in 16 combination, and Matsumoto and Flach in combination, 17 refer to the full text of any claim of the '413 18 patent, right? 19 MS. NGUYEN: Objection, form. 20 BY THE WITNESS: 21 A. I never quote the full text of any claim, 22 but my opinions are directly relevant to claims. 23 BY MR. SWISHER: 24 Q. All right. Is it your understanding,	Page 204 1 A. Okay. 2 Q. Okay. In paragraph 25 you're referring to 3 some aspects of the '413 patent that include a watch 4 element that's depicted as an electronic console 301, 5 right? 6 A. Yes. 7 Q. And that's in reference to Figure 3A, which 8 appears on page 12 of your declaration, right? 9 A. I don't see it here saying it's in reference 10 to Figure 3A. 11 Q. I'm talking about the number 301 element 12 that's shown in Figure 3A, right? 13 A. Yes. 14 Q. Okay. And then the same figure also has 15 components 303 and 305, right? 16 A. Yes. 17 Q. Okay. And then turning back to 18 paragraph 25, you refer to those as remote electronic 19 sensors, correct? 20 A. Yes. 21 Q. Okay. So I'm just trying to kind of set the 22 stage here for what the patent is talking about in 23 this aspect. 24 So these remote electronic sensors, they
Page 203 1 Dr. Lynch, that the claims of the '413 patent 2 referring to encoded messages are referring to 3 wireless transmission of messages? 4 MS. NGUYEN: Objection, form. 5 BY THE WITNESS: 6 A. So claim 2 does not limit to wireless. 7 BY MR. SWISHER: 8 Q. Right. So I guess I'm just trying to 9 understand what your understanding is of encoded 10 messages as it's recited in claim 2, so let's start 11 there. 12 A. So generally it means that you have some 13 information that you want to transmit from one place 14 to another, and so you have to turn it in to a 15 message that can be sent, which is typically -- or I 16 shouldn't say typically -- often arranging it as a 17 sequence of bits that can be transmitted from one 18 place to another. 19 Q. All right. Just ask you some questions 20 about the patent again. 21 So let's flip back to page 11 of your 22 declaration, Exhibit 1009. 23 A. What paragraph? 24 Q. It's paragraph 25.	Page 205 1 would have to communicate with the electronic console 2 in a wireless manner, right? 3 MS. NGUYEN: Objection, form. 4 BY THE WITNESS: 5 A. That might be a preferred way to do it, 6 but -- 7 BY MR. SWISHER: 8 Q. Right. 9 A. They don't have to. 10 Q. Right. Like what I mean, though, is that if 11 they are remote and there aren't any wires connecting 12 then to the sensor, to the console, like how else 13 would you be able to do it, other than wirelessly? 14 A. If there are no wires, it is wireless. 15 Q. Okay, there we go. So we can agree on that. 16 So -- and for example, if we take a look at 17 column 5 of Exhibit 1001, that's the '413 patent. 18 A. Yes. 19 Q. Okay. So let's take a look, starting at 20 line 24 of column 5, the '413 patent reads: "For 21 example, the sensor interfaces may include a wireless 22 transmitter and receiver for both sending and 23 receiving information to and from remote sensors, 24 right?

Page 206 1 A. Yes. 2 Q. Okay. And it says: "For example, one or 3 more sensor interfaces may be capable of transmitting 4 and receiving infrared signals, visible light 5 signals, and signals encoded on to radio waves." 6 Right? 7 A. Correct. 8 Q. And all those types of signals, infrared, 9 visible light, and signals on radio waves, those are 10 all types of wireless communication, right? 11 A. Correct. 12 Q. Okay. And then the specification goes on to 13 say: "Alternatively, one or more sensor interfaces 14 may be physically connected to a remote sensor by a 15 conductive wire or an optical fiber." Right? 16 A. Right. 17 Q. All right. So I think that confirms, but in 18 the instance where the remote sensors are not 19 connected by a wire to the electronic console, they 20 would have to be using wireless communication to 21 transmit and receive, right? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. If there are no wires, then by definition,	Page 208 1 A. Yes. 2 Q. Okay. Now do you know if Matsumoto 3 discloses a wired or wireless exercise machine? 4 A. So I'd have to review. I know that 5 Matsumoto talks about an exercise bicycle, as well as 6 free running, among other possible implementations. 7 But if you would like me to review something, I'm 8 happy to. 9 Q. Yeah, let's take a look at Exhibit 1003. 10 A. Is that Matsumoto? 11 Q. That's Matsumoto, yes. 12 And if you can turn to the second page, or I 13 guess it's the first page after the sort of front 14 face of the patent where it shows Figures 1 and 2. 15 A. Yes. 16 Q. Okay. So having in mind Figures 1 and 2 17 there, maybe keep a thumb in it, let's turn to 18 column 2 of Matsumoto. 19 A. Okay. 20 Q. And column 2 at line 34 refers to item 16, a 21 wire that connects the pulse sensor (15) and the 22 exercise management machine (17). 23 Do you see that? 24 A. Yes.
Page 207 1 it's wireless. 2 BY MR. SWISHER: 3 Q. Okay. Now when you were reviewing the prior 4 art references, did you consider whether they 5 disclosed wired or wireless devices? 6 A. I certainly read about them. Can you 7 clarify what you mean by "consider"? 8 Q. Yeah, like when you were looking at a 9 reference, did you think about, okay, I want to 10 understand if this reference is talking about a wired 11 device or a wireless device? Is that something you 12 did? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. I don't recall at the moment. 16 BY MR. SWISHER: 17 Q. Okay. Let's take a look at paragraph 107 of 18 your declaration, 1009, Exhibit 1009. 19 Okay, I want to start with Matsumoto. So 20 this is in paragraphs 107 and 108. 21 Here you opine in paragraph 107 that a 22 POSITA would have found it obvious to combine the 23 exercise machine in Matsumoto with the communication 24 technique of Gorman, right?	Page 209 1 Q. So in Figure 1, which is the training 2 bicycle, Matsumoto discloses a device that has a 3 wired connection between the pulse sensor and the 4 exercise machine, correct? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. So that -- so the description of Figure 1 8 mentions a wire that connects a pulse sensor to the 9 exercise management machine. 10 BY MR. SWISHER: 11 Q. Okay. And in reference to Figure 2, let's 12 turn to column 4 of Matsumoto. 13 A. Okay. 14 Q. All right. And I will direct you to line 41 15 of column 4 where Matsumoto states: "The pulse 16 signal obtained was sent through wire (51) to the 17 jogging management machine body (50) which calculated 18 the user's pulse." 19 Do you see that? 20 A. I do. 21 Q. And if we look back at Figure 2, we can see 22 the wire depicted as item 51 in Figure 2, right? 23 A. Just to be clear, in column 4 there, it's 24 talking about with jogging machines of the past, and

Page 210 1 then it continues to talk about what you just said, 2 pulse signal being obtained was sent through the 3 wire. 4 Q. Jogging machines of the past. Where are you 5 referring to? Sorry. 6 A. You just quoted at line 41, I think you said 7 the pulse signal obtained was sent through wire, and 8 that's part of the sentence that begins "with jogging 9 machines of the past." 10 Q. Yes. Yes, and so that's describing what's 11 shown in Figure 2, right? 12 A. Figure 2? 13 Q. Yeah. 14 A. I don't think so. 15 Q. Column 4, line 38 says, for example, the 16 exercise management machine for jogging as shown in 17 Figure 2. 18 A. It talks about an exercise -- this is 19 line 37. 20 It says: "Exercise management machine for 21 jogging as shown in Figure 2." 22 Q. Yeah. 23 A. An outline of the jogging management machine 24 will now be explained.	Page 212 1 shows a device that uses a wire to connect the sensor 2 to the device. 3 A. Figure 2 has a wire, 51. 4 Q. Okay. So do you see any -- or strike that. 5 Are you aware of any disclosure in Matsumoto 6 of a wireless exercise training machine? 7 MS. NGUYEN: Objection, form. 8 BY THE WITNESS: 9 A. Can you define what you mean by "wireless 10 training machine"? 11 BY MR. SWISHER: 12 Q. Yes, a device that uses wireless 13 transmission between sensors and some sort of other 14 electrical component that's receiving the signals 15 from the sensors? 16 A. So the question is, is there any wireless 17 communication described in Matsumoto? 18 Q. Well, that's one question, but what I'm 19 asking is -- you know, let's start at the beginning. 20 So Matsumoto, the title on the very first 21 page of the patent is Exercise and Training Machine 22 with Microcomputer Assisted Training Guide, right? 23 A. Yes. 24 Q. And then the abstract says: "An exercise
Page 211 1 And then it says: "With jogging machines of 2 the past, a band was used to hold the electrodes 3 directly against the user's chest. The pulse signal 4 obtained was sent through wire to the jogging 5 management machine body which calculated the user's 6 pulse," and so on. 7 Q. Right. 8 A. Okay. So are you representing that that's 9 describing Figure 2? 10 Q. I mean, yes. It says Figure 2, uses little 11 numbers bold 51, 50, 54. Those are shown in 12 Figure 2, if you turn back to that. 13 A. Okay. But it's also talking about the 14 jogging machines of the past. 15 Q. Yeah. Yeah, this may be is something that 16 was also available in the past, or portions of it may 17 have been. 18 A. Okay. 19 MS. NGUYEN: Objection, form. 20 BY THE WITNESS: 21 A. So I'm sorry, what -- is there a question 22 that's outstanding? 23 BY MR. SWISHER: 24 Q. Yeah, I was just asking whether Figure 2	Page 213 1 management machine which measures the individual's 2 pulse and is provided with an indicator to inform the 3 user of the exercise program," et cetera. Right? 4 A. Yes. 5 Q. And so I'm just asking if Matsumoto 6 discloses any exercise management machine that uses 7 wireless communications to send signals from a 8 sensor? 9 A. Sitting here now, I can't answer that. 10 Q. Okay. And did you analyze Matsumoto to 11 figure out the answer to that question when you were 12 conducting your analysis that's reflected in your 13 declaration? 14 MS. NGUYEN: Objection, form. 15 BY THE WITNESS: 16 A. I don't remember thinking that that was 17 important. 18 BY MR. SWISHER: 19 Q. Okay. In paragraph 108 of your declaration, 20 Exhibit 1009, if you can turn to that. 21 A. Just to clarify, whether the communication 22 is wired or wireless, it needs to be encoded, and I'm 23 only mentioning that because before we started down 24 this road, we were talking about encoding messages.

Page 214 1 So I don't know if your questions were a follow-up to 2 that, but in any case, it needs to be encoded. 3 Q. Why does it need to be encoded if it's using 4 a wire? 5 A. Because that's how information is 6 communicated. 7 Q. All information is encoded? 8 A. I wouldn't say all. 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. I think I said before often, or typically. 12 BY MR. SWISHER: 13 Q. Is there any disclosure in Matsumoto 14 discussing using encoded messaging in a wire -- wired 15 setup or wired apparatus? 16 A. Again, that's a question about anywhere in 17 the patent, and I can't answer that question. 18 Q. Okay. 19 A. But it does talk about communicating 20 information. 21 Q. Right. So in -- 22 A. And communicated information is encoded. 23 Q. In paragraph 108 of your declaration, you 24 state that Matsumoto gives little detail about how	Page 216 1 BY MR. SWISHER: 2 Q. Yeah, we can go there if you like. 3 So, you know, it's starting on paragraph 82, 4 which discusses Gorman, and then paragraph 86 starts 5 discussing Flach. 6 A. Mm-hmm. 7 Q. So when you were reviewing Gorman and Flach, 8 were you looking for any disclosures of using encoded 9 messages for a wired apparatus? 10 MS. NGUYEN: Same objection. 11 BY THE WITNESS: 12 A. So Gorman and Flach at least both disclose 13 wireless communication. 14 MS. NGUYEN: Counsel, can we take a break 15 soon? 16 MR. SWISHER: How long have we been on the 17 record? 18 THE VIDEOGRAPHER: This section is 19 39 minutes. 20 MR. SWISHER: I'd like to keep going for 21 another 15 or so, if we can, because I have stuff 22 that's all related to this. 23 MS. NGUYEN: Is that okay with you? 24 MR. SWISHER: Okay. Then we can take a
Page 215 1 its heart rate sensor communicates with the main 2 device, right? 3 A. Correct. 4 Q. But we do know from looking at Matsumoto 5 that it uses a wire to send signals from a sensor to 6 the body of the device, right? 7 MS. NGUYEN: Objection, form. 8 And, Dr. Lynch, if you can give me an 9 opportunity to state my objections. 10 THE WITNESS: Sorry. 11 MS. NGUYEN: I appreciate it. Thank you. 12 BY THE WITNESS: 13 A. Matsumoto discloses wired communication at 14 least. 15 BY MR. SWISHER: 16 Q. Okay. When you were analyzing Gorman and -- 17 is it Flach? I'll say Flach if it's Flach. 18 Gorman and Flach, did you consider whether 19 those references were discussing using encoded 20 signals in a wired apparatus? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. I'm sorry, are you directing me to 24 particular parts of my declaration, or --	Page 217 1 break when we move on to the next topic. 2 BY MR. SWISHER: 3 Q. All right. So turning back to your opinions 4 about the combinations of Amano with Gorman and 5 Flach, was there anything in your review of Amano 6 that indicated to you that a POSITA would consider 7 combining it with teachings about wireless 8 communications? 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. Sorry, I didn't follow the question. 12 BY MR. SWISHER: 13 Q. Sure. So we discussed earlier that Amano 14 discloses an exercise device that uses a wire, right? 15 A. Amano? 16 MS. NGUYEN: Objection. 17 BY MR. SWISHER: 18 Q. Oh, I'm sorry, let's start with Matsumoto, 19 then we can go to Amano. Let's start with Matsumoto. 20 So we discussed earlier that Matsumoto 21 discloses an exercise device that uses a wire, right? 22 A. At least that. I haven't read the entire 23 patent again to determine what could be wired or 24 wireless.

Page 218 1 Q. Okay. So what I'm asking is, is there 2 anything that you identified in Matsumoto that would 3 have motivated a POSITA to combine Matsumoto's wired 4 device with teachings about wireless communications? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. So some aspects, as I mentioned earlier, of 8 communication are independent of whether it's wired 9 or wireless. 10 BY MR. SWISHER: 11 Q. Okay. So let's just look at paragraph 107 12 of your declaration, Exhibit 1009. 13 The first sentence says: "A POSITA would 14 have found it obvious to combine the exercise machine 15 in Matsumoto with the communication technique of 16 Gorman." Right? 17 A. Correct. 18 Q. Now you agree that the exercise machine in 19 Matsumoto does not utilize wireless communications, 20 right? 21 MS. NGUYEN: Objection, form, asked and 22 answered. 23 BY THE WITNESS: 24 A. I did not agree to that.	Page 220 1 In the past few days, I wasn't focused 2 necessarily on wired versus wireless communication, 3 so even though I've read the whole thing, I don't 4 have it -- I haven't memorized everything in it. 5 Q. Now I want to ask you about the time that 6 you were conducting your analysis and your opinions 7 in your declaration, okay? 8 So when you were conducting that analysis, 9 did you focus on whether Matsumoto disclosed a wired 10 or wireless device? 11 A. Again, I don't remember everything that I 12 did ten months ago. 13 Q. Okay. Is there anything in your declaration 14 that discusses whether Matsumoto discloses a wired or 15 wireless device? 16 MS. NGUYEN: Objection, form. 17 BY THE WITNESS: 18 A. So again, a wired or wireless device, I 19 think the question is, is there any wireless 20 communication anywhere in Matsumoto. I think that's 21 a question that can be answered in a binary way, 22 although I can't right now, because I haven't read 23 the whole patent recently with an eye towards that. 24 But there are plenty of devices that are
Page 219 1 BY MR. SWISHER: 2 Q. So you don't know one way or the other 3 whether the exercise machine in Matsumoto uses 4 wireless communications? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. Sitting here right now, I'd have to read the 8 entire patent again to look for every place that it 9 could be wired or wireless. 10 BY MR. SWISHER: 11 Q. Okay. So it's fair to say then that you 12 didn't consider whether or not the device in 13 Matsumoto is wired or wireless in forming the 14 opinions that are reflected in paragraph 107, right? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. That is not correct. 18 BY MR. SWISHER: 19 Q. So just a moment ago, you said you didn't 20 know for sure whether Matsumoto disclosed a wired or 21 wireless device. 22 A. So to be clear, I first reviewed Matsumoto 23 ten months ago, and have not looked at it again until 24 just the past few days.	Page 221 1 both wired and wireless, so -- 2 BY MR. SWISHER: 3 Q. Yeah, I am actually asking a different 4 question, so maybe I can just explain it better. 5 So you agreed a few minutes ago that Gorman 6 primarily discloses wireless communication 7 techniques, or at least that's what you talked about 8 in the section of your declaration on Gorman, right? 9 A. So Gorman is describing encoding messages 10 which needs to be done with wired or wireless 11 devices, among many other things. 12 So as an example, Gorman discusses including 13 identification data in a message which is needed for 14 a wired or wireless devices. 15 Q. Explain what you mean by that. 16 MS. NGUYEN: Objection, form. 17 BY MR. SWISHER: 18 Q. Can you just give me some more details on 19 why a wired device would need to include 20 identification message -- identification data in a 21 message? 22 MS. NGUYEN: Same objection. 23 BY THE WITNESS: 24 A. Sure. So in paragraph 98 of my disclosure,

Page 222 1 I mention that it's common to encode messages with 2 sender identification data in wired and wireless 3 communication, and I gave the example of CAN, which 4 stands for controller area network in Bluetooth. So 5 CAN is often implemented in a wired manner, Bluetooth 6 is wireless, and both of those package data up in a 7 digital way to be transmitted, including 8 identification data of the sender. 9 BY MR. SWISHER: 10 Q. Okay. So what would the purpose be of 11 including identification data in a message in the 12 context of wired communications? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. So again, I'll use controller area network 16 as an example. 17 So this is where multiple devices share the 18 same communication bus, and if one puts out a 19 message, it needs to tell the others who it's coming 20 from so they know whether to pay attention to it or 21 not, for example. That's one example. 22 BY MR. SWISHER: 23 Q. Okay. And is there any aspect of Matsumoto, 24 for example, that relates to multiple devices sharing	Page 224 1 communication and has been for many years. Probably 2 in your car too. 3 BY MR. SWISHER: 4 Q. Is there any disclosure of the CAN 5 communication method in Matsumoto? 6 A. The disclosure in Matsumoto is about 7 multiple devices communicating, and CAN is a 8 well-known way to do it, and Gorman also provides a 9 way to allow communication between multiple devices. 10 Q. So what I'm just trying to understand is we 11 can agree that Matsumoto discloses a manner in which 12 its device communicates between the sensors and the 13 device, right? 14 MS. NGUYEN: Objection, form. 15 BY MR. SWISHER: 16 Q. Maybe a simple way of putting it is 17 Matsumoto discloses what you would understand to be 18 an operable device, right? 19 MS. NGUYEN: Same objection. 20 BY THE WITNESS: 21 A. That I understand to be a legal term so I 22 don't want to weigh in on that, but as I mention in 23 my disclosure, Matsumoto does not talk in great 24 detail about how the communication is achieved.
Page 223 1 the same communication bus? 2 A. So Matsumoto describes at least two sensors, 3 and those would be communicating with the same 4 processor. 5 Q. But you agree that Matsumoto discloses a 6 wired method for communicating between the sensors 7 and the device, right? 8 MS. NGUYEN: Objection, asked and answered. 9 BY THE WITNESS: 10 A. Asked and answered, so we've talked about 11 this. But at least wired. 12 BY MR. SWISHER: 13 Q. Okay. 14 A. And if it's wired, then CAN is an example of 15 a wired communication system where each message will 16 include sender identification data. 17 Q. Okay. Well let me ask you this: Can you 18 explain to me what would have motivated a POSITA 19 looking at Matsumoto to want to combine with the 20 teachings of Gorman? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. Well, you need successful communication, and 24 CAN is a very popular way of doing wired	Page 225 1 BY MR. SWISHER: 2 Q. Yeah, I didn't mean to ask you anything 3 about a legal term, so I'm not sure which one you're 4 referring to. 5 But is it your understanding that Matsumoto 6 only discloses like an incomplete device? Something 7 like that? 8 MS. NGUYEN: Objection, form. 9 BY THE WITNESS: 10 A. No. 11 BY MR. SWISHER: 12 Q. So it discloses a way in which its sensors, 13 sensor or sensors, can send signals, right? 14 A. If I disclose a device that has a CPU in it, 15 I don't have to explain what a CPU is. So Matsumoto 16 is saying that communication happens, but does not 17 give the details of how the communication ends, 18 whereas other references go into that in more detail. 19 Q. So Matsumoto doesn't say a wire is used 20 between the sensor and the device? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. I don't see -- the question is sort of non 24 sequitur. I didn't understand --

Page 226 1 BY MR. SWISHER: 2 Q. The topic I'm asking about -- 3 A. Did you change the topic? 4 Q. No, no, I didn't intend to. 5 What I'm saying is that the device in 6 Matsumoto, we already went over this, it says the 7 wire connects the pulse sensor to the exercise 8 management machine, right? You remember that's in 9 column 2 of Exhibit 1003? 10 A. Yes. 11 Q. Yeah. So Matsumoto explains how the pulse 12 sensor, at a high level at least, connects with the 13 machine; it's by a wire, right? 14 MS. NGUYEN: Objection, form. 15 BY THE WITNESS: 16 A. It does not describe the communication 17 protocol between the two. 18 BY MR. SWISHER: 19 Q. Okay. So what I'm trying to understand is 20 just if a POSITA like yourself looking at Matsumoto, 21 what was it that led you to think, oh, I need to 22 combine Matsumoto with some wireless communication 23 disclosures like the ones in Gorman? 24 MS. NGUYEN: Objection, form.	Page 228 1 Gorman. 2 BY MR. SWISHER: 3 Q. So I'm asking like at the time of the 4 patent, which was issued in 1990 for Matsumoto, it 5 was well-known how to use wires to send signals 6 between electronic components, right? 7 MS. NGUYEN: Objection, form. 8 BY THE WITNESS: 9 A. There are many methods for doing so and one 10 successful way is by putting sender identification 11 data with the message. 12 BY MR. SWISHER: 13 Q. Okay. 14 MS. NGUYEN: Counsel, it's been 15 minutes. 15 Can we please take a break? 16 MR. SWISHER: I'm almost done with this one, 17 and then maybe a few more minutes, but I don't want 18 to stop in the middle of this line of questioning. 19 BY MR. SWISHER: 20 Q. Okay. So I think we agree, there were known 21 methods at the time of 1990 to use wires to 22 communicate between electronic components, right? 23 A. Yes. 24 Q. Okay. So what I'm just trying to understand
Page 227 1 BY THE WITNESS: 2 A. The motivation is to have successful 3 communication, and as I mention before, both wired 4 and wireless devices have shown that it's a 5 successful strategy to put the sender identification 6 data. 7 BY MR. SWISHER: 8 Q. Okay. 9 A. With the message. 10 Q. But you don't opine that Matsumoto's 11 communication was unsuccessful, right? However 12 Matsumoto did it? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. Matsumoto does not give any detail on how to 16 do communication, so a user or a reader would be 17 motivated to look for a way to do it. 18 BY MR. SWISHER: 19 Q. So you don't think a POSITA would understand 20 how to send signals between two electronic devices 21 using a wire? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. They would by appealing to methods like	Page 229 1 is, what was it in the Matsumoto reference that led 2 you to think I should combine it with the teachings 3 of Gorman? 4 MS. NGUYEN: Objection, asked and answered. 5 BY THE WITNESS: 6 A. Well, Matsumoto specifically is talking 7 about, at least, a heart rate sensor, and Gorman is 8 also talking about physiological sensors. So that 9 would be a reason that you might look to Gorman 10 specifically. 11 BY MR. SWISHER: 12 Q. Okay. Now of course Matsumoto already 13 disclosed physiological sensors, right? 14 A. Matsumoto disclosed physiological sensors. 15 Q. Right. 16 A. I was just understanding it. Matsumoto 17 discloses physiological sensors, yes. 18 Q. Okay. 19 MR. SWISHER: Okay, let's go ahead and take 20 a break. 21 THE VIDEOGRAPHER: Off the record at 4:16. 22 (A short break was taken.) 23 THE VIDEOGRAPHER: Back on the record at 24 4:27.

Page 230 1 BY MR. SWISHER: 2 Q. Okay, Dr. Lynch, I'm going to ask you some 3 more questions about the combinations with Gorman and 4 Flach, which are similar to the previous ones, but 5 hopefully these go a little faster since we have some 6 foundation laid already as to what we're talking 7 about, okay? 8 So first I'd like to ask you some questions 9 about the Amano combinations in paragraphs 105 and 10 106. 11 Now conducting your analysis of Amano, did 12 you consider whether that reference discloses wired 13 or wireless devices? 14 A. It was certainly part of my analysis. Part 15 of my reading of the documents. 16 Q. Okay. Are any details of that analysis 17 reflected in your declaration? 18 A. That's a difficult question to answer, 19 because you have to search through my entire 20 declaration, but is there something else I can tell 21 you? 22 Q. Yeah, so let's take a quick look. 23 Let's go to page 30 of your declaration 24 starting on paragraph 70, and from there through the	Page 232 1 MS. NGUYEN: Objection, form. 2 BY THE WITNESS: 3 A. Optical signals here refers to a wireless 4 transmission. 5 BY MR. SWISHER: 6 Q. And if we take a look at Figure 44. 7 A. Yes. 8 Q. Okay. And you can see there, there's no 9 wire depicted connecting the pulse sensor that's on 10 the main finger to the watch-like device on the 11 wrist, right? 12 A. That's correct. 13 Q. All right. Now just quickly, I want to 14 confirm if we look at the paragraph before 15 paragraph 72 where you reference column 37, so if we 16 go to paragraph 71 in your declaration. 17 A. Yes. 18 Q. And -- okay. And you can see that, in the 19 second-to-last sentence of that paragraph, 71, you 20 refer to a CPU and memory and you cite to column 7 of 21 Amano, correct? 22 A. Yes. 23 Q. And if we look at column 7 of Amano, you 24 would agree that it appears in what is titled
Page 231 1 succeeding paragraphs up through paragraph 76, is 2 there any discussion about Amano and whether or not 3 it discloses wired or wireless devices? 4 A. Yes. 5 Q. Okay. And where are you referring? 6 A. So at least at column 37, lines 6 to 12, as 7 cited in my declaration. At least there. I have to 8 keep looking for others. 9 Q. Right, okay. Yeah, so column 37 of Amano. 10 Can we take a look at Amano, Exhibit 1002, where that 11 column appears? 12 You would agree that column 37 is part of 13 embodiment 7 of Amano, right? 14 A. Again, I don't know -- I'm not a lawyer, I 15 don't know the legal definition of embodiment, it is 16 in a section entitled Embodiment 7. 17 Q. Do you see in column 36 in line 53, Amano 18 reads: "In this embodiment transmission of pulse 19 wave information from sensor unit (30) to device main 20 body (10) is carried out by means of optical signals 21 as shown in Figure 44." 22 A. Yes, I see that. 23 Q. And in this instance, optical signals is 24 referring to wireless transmission, correct?	Page 233 1 Embodiment 1 of the Amano reference, which begins on 2 the previous page in column 6? 3 MS. NGUYEN: Objection, form. 4 BY THE WITNESS: 5 A. Section 1.1 is entitled -- no, sorry, 6 Section 1 is entitled Embodiment 1. 7 BY MR. SWISHER: 8 Q. Okay. 9 A. And then there are many subsections, and 10 this is in one of the subsections. 11 Q. Right. So it's in one of the subsections of 12 Embodiment 1, right? 13 A. It's in one of the subsections of the 14 section titled Embodiment 1. 15 Q. Okay. And in column 8 at line 58, we're 16 still in embodiment 1, and it refers to the device 17 shown in Figure 5, right? 18 A. Yes. 19 Q. And if we go back into figures of Amano and 20 take a look at Figure 5, we can see... 21 A. Yes. 22 Q. Okay. We can see in Figure 5 that, in this 23 instance, there is a wire connecting the finger pulse 24 sensor to the wristwatch device, right?

Page 234 1 MS. NGUYEN: Objection, form. 2 BY THE WITNESS: 3 A. There is a wire, 501, connecting 520 and the 4 watch. 5 BY MR. SWISHER: 6 Q. Okay. So the first embodiment of Amano 7 discloses a device that uses a wire to connect the 8 sensor to the device, right? 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. Figure 5 is showing a wire. 12 BY MR. SWISHER: 13 Q. Okay. And if we can go back to your 14 declaration at paragraph 75, we talked about this 15 before, but just to remind, on the same page in 16 paragraph 75, you are citing from columns 19 and 20 17 of Amano, right? 18 A. Correct. 19 Q. Okay. And we talked about earlier how those 20 columns appear in embodiment 4 of the Amano 21 reference, right? 22 A. So Amano has several sections, and the top 23 levels say Embodiment 1, Embodiment 2, Embodiment 3, 24 Embodiment 4, and so this is within a section that	Page 236 1 MR. SWISHER: I'm sorry, did I say the wrong 2 one? 3 BY MR. SWISHER: 4 Q. Referring to column 37 of Amano for that 5 quote that's in paragraph 105, right? 6 A. That's right. 7 Q. Okay. And we just agreed earlier that 8 embodiment 7 includes the material that's in 9 column 37, and that depicts the device in Figure 44, 10 which is a wireless embodiment, correct? 11 A. Figure 44 is describing a wireless 12 communication between a sensor and the watch. 13 Q. Okay. All right. So having said all that 14 background, is it fair to characterize your opinions 15 in one -- I'm sorry, paragraph 105 of your 16 declaration as applying to the combination of -- 17 A. Sorry, can you give me another moment? 18 Q. Yeah, absolutely. 19 Let's just turn back to paragraph 105, and 20 we can be on the same page. 21 A. So the description of column 36, lines 53 22 and after, is also describing a wired communication. 23 Q. You're talking about the signal sent in 24 cable 20B?
Page 235 1 says Embodiment 4. 2 Q. Okay. All right, and in the middle of 3 column 20 at line 38, there is a reference to 4 Figure 16 as being part of embodiment 4, right? 5 A. I see the reference to Figure 16. 6 Q. Okay. And if we flip back to Figure 16 in 7 Amano, you can see that, again, in Figure 16, the 8 device shown there has a wire connecting the finger 9 pulse sensor to the device, right? 10 MS. NGUYEN: Objection, form. 11 BY THE WITNESS: 12 A. There is a wire connecting the pulse sensor 13 to the watch. 14 BY MR. SWISHER: 15 Q. Okay. All right. So let's just turn back 16 to paragraph 105 of your declaration. 17 All right. So you can see the last sentence 18 on page 45, paragraph 105 quotes from Amano with a 19 section that starts "When the pulse signal is sent 20 from transmission device 400," right? 21 A. Yes. 22 Q. And that's referring to column 36 of Amano 23 as the source of that quote, right? 24 MS. NGUYEN: Objection, form.	Page 237 1 A. Sensor unit 30 and transmission device 400 2 send and receive the pulse signal by means of an 3 electrical connection via cable 20B. 4 Q. Right. Okay. So it appears that 5 embodiment 7 includes some wireless communications 6 and some wired communications, is that fair? 7 MS. NGUYEN: Objection, form. 8 BY THE WITNESS: 9 A. Figure 44 seems to have wired and wireless 10 communication, based on my reading at the moment. 11 BY MR. SWISHER: 12 Q. Okay. So then turning to paragraph 105 of 13 your declaration. 14 A. Yes. 15 Q. Are your opinions about the combination of 16 Amano and Gorman limited only to the seventh 17 embodiment of Amano? 18 MS. NGUYEN: Objection, form. 19 BY THE WITNESS: 20 A. So my opinion about combining Amano with 21 Gorman is to give Amano more details in the 22 communication method, so encoding and adding unique 23 identifiers. 24

Page 238 1 BY MR. SWISHER: 2 Q. And your opinions about -- 3 A. It could apply to wired or wireless 4 communication, as we discussed already. 5 Q. Okay. Does your paragraph 105 of your 6 declaration cite any embodiment of Amano, other than 7 its seventh embodiment? 8 MS. NGUYEN: Objection, form. 9 BY THE WITNESS: 10 A. There is one citation in paragraph 105, and 11 that's to column 37. 12 BY MR. SWISHER: 13 Q. So the only citation to Amano in 14 paragraph 105 is to the seventh embodiment of Amano, 15 correct? 16 MS. NGUYEN: Same objection. 17 BY THE WITNESS: 18 A. I'll just say it's to column 37. 19 BY MR. SWISHER: 20 Q. Okay. Are you hesitating because you are 21 not sure if column 37 is in the seventh embodiment or 22 is there any other -- 23 A. As I mentioned earlier -- 24 MS. NGUYEN: Objection, form.	Page 240 1 BY THE WITNESS: 2 A. Well, unlike paragraph 105, paragraph 106 is 3 more directed to wireless communication. 4 BY MR. SWISHER: 5 Q. Okay. So for the combination of Amano and 6 Flach, you only -- 7 A. And let me amend that by saying 8 paragraph 105 applies to wired and wireless 9 communications, but paragraph 106 is focusing more on 10 wireless communication. 11 Q. So you're saying that when you were forming 12 the opinions that are reflected in paragraphs 105 and 13 106, you were thinking about the wired and wireless 14 disclosures of Amano? 15 A. So when I wrote paragraphs 105 and 106, I 16 was considering the communication disclosures of 17 Amano. In paragraph 105 -- I'll stop there. 18 Q. Okay. So you were considering the wireless 19 communication disclosures throughout Amano, not 20 limited to specific embodiment; is that right? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. I was considering that Amano could either 24 communicate wirelessly or in a wired fashion, or both
Page 239 1 THE WITNESS: Sorry. 2 BY THE WITNESS: 3 A. As I mentioned earlier, I understand 4 embodiment to be a legal term. I'm not a lawyer. So 5 I'm going to stick with the column number. 6 BY MR. SWISHER: 7 Q. Okay. And how about paragraph 106 of your 8 declaration where you discuss the combination of 9 Amano and Flach, which portions of Amano are you 10 opining would be combined with Flach? 11 MS. NGUYEN: Objection, form. 12 BY THE WITNESS: 13 A. So my opinion in paragraph 106, again, 14 relates to the fact that Amano needs to communicate 15 between devices, and Flach provides a method to do 16 that based on assigning time slots to different 17 devices so that they can share the communication 18 channel. 19 BY MR. SWISHER: 20 Q. Okay. So whether or not Amano discloses a 21 wired or wireless device didn't factor in to the 22 opinions that you offered in paragraph 106? 23 MS. NGUYEN: Objection, form. 24	Page 241 1 simultaneously as we discussed. 2 BY MR. SWISHER: 3 Q. Okay. In your opinion, what is -- strike 4 that. 5 In your opinion, what aspect of Amano would 6 have led a POSITA to consider combining its devices 7 with the teachings of Gorman? 8 MS. NGUYEN: Objection, form. 9 BY THE WITNESS: 10 A. It's the same discussion we had before. To 11 allow multiple devices to talk to each other, the 12 idea -- first of all, encoding, it's common to any 13 kind of communication, and then specifically putting 14 an identification message as part of your message is 15 -- has been demonstrated to be a successful technique 16 when multiple devices are communicating. 17 BY MR. SWISHER: 18 Q. Okay. Does what you just described have any 19 relationship to the disclosures in Amano? 20 MS. NGUYEN: Objection, form. 21 BY THE WITNESS: 22 A. Amano discloses communication, but does not 23 talk specifically about the protocols, and Gorman 24 does.

Page 242 1 BY MR. SWISHER: 2 Q. So -- 3 A. Both relate to physiological sensors, and 4 Gorman provides more specifics on how successful 5 communication might be achieved. 6 Q. Okay. So in your mind, was there something 7 about Amano that led you to think the way it 8 disclosed communication was unsuccessful in some 9 manner? 10 A. As we discussed before -- excuse me. 11 Amano does not give the details of how that 12 communication occurs, and so a reader, a POSITA who 13 is reading it, would be motivated to fill in the 14 details of that communication, which Gorman does. 15 Q. Okay. So is it your opinion that a POSITA 16 would have recognized that Amano could be combined 17 with Gorman or Flach? 18 A. Is it my opinion that a POSITA would 19 recognize that Amano could be combined with those 20 other references. Yes. 21 Q. Okay. And do you have any opinion in your 22 declaration explaining why a POSITA would have 23 combined Amano with the teachings of Gorman or Flach? 24 MS. NGUYEN: Objection, asked and answered.	Page 244 1 BY THE WITNESS: 2 A. Amano already appears to disclose encoding 3 information with unique identifiers. 4 BY MR. SWISHER: 5 Q. Okay. 6 A. But again, details are missing, and Gorman 7 describes more fully. 8 Q. All right, Dr. Lynch, I'm going to hand you 9 what's been marked as Exhibit 1004. This is the 10 Lubell reference. 11 All right. Dr. Lynch, in conducting your 12 analysis as reflected in your declaration, did you 13 consider whether Lubell discloses a wired or wireless 14 health fitness monitor? 15 A. I considered the entire thing, so... 16 Q. Yeah, so I'm asking specifically did you 17 consider wired and wireless aspects? 18 A. Yes. 19 Q. Do you know whether Lubell discloses a wired 20 or a wireless health fitness monitor? 21 A. So again, I don't like that terminology. I 22 think you're asking is there any wireless 23 communication. If that's not what you're asking, can 24 you please clarify?
Page 243 1 BY THE WITNESS: 2 A. Yes. 3 BY MR. SWISHER: 4 Q. Okay. And what are those opinions? 5 A. So paragraph 105, for example, Amano and 6 Gorman, says that combining Amano with the more 7 details provided in Gorman would allow you to improve 8 the communication between the sensor and the device 9 to fill in the details that Amano does not provide. 10 Q. Why would a POSITA have been motivated to 11 look for additional details for how to implement the 12 communication methods that were already disclosed in 13 Amano? 14 MS. NGUYEN: Objection, form. 15 BY THE WITNESS: 16 A. Communication methods were not disclosed in 17 Amano to the depth that Gorman does. 18 BY MR. SWISHER: 19 Q. Okay. But you agree, as you state in 20 paragraph 105, that Amano already appears to disclose 21 communication using encoded messages and unique 22 identifiers, right? 23 MS. NGUYEN: Objection, form. 24	Page 245 1 Q. Well, you testified that you considered 2 wireless and wired aspects of Lubell. So I'm just 3 asking whether you know whether Lubell discloses one 4 or the other of those types of approaches for 5 communications? 6 MS. NGUYEN: Objection, form. 7 BY MR. SWISHER: 8 Q. Like does it disclose wired, does it 9 disclose wireless, or does it disclose both? 10 MS. NGUYEN: Same objection. 11 BY THE WITNESS: 12 A. So I did consider it. At the moment, I 13 would have to look up the details. 14 BY MR. SWISHER: 15 Q. So sitting here right now, you can't recall 16 whether Lubell discloses a wired or wireless health 17 fitness monitor? 18 A. Give me a moment to refresh myself. 19 Q. Okay. 20 A. It's been a long day. 21 MS. NGUYEN: Counsel, can we take a break 22 soon? 23 MR. SWISHER: We haven't been going very 24 long.

Page 246 1 THE VIDEOGRAPHER: 27 minutes. 2 MR. SWISHER: Can we go an hour so, so we 3 can get out of here quicker? 4 MS. NGUYEN: Maybe can we take just a short 5 five-minute break after... 6 MR. SWISHER: Okay. 7 BY THE WITNESS: 8 A. So I understand Lubell disclosed both wired 9 and wireless communication. 10 BY MR. SWISHER: 11 Q. Okay. Can you point me to the disclosures 12 of wireless communication? 13 A. I'm sorry, I don't see wireless 14 communication explicitly. 15 Q. Okay. And maybe I can help a little bit. 16 So take a look at Figure 1. 17 A. Yes. 18 Q. Can you see that there is a little wire 19 connecting the device that's strapped around the 20 waist to the sensor that's strapped around the chest? 21 A. Yes, in this example. 22 Q. Okay. And if we take a look at column 5 of 23 Exhibit 1004, I'll direct you to line 40, which 24 begins: "As shown in Figure 2 and 3, a front panel	Page 248 1 like. 2 Q. Sitting here right now, do you have any 3 reason to believe that Lubell discloses a wireless 4 device? 5 A. Without having read through the whole thing 6 just now, I'm not aware of a wireless communication 7 disclosed in here. 8 Q. Okay. And is that why, if we take a look at 9 paragraph 96 of your declaration, this is 10 Exhibit 1009, in the last paragraph of -- last 11 sentence, I'm sorry, of paragraph 96, you opine that 12 if a POSITA were to implement Lubell in a wireless 13 manner, they would be highly motivated to use 14 Gorman's communication to identify a sensor sending a 15 signal. 16 Do you see that? 17 A. I do see that. 18 Q. Okay. So is that the reason why you 19 referred to, you know, if a POSITA were to implement 20 Lubell wirelessly, because Lubell does not itself 21 disclose a wireless device? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. So this sentence in paragraph 96 is -- is
Page 247 1 of the device," et cetera, et cetera. 2 So it's referring to the device shown in 3 Figures 2 and 3, right? And if you go down a few 4 further lines, starting at line 47 of column 5, 5 Lubell reads: "A recessed socket (23) is provided on 6 a back panel of the device (11) to receive a jack 7 from the heartbeat sensor (12)." 8 Do you see that? 9 A. Yes. 10 Q. Okay. So do you understand this portion 11 Lubell to be referring to a wired connection between 12 the heartbeat sensor and the device body? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. I see 11 referred to as a heart rate monitor 16 and as a device. 17 BY MR. SWISHER: 18 Q. Uh-huh. 19 A. So there appears to be a wire connecting, I 20 believe, 11, which is either a heart rate monitor or 21 device or both to the chest strap or -- there is a 22 wire there. 23 Q. Okay. 24 A. Connecting two pair of electrodes, it looks	Page 249 1 saying that, if Lubell was implemented in a wireless 2 manner, and it's not citing anywhere in the -- in the 3 patent itself. 4 Q. Mm-hmm. 5 A. Where it says that. 6 Q. Right. So why did you say -- what was the 7 purpose of your opinion here in saying that if Lubell 8 was implemented wirelessly, that's why you would be 9 motivated to combine with Gorman's communication 10 techniques? 11 MS. NGUYEN: Objection, form. 12 BY THE WITNESS: 13 A. It's just saying that a POSITA could 14 implement it in a wired manner or a wireless manner, 15 and if it were done in a wireless manner, they would 16 be motivated to use Gorman's communication technique. 17 BY MR. SWISHER: 18 Q. Okay. So following from that statement 19 then, you mean that if they were to implement Lubell 20 in a wired manner, there would be no reason to 21 combine with Gorman's teachings, right? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. I disagree with that statement, for all the

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Page 250 1 reasons that we talked about earlier. 2 BY MR. SWISHER: 3 Q. So then I guess I just don't understand your 4 previous statement. 5 You said a POSITA could implement in a wired 6 or wireless manner, and if it were done in a wireless 7 manner, they would be motivated to use Gorman's 8 communication techniques. 9 Do you remember saying that? 10 A. Yes, I was reading my declaration. 11 Q. So is that reflective of your opinion, or is 12 your opinion something different? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. So two things can be true at once. 16 So one thing that's true is if they were 17 implementing this in a wireless manner, they would be 18 motivated to use Gorman's technique. 19 If they implemented it in a wired manner, 20 they might also be motivated to use Gorman's 21 technique. 22 BY MR. SWISHER: 23 Q. Okay. 24 A. Go ahead. Never mind.	Page 252 1 So Gorman is both encoding as well as 2 providing the sender ID with the message, and that 3 works for wired or wireless communication. 4 BY MR. SWISHER: 5 Q. Okay. And is there anything in Lubell that 6 led you to think that there would be a reason for a 7 POSITA to want to distinguish the sensor sending 8 information to the device? 9 I guess what I'm getting at, you mentioned 10 that there is a sender ID and encoding, and the 11 sender ID helps you distinguish which sensor is 12 sending information to a device, right? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. The sender ID helps to distinguish which 16 devices are talking. 17 BY MR. SWISHER: 18 Q. Yeah. So I'm just trying to understand, 19 what was in Lubell, for the wired portion of it, that 20 led you to think there would be a reason to need to 21 distinguish the sensor if you're using the wired 22 implementation for Lubell? 23 MS. NGUYEN: Objection, form. 24
Page 251 1 Q. I was just going to say, you already agreed 2 that Lubell is implemented in a wireless manner, 3 right? 4 MS. NGUYEN: Objection, form. 5 BY THE WITNESS: 6 A. I said that sitting here now, without 7 reading the whole disclosure again, I can't point to 8 a place where there is a wireless communication 9 between a heart rate sensor and a heart rate monitor. 10 MS. NGUYEN: Counsel, can we take a break? 11 MR. SWISHER: I'd like to finish this line 12 of questioning, but I'll be done in a few minutes. 13 BY MR. SWISHER: 14 Q. Okay. So for the implementation of Lubell 15 in a wireless -- sorry, strike that. 16 For the implementation of Lubell in a wired 17 manner, in your opinion, what would have motivated a 18 POSITA to combine the wired device of Lubell with the 19 teachings of Gorman? 20 MS. NGUYEN: Objection, form. 21 BY THE WITNESS: 22 A. So the same discussion that we had before, 23 that it was a known successful method for having 24 multiple devices talk to each other.	Page 253 1 BY THE WITNESS: 2 A. So for example, if there were more than one 3 sensor. 4 BY MR. SWISHER: 5 Q. Okay. 6 A. So perhaps a bicycle speed sensor and a 7 heart rate sensor. 8 Q. Okay. And are those types of sensors part 9 of the device in Lubell? 10 A. Yes. 11 Q. Is there anything else, any other reason 12 that a POSITA would want to combine the teachings of 13 the wired device in Lubell with the techniques taught 14 in Gorman? 15 A. I just gave a few reasons. I don't know of 16 others at the moment. 17 Q. Okay. And for the next combination of 18 Lubell and Flach in paragraphs 99 through 104 of your 19 declaration, in rendering the opinions in these 20 paragraphs, did you consider whether or not Lubell 21 discloses a wired or wireless device? 22 A. Yes. 23 Q. So what do you mean you considered it? I'm 24 just trying to understand.

Page 254 1 A. You asked me the question. 2 Q. You just testified a moment ago that you 3 weren't aware of any wireless device disclosed in 4 Lubell, correct? 5 MS. NGUYEN: Objection, form. 6 MR. ARJOMAND: Counsel, we've asked for a 7 break three times now. 8 MR. SWISHER: Is it you guys need the break, 9 or is it the witness who needs it? 10 MS. NGUYEN: Probably everybody. 11 MR. SWISHER: All right, let's take a quick 12 break. 13 MS. NGUYEN: Thank you. 14 THE VIDEOGRAPHER: Off the record at 5:08. 15 (A short break was taken.) 16 THE VIDEOGRAPHER: Back on the record at 17 5:17. 18 BY MR. SWISHER: 19 Q. All right. All right, Dr. Lynch, apologies 20 if I already asked this question before, but I don't 21 think I did, but I want to direct you again to 22 paragraph 96 of your declaration, and I want to ask 23 you again about the last sentence where you talk 24 about if a POSITA were to implement Lubell in a	Page 256 1 itself that would have motivated a POSITA to 2 implement it in a wireless manner? 3 MS. NGUYEN: Objection, form. 4 BY THE WITNESS: 5 A. Perhaps. I mean, Lubell talks about 6 instrumenting people who are running freely, and so 7 you could imagine communicating wirelessly. 8 BY MR. SWISHER: 9 Q. Okay. Do you have -- 10 A. But there may be other things. I haven't 11 read it with an eye towards that. 12 I would say the primary thing is that, in 13 the 20 years intervening, wireless technology had 14 become popular, easy, cheap to use, which a POSITA 15 would know. 16 Q. Okay. All right, sticking with Lubell, I 17 want to switch gears a bit more. 18 Would you agree with me, Dr. Lynch, that one 19 of the objects of the invention of Lubell is 20 determining a user's maximal oxygen uptake level, or 21 VO2 max? 22 A. So the general purpose of Lubell is to 23 determine fitness parameters appropriate to a user, 24 parameter or parameters, and then use that to come up
Page 255 1 wireless manner, okay? 2 A. Yes. 3 Q. Now did you identify any aspects of Lubell 4 that, in your opinion, would have led a POSITA to 5 consider implementing it in a wireless manner? 6 A. So Lubell is an old patent from a time when 7 wireless communication was not so common as it was 8 for some of the later art from 2003 in particular, so 9 that would have been highly motivating for a POSITA 10 to say, how would I use the teachings of Lubell but 11 with newer wireless technology. 12 Q. Okay. So you're saying, you know, in 2003, 13 based on what was common in the art at that point, 14 people were thinking about implementing devices using 15 wireless communications? 16 MS. NGUYEN: Objection, form. 17 BY THE WITNESS: 18 A. So in 2003, wireless communication was 19 common in a way that, in 1983, it was not. And so 20 the teachings of Lubell would be natural to convert 21 to wireless technologies, which a POSITA would be 22 familiar with. 23 BY MR. SWISHER: 24 Q. Okay. So is there anything within Lubell	Page 257 1 with an exercise program that is customized for that 2 user. 3 Q. Okay. And the fitness parameter that Lubell 4 does determine is VO2 max, correct? 5 A. VO2 max is talked about heavily in the 6 disclosure. 7 Q. Right. So the protocol that Lubell 8 discloses is for -- strike that. 9 The protocol that Lubell discloses for 10 determining a fitness parameter is one that 11 determines VO2 max, right? 12 A. So I believe Lubell defines it as an example 13 or an exemplary or preferred training exercise. 14 Q. Right. So for example -- oh, go ahead. 15 A. I have to find the passage. 16 Q. Yep. So if we turn to column 3 of 17 Exhibit 1004, Lubell -- actually, strike that. Let's 18 take a look first at column 2 real quick. 19 So column 2 at line 45 through 51 reads 20 that: "Accordingly, it is an object of this 21 invention to provide a heart rate monitor and/or 22 fitness monitor device which avoids the drawbacks of 23 the previously proposed devices and automatically 24 calculates an appropriate fitness parameter, e.g.,

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Page 258 1 maximal oxygen uptake level, or VO2 max, by 2 automatically pacing the subject through a 3 straightforward training protocol." Right? 4 A. That is lines 45 to 51 of column 2. 5 Q. Yeah. 6 A. What you just read. 7 Q. So that's one of the objects of the 8 invention of Lubell, right? 9 A. It's defined that way, yes. 10 Q. Okay. And then the portion of Lubell that 11 discusses this calculation of a fitness parameter is 12 discussing calculating VO2 max, right? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. I'm sorry, are you directing me to a 16 particular place or -- I'm not sure -- 17 BY MR. SWISHER: 18 Q. Yeah, we can, I was just asking generally if 19 that's your understanding of Lubell. 20 A. So could you ask the question one more time? 21 I was reading still. 22 Q. Yeah, yeah. 23 Is it your understanding that the fitness 24 parameter that Lubell discloses a protocol for is the	Page 260 1 the VO2 max relies on the so-called Van der Walt 2 relationship, right? 3 A. There are two formulas given, but it's -- 4 they're both called Van der Walt relationship. 5 Q. Okay. Are you referring to the two formulas 6 on the top half of column 4? 7 A. That's correct. 8 Q. Okay, right. So I think we are on the same 9 page. 10 So both of those are related to the Van der 11 Walt relationship, right? 12 MS. NGUYEN: Objection, form. 13 BY THE WITNESS: 14 A. Yes. 15 BY MR. SWISHER: 16 Q. Okay. Now in order for the Van der Walt 17 relationship to be used to determine VO2 max, a 18 person has to attain their maximum heart rate, 19 correct? 20 MS. NGUYEN: Objection, form. 21 BY THE WITNESS: 22 A. No. 23 BY MR. SWISHER: 24 Q. Okay. Let me ask it this way: So Lubell
Page 259 1 calculation of VO2 max? 2 MS. NGUYEN: Same objection. 3 BY THE WITNESS: 4 A. He discloses -- I'm sorry. 5 Lubell discloses a training protocol, one 6 object of which is derive VO2 max for that user. 7 BY MR. SWISHER: 8 Q. Right, right. All I'm asking is the 9 training protocol that Lubell discloses, the 10 parameter that it's calculating is VO2 max, right? 11 That's the parameter? 12 MS. NGUYEN: Objection, form. 13 BY THE WITNESS: 14 A. The one that's discussed in greatest detail 15 is that. 16 BY MR. SWISHER: 17 Q. Yeah. So for example, if we take a look at 18 column 3, starting with line 19, Lubell says: "The 19 above-mentioned fitness parameters include at least 20 the maximal oxygen uptake VO2 max as a fitness index, 21 the determination of which is carried out as 22 follows," and then there is a long section, right? 23 A. That's correct. 24 Q. Okay. Now the way that Lubell determines	Page 261 1 discloses a protocol that uses the Van der Walt 2 relationship in order to determine a person's VO2 3 max, right? 4 A. Correct. 5 Q. Okay. And in that protocol, a person is 6 directed to run at certain miles per hour, correct? 7 A. Correct. 8 Q. Okay. And the test in Lubell requires that 9 the person exercise until they reach their maximal 10 heart rate or reach the point of exhaustion, right? 11 MS. NGUYEN: Objection, form. 12 BY THE WITNESS: 13 A. Can you point me to that column? 14 BY MR. SWISHER: 15 Q. Yes. I'm looking at column 3 at line 44. 16 A. Column 3, line 44 doesn't say that. 17 Q. Do you mean it doesn't use those specific 18 words or it doesn't explain that concept? 19 A. It doesn't say what you just said. 20 Q. Okay. 21 A. It's not even the words, it's just an 22 unrelated topic. 23 Q. Am I reading from the wrong paragraph? 24 Wrong section.

Page 262 1 A. Oh, I apologize. I might be reading from 2 the wrong -- can you tell me one more time? 3 Q. Yeah, column 3, starting at line 44. 4 A. Thank you. My mistake. 5 Q. That's okay. 6 A. So the test continues until the subject 7 reaches a point of exhaustion or reaches a maximal 8 heart rate, according to column 3, line 44 to 47 or 9 48. 10 Q. Okay. And the reason why the protocol works 11 that way is because the equation that's used to 12 calculate a person's VO2 max, a generic version of 13 which is shown in line 53 of column 3, has an input 14 that uses the letter T, right? Which stands for the 15 time that it takes for the person from beginning of 16 the test until they reach their maximum heart rate, 17 right? 18 MS. NGUYEN: Objection, form. 19 BY THE WITNESS: 20 A. According to this, until they reach their 21 maximum heart rate or when the subject reaches the 22 point of exhaustion, whichever occurs first. 23 BY MR. SWISHER: 24 Q. Yes. So the test then records the time that	Page 264 1 equation with two different sets of coefficients, A 2 and B, right? 3 A. That's correct. 4 Q. Okay. And so the first version, Lubell says 5 that if the total elapsed time, T, is less than 7, 6 then you use an equation that has some specific 7 coefficients in it, right? 8 A. Correct. 9 Q. And on the other hand, if the time, T, falls 10 between 7 and 18 minutes, then you use a different 11 equation that has different A and B coefficients, 12 right? 13 A. Correct. 14 Q. Okay. And here's where I'm going with this: 15 I want to take a look at paragraph 59 -- I'm sorry. 16 The section in your report starting at paragraph 59, 17 which is on page 25 of Exhibit 1009. 18 Just let me know when you're there. 19 A. I'm there. 20 Q. Okay. All right, and so in paragraph 59, 21 there is a heading that says Obvious Modification 22 Number 2, right? 23 A. Yes. 24 Q. Okay. And the fourth line or so of
Page 263 1 it took for that person to either get to their 2 maximum heart rate or reach the point of exhaustion 3 and it plugs that time in to the equation to 4 calculate the person's VO2 max, right? 5 A. That's correct. 6 Q. Okay. And I referenced at column 3, line 53 7 or so, has a generic version of the equation because 8 Lubell explains that there are these experimentally 9 derived coefficients that it terms A and B that are 10 part of this equation, right? 11 MS. NGUYEN: Objection, form. 12 BY THE WITNESS: 13 A. So this equation has two coefficients, A and 14 B, which are experimentally derived and different for 15 different sexes, genders. 16 BY MR. SWISHER: 17 Q. Are they also different based on what the -- 18 what range the person's time, T, falls into? 19 MS. NGUYEN: Objection, form. 20 BY THE WITNESS: 21 A. Yes. 22 BY MR. SWISHER: 23 Q. Okay. So for example, the top half of 24 column 4 provides two examples of the Van der Walt	Page 265 1 paragraph 59 says that you are going to talk about 2 here in this section whether it would have obvious to 3 change the protocol of Lubell to be based on a user's 4 physical fitness, right? 5 A. Yes. 6 Q. Okay. Now we can agree that the protocol we 7 just discussed in columns 3 and 4 of Lubell is not 8 based on a specific user's physical fitness, right? 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. So column 3 describes preferred fitness 12 index submaximal exercise test protocol, and then 13 describes how that would work. 14 BY MR. SWISHER: 15 Q. Right. And that protocol is not based on an 16 individual user's physical fitness, correct? 17 A. That's correct. 18 Q. And so in paragraph 59 of your declaration, 19 you're starting to discuss the portion of your 20 opinions where you're saying why it would have been 21 obvious, allegedly, to change the protocol of Lubell 22 so that it was based on a user's physical fitness, 23 right? 24 A. That's right.

Page 266 1 Q. Okay. All right. And so turning to the 2 next paragraph of your declaration, paragraph 60, in 3 the third line, you opine: "However, Lubell also 4 discloses that another suitable submaximal exercise 5 test protocol could be used to estimate fitness." 6 Do you see that? 7 A. Yes. 8 Q. Okay. And you're citing to column 5 at 9 lines 12 to 13 of Lubell? 10 A. That's right. 11 Q. Okay. So let's take a look at that part of 12 Lubell in column 5. 13 Now when you were forming your opinions, did 14 you review the entire paragraph in column 5 that 15 includes lines 12 and 13? 16 A. Yes. 17 Q. Okay. Now is there anything in this 18 paragraph in column 5 of Lubell, which runs from 19 lines 6 through approximately 17, that refers to 20 another protocol as you termed it? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. It refers to a suitable submaximal exercise 24 test protocol could be used.	Page 268 1 BY THE WITNESS: 2 A. I'm not referring to any particular 3 scenario. 4 BY MR. SWISHER: 5 Q. Okay. Now let's start at the beginning of 6 this paragraph. I just want to ask you a few 7 questions about what it says here. 8 So starting at line 6, Lubell reads: "While 9 the description given below is an exemplary 10 embodiment intended for use with a human subject 11 using running as the preferred training exercise, it 12 is to be understood that a device embodying this 13 invention could be suitably adapted for use when 14 cycling, swimming, or some other exercise is the 15 preferred training exercise. In such case, a 16 suitable submaximal exercise test protocol could be 17 used in a controlled exercise environment." 18 Now did you consider whether Lubell was 19 referring to a suitable protocol for use with a 20 different type of exercise, like cycling or swimming? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. Those are examples, but not the only 24 possibilities.
Page 267 1 BY MR. SWISHER: 2 Q. Okay. And in your opinion, that's referring 3 to a different protocol than the Van der Walt 4 relationship based protocol that's described in 5 columns 3 and 4? 6 MS. NGUYEN: Objection, form. 7 BY THE WITNESS: 8 A. It is referring to a different kind of 9 protocol than columns 3 and 4. 10 BY MR. SWISHER: 11 Q. What makes you think that it's referring to 12 something that's not using the Van der Walt 13 relationship? 14 A. I -- so I didn't say that. The protocol 15 itself is pacing the subject at 4 miles per hour, 16 then 6 miles per hour, and 8 miles per hour, et 17 cetera. So that's the protocol. 18 And so what this sentence is saying is that 19 a different protocol could be used. 20 Q. Okay. And what do you mean by -- in what 21 context are you referring to a different protocol 22 being used? Like do you mean a different type of 23 running protocol? 24 MS. NGUYEN: Objection, form.	Page 269 1 BY MR. SWISHER: 2 Q. Okay. 3 A. It could be the same type of exercise, it 4 could be a different type of exercise. 5 Q. Okay. So even though the sentence preceding 6 "a suitable submaximal exercise test protocol could 7 be used" comes after the sentence that talks about 8 cycling and swimming, you think it could be referring 9 to something other than just a different form of 10 exercise? 11 MS. NGUYEN: Objection, form. 12 BY THE WITNESS: 13 A. I think you have to read the entire 14 specification, not just the sentence before, and in 15 column 3, it's already referred to in a preferred 16 fitness index submaximal exercise test protocol. 17 So it's not saying in the only fitness index 18 submaximal exercise test protocol for running. This 19 is one example. It's a preferred example. 20 So running, swimming, cycling, or some other 21 exercise, there can be a different suitable 22 submaximal exercise test protocol. 23 Q. Would this alternative protocol also have to 24 be able to determine the person's VO2 max, in your

Page 270 1 view? 2 MS. NGUYEN: Objection, form. 3 BY THE WITNESS: 4 A. No. 5 BY MR. SWISHER: 6 Q. Okay. So in your opinion, paragraph -- from 7 lines 6 through 17 in column 5 of Lubell is saying 8 that you could modify the device of Lubell to 9 determine some other type of fitness parameter? 10 MS. NGUYEN: Objection, form. 11 BY THE WITNESS: 12 A. So column 3, line 19, says: "The 13 above-mentioned fitness parameters include at least 14 the maximal oxygen uptake VO2 max as a fitness 15 index." 16 So it's already referred to the possibility 17 of other fitness parameters by the time we get to 18 column 5. 19 Q. Okay. And so what other types of fitness 20 parameters are you referring to? 21 A. I'm not referring to any specifically, I'm 22 reading column 3, line 19. 23 Q. Mm-hmm. 24 A. Which indicates that there are other fitness	Page 272 1 BY MR. SWISHER: 2 Q. Okay. Does the Ceci reference disclose a 3 protocol for determining VO2 max? 4 A. Ceci or Ceci? 5 Q. I was going with the Italian, but -- Ceci, I 6 think, but either one. 7 A. I've been saying Ceci. I thought it was 8 Spanish. 9 Q. Hopefully we're not offending anyone. Do 10 the best we can. 11 A. I will do whatever you want. 12 Q. Let's go with Ceci. It sounds cooler. 13 A. Okay, could you ask the question again? 14 Q. Yeah. 15 Does Ceci disclose a protocol for 16 determining VO2 max? 17 A. No. 18 Q. So what would the purpose be for a POSITA to 19 combine the device of Lubell with the protocol of 20 Ceci that you just discussed doesn't determine VO2 21 max? 22 A. Well, Lubell suggests that other test 23 protocols might be suitable in other circumstances, 24 so Ceci is such a protocol.
Page 271 1 parameters possible. 2 Q. Okay. So I'm just trying to understand the 3 basis of your opinions in paragraph 60 of your 4 declaration, so maybe we can turn back to that for a 5 moment, if you don't mind. 6 So the sentence we've been talking about 7 where you cite to column 5, lines 12 through 13, you 8 say: "Lubell also discloses that another suitable 9 submaximal exercise test protocol could be used to 10 estimate fitness." Right? 11 A. That's right. 12 Q. Okay. And then in the next sentence you 13 say: "This provides motivation for a POSITA to 14 consider what other test protocols could be used." 15 Is that right? 16 A. That's correct. 17 Q. Okay. Now do you mean this provides a 18 POSITA with motivation to consider other test 19 protocols for measuring different fitness parameters? 20 MS. NGUYEN: Objection, form. 21 BY THE WITNESS: 22 A. Could be other test protocols to determine 23 the VO2 max fitness parameters or other parameters, 24 as indicated in column 3.	Page 273 1 Q. Suitable for determining what exactly? 2 A. So Ceci is not determining VO2 max, but it 3 is measuring heart rates. 4 So Ceci is using ratings of perceived 5 exertion and mapping those to heart rates under 6 different exercises. 7 Q. Okay. Now Lubell also -- strike that. 8 The device in Lubell also measures heart 9 rates, right? 10 A. Yes. 11 Q. So why would a POSITA look to combine Lubell 12 with Ceci when Lubell can already measure heart 13 rates? 14 A. So Lubell provides the hardware to be able 15 to implement other test protocols, so as you 16 mentioned, Lubell provides a heart rate sensor. 17 Q. Okay. Well, let me ask you this: If you 18 implemented the Ceci RPE protocol in the Lubell 19 device, would Lubell be able to determine a person's 20 VO2 max? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. That's a possibility. But it's not the only 24 possibility.

Page 274 1 BY MR. SWISHER: 2 Q. Okay. How would Lubell be able to determine 3 a person's VO2 max using the Ceci RPE protocol 4 instead of the protocol that's disclosed in Lubell? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. So Ceci discloses asking users to operate at 8 different levels of perceived exertion, and there are 9 methods known in the art for taking heartbeat -- 10 heart rates and exercise intensity and determining 11 VO2 max. So that's an option, but it's not the only 12 option, as Lubell allows for other sorts of fitness 13 parameters besides VO2 max. 14 BY MR. SWISHER: 15 Q. Okay. Does Lubell discuss any of these 16 methods known in the art for taking heart rates and 17 exercise intensity to determine VO2 max? 18 A. Lubell provides citations to -- well, at 19 least one citation to work that does that. 20 Q. Okay. Which citation are you referring to? 21 A. In the references cited, other publications. 22 Q. Any specific one? 23 A. Aastrand, November 1973. 24 So that's one example, but again, VO2 max	Page 276 1 mention any others? 2 MS. NGUYEN: Objection, form. 3 BY THE WITNESS: 4 A. I can't answer that. I'd have to scan, read 5 the entire thing. As I sit here, I am not aware. 6 MS. NGUYEN: Counsel, can we take a break? 7 MR. SWISHER: How long have we been going? 8 THE VIDEOGRAPHER: 31 minutes. 9 MR. SWISHER: I mean, the sooner we finish, 10 we can get out of here. I think we can wrap up in 11 less than 30 minutes if we keep going. 12 MS. NGUYEN: Okay. Do you need take a 13 break, Dr. Lynch? 14 THE WITNESS: I think I'm okay. 15 MR. SWISHER: Okay. 16 THE WITNESS: Actually, I do have to use the 17 restroom. 18 MR. SWISHER: Oh, okay. In that case, sure. 19 MS. NGUYEN: I think it makes sense to take 20 a break. 21 THE VIDEOGRAPHER: Off the record at 5:49. 22 (A short break was taken.) 23 THE VIDEOGRAPHER: Back on the record at 24 5:55.
Page 275 1 does not have to be a fitness parameter. 2 Q. Okay. And the other fitness parameter you 3 mentioned, other than the VO2 max, is heart rate 4 levels? 5 A. Heart rates. 6 Q. Heart rates? 7 A. Yes. 8 Q. Any other fitness parameters come to mind 9 right now, other than VO2 max and heart rates? 10 A. As we talked about before, there are plenty 11 of ways you can measure fitness, but I don't need to 12 introduce any others at this point. 13 Q. Okay. Are any of those other ones mentioned 14 in Lubell? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. They are referred to when talking about 18 other kinds of fitness parameters. One or more 19 fitness parameters calculated on the basis of the 20 entered selected data and detected heartbeats of the 21 subject. So there is an implication there that other 22 fitness parameters could be calculated in column 3. 23 BY MR. SWISHER: 24 Q. Okay. But Lubell doesn't specifically	Page 277 1 BY MR. SWISHER: 2 Q. All right. Dr. Lynch, I just have a few 3 more questions about the combination of Lubell and 4 Ceci. 5 Now if you took the device disclosed in 6 Lubell and plugged into it a protocol based on the 7 RPE scale that's discussed in Ceci, would Lubell 8 still be able to determine a person's VO2 max? 9 MS. NGUYEN: Objection, form. 10 BY THE WITNESS: 11 A. By using different methods, it's possible, 12 but it's not necessary. 13 BY MR. SWISHER: 14 Q. So you mean a different method other than 15 the Van der Walt relationship would have to be used 16 in that scenario? 17 A. That's correct. 18 Q. Okay. 19 A. As far as I know. 20 Q. Do you know what types of equations or 21 relationships would have to be used in replacement of 22 the Van der Walt relationship in the scenario where 23 Ceci's RPE protocol was used? 24 MS. NGUYEN: Objection, form.

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Page 278 1 BY THE WITNESS: 2 A. Sitting here, I can't say. 3 BY MR. SWISHER: 4 Q. All right, just quickly turning back to the 5 paragraph at the beginning of column 5 that we have 6 referred to a few times now, column 5 of Lubell, that 7 is, from line 6 through 17 or so. 8 In your -- in forming your opinions, did you 9 consider the possibility that, when Lubell refers to 10 a suitable submaximal exercise test protocol could be 11 used, that it was referring to protocols in use with 12 types of exercise other than running? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. In that same paragraph, Lubell talks about 16 non-human subjects, so I believe it's to be 17 interpreted broadly in terms of the type of exercise 18 that the suitable submaximal exercise test protocol 19 is doing. 20 BY MR. SWISHER: 21 Q. Do you think an exercise protocol that 22 relied on self-regulation could be used with 23 non-human subjects? 24 MS. NGUYEN: Objection, form.	Page 280 1 So what Lubell is getting at here is that if 2 you know a subject's resting heart rate and their 3 maximal heart rate, then you can calculate the heart 4 rate during exercise that would correspond to a 5 certain percentage of VO2 max, right? 6 Do you follow me so far? 7 MS. NGUYEN: Objection, form. 8 BY THE WITNESS: 9 A. This formula allows you to convert between 10 VO2 max, percent VO2 max and the heart rates. 11 BY MR. SWISHER: 12 Q. So for example, if you wanted -- 13 A. Based on the information that you just 14 mentioned. 15 Q. Yeah. So just as an example, if you wanted 16 to know what exercising heart rate for a person 17 corresponded to 50 percent of VO2 max, you could plug 18 in 50, the person's resting heart rate, and the 19 person's maximum heart rate, and you would be able to 20 calculate what that exercising heart rate would be, 21 right? That calculates -- I'm sorry, that correlates 22 to 50 percent VO2 max? 23 MS. NGUYEN: Objection, form. 24 BY THE WITNESS:
Page 279 1 2 BY THE WITNESS: 3 A. I don't know. 4 BY MR. SWISHER: 5 Q. Do you know if Ceci's RPE protocol could be 6 used with racehorses or dogs? 7 A. Again, I suppose you could train a dog to 8 run at different -- but this is not something I've 9 formed an opinion on. 10 Q. Okay. All right. Dr. Lynch, in column 4 of 11 Lubell, I want to ask you some questions about the 12 second lower portion of that column. 13 Now you see around line 50 where Lubell 14 discloses another equation that can be used to 15 calculate heart rates that correspond to a specific 16 percentage of VO2 max? 17 Do you see that equation. 18 MS. NGUYEN: Objection, form. 19 BY THE WITNESS: 20 A. I see the equation in column 4, 21 approximately line 50. 22 BY MR. SWISHER: 23 Q. And you agree that -- I just want to ask you 24 a few questions about this equation, all right?	Page 281 1 A. Yes. 2 BY MR. SWISHER: 3 Q. Okay. All right, just quickly, I wanted to 4 ask you about the opinions in paragraph 92 of your 5 declaration, Exhibit 1009. 6 In this section, you're talking about the 7 combination between Lubell and Ceci, right? 8 A. Yes. 9 Q. Okay. Now the last sentence of 10 paragraph 92, which then spills over on to the next 11 page reads: "A POSITA would thus be motivated to use 12 the heart rates measured at different RPE levels as 13 described in Ceci as the basis for the heart rate 14 zones in Lubell, heart rates that correlate to less 15 than 60 percent, 60 to 80 percent, and greater than 16 80 percent VO2 max." Right? 17 A. That's correct. 18 Q. Okay. So what I'm trying to understand is 19 why -- in your opinion, why would a POSITA want to 20 change the way that Lubell calculates a zone based on 21 VO2 max to the way that Ceci calculates a zone based 22 on heart rates? 23 MS. NGUYEN: Objection, form. 24 BY THE WITNESS:

Page 282 1 A. So Lubell explicitly teaches that other 2 exercise protocols are possible, other fitness 3 parameters are possible, so that would have motivated 4 a POSITA to look for such protocols and fitness 5 parameters. 6 BY MR. SWISHER: 7 Q. Okay. But why would a POSITA want to change 8 the protocol that was used in Lubell? 9 A. There could be many reasons, but... 10 Q. Any reasons, in your opinion, that you 11 discuss in your declaration for making that change to 12 Ceci's protocol? 13 MS. NGUYEN: Objection, form. 14 BY THE WITNESS: 15 A. So in paragraph 92, for example, this is -- 16 a POSITA would have recognized that this RPE test 17 protocol would give the device in Lubell other 18 options, so more flexibility to be used in other 19 ways. 20 So the test protocol would be easy to 21 implement, whereas the device itself is a big 22 investment, and so this would give the flexibility to 23 base it on graded levels of the initial test on the 24 physical fitness of the user.	Page 284 1 BY MR. SWISHER: 2 Q. Okay. So you agree that portion of Lubell 3 you just read doesn't mention a specific option, 4 right? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. It describes a class of options that are 8 based on the entered data and the heartbeats of the 9 subject. 10 BY MR. SWISHER: 11 Q. All right. Would you agree, Dr. Lynch, that 12 Ceci -- excuse me. Let me start over. 13 Would you agree that the RPE protocol 14 disclosed in Ceci is a self-regulated protocol? 15 A. To be more specific, the subject is asked to 16 exercise at different levels, and then the subject 17 chooses the intensity of their exercise so that they 18 feel like it matches the level they were asked to 19 exercise at. 20 Q. Okay. So you agree that the protocol in 21 Ceci allows the subject to choose their own intensity 22 of the exercise that they perform, right? 23 A. Well, they are prompted to achieve -- I 24 don't have it in front of me, but hard, somewhat
Page 283 1 BY MR. SWISHER: 2 Q. Okay. And is there anything in Lubell that 3 would motivate a POSITA in the first place to, you 4 know, consider other protocols? 5 A. Well, just that it mentions that other 6 fitness parameters can be used and the protocol that 7 it describes is the preferred protocol, and then goes 8 on to say other suitable submaximal exercise test 9 protocols could be used. 10 So those would be the motivation to look for 11 other test protocols. 12 Q. Okay. And you agreed earlier that Lubell 13 doesn't specifically describe any other fitness 14 parameters, other than VO2 max, right? 15 MS. NGUYEN: Objection, form. 16 BY THE WITNESS: 17 A. So in column 3 around line 5, Lubell says 18 that one or more fitness parameters can be calculated 19 on the basis of the entered selected data, and the 20 detected heartbeats of the subject, so that gives a 21 lot of possible options, and sitting here now, that's 22 what I know for the other possibilities that 23 Lubell... 24	Page 285 1 hard, and there was another one, an easier one. So 2 they are asked to achieve those levels. 3 Q. Okay. 4 A. And so they are constrained by that. But 5 other than that, they can choose how they achieve 6 those requested levels. 7 Q. Okay. And that's distinct, or I should say 8 that's a different approach than, for example, the 9 preferred protocol mentioned in Lubell that paces the 10 subject through specific mile per hour increments 11 automatically, right? 12 MS. NGUYEN: Objection, form. 13 BY THE WITNESS: 14 A. So I apologize, I just wanted to clarify the 15 levels. I should be looking at my declaration as I'm 16 talking. 17 The levels that Ceci describes are light, 18 somewhat hard, and hard exertion levels, so according 19 to the ratings of perceived exertion scale, so I just 20 wanted to clarify that. 21 BY MR. SWISHER: 22 Q. Okay, I appreciate that. 23 So I think we're on the same page. I was 24 just asking if you agree that the -- the exercise

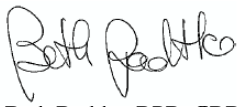
Page 286 1 levels corresponding to those exertion levels in Ceci 2 are chosen by the user, right? 3 MS. NGUYEN: Objection, form. 4 BY THE WITNESS: 5 A. So the user is asked to perform at a light 6 exertion level, a somewhat hard exertion level, and a 7 hard exertion level, and given that instruction, they 8 exercise how they think meets that request. 9 BY MR. SWISHER: 10 Q. Okay. Now did you consider whether Lubell 11 discusses any exercise protocols where the user gets 12 to choose their exertion that corresponds to a 13 certain level of intensity? 14 MS. NGUYEN: Objection, form. 15 BY THE WITNESS: 16 A. So Lubell describes one particular protocol 17 in great detail, and then alludes to other 18 possibilities. 19 BY MR. SWISHER: 20 Q. Did you consider whether, in the background 21 section of Lubell, Lubell discusses other approaches 22 where users can choose their own speeds, for example? 23 MS. NGUYEN: Objection, form. 24	Page 288 1 MS. NGUYEN: Objection, form. 2 BY THE WITNESS: 3 A. I considered the entire disclosure of Lubell 4 from the viewpoint of a POSITA in coming up with my 5 opinions. 6 BY MR. SWISHER: 7 Q. Okay. And let me ask you about, still in 8 column 2 of Lubell, line 45, Lubell states: 9 "Accordingly, it is an object of this invention to 10 provide a heart rate monitor and/or fitness monitor 11 device which avoids the drawbacks of the previously 12 proposed devices, and automatically calculates an 13 appropriate fitness parameter, e.g., maximal oxygen 14 uptake level or VO2 max, by automatically pacing the 15 subject through a straightforward training protocol." 16 Do you see that? 17 A. I do. 18 Q. Okay. Did you consider that paragraph in 19 coming to your opinions regarding the combination of 20 Lubell and Ceci? 21 A. At the risk of being repetitive, I 22 considered the entire Lubell patent. 23 Q. Okay. So in looking at -- or when you 24 considered these portions of column 2 that we just
Page 287 1 BY THE WITNESS: 2 A. I considered the entire specification. 3 BY MR. SWISHER: 4 Q. Okay. Let's take a look at column 2 5 specifically then. 6 Starting at the top of column 2, Lubell in 7 line 1, reads: "In one previously proposed fitness 8 monitoring system, this fitness index VO2 max was 9 calculated by having the subject exercise at whatever 10 speed he or she desired for a period of 12 minutes." 11 Do you see that? 12 A. Yes. 13 Q. Okay. And I'll direct you to line 35 of 14 column 2 in Lubell. 15 Here Lubell says: "Some previously proposed 16 fitness monitors provided pacing tones to provide 17 footfall cadence for runners to pace themselves at 18 various speeds." 19 Do you see that? 20 A. Yes. 21 Q. Now did Lubell's descriptions of these prior 22 or proposed methods where runners could pace 23 themselves impact your opinions regarding the 24 combination of Lubell and Ceci?	Page 289 1 looked at, did you consider whether those would have 2 indicated to a POSITA that they shouldn't look to 3 other protocols where users are allowed to choose 4 their own speeds of exercise? 5 MS. NGUYEN: Objection, form. 6 BY THE WITNESS: 7 A. I'm sorry, could you ask that question one 8 more time? 9 BY MR. SWISHER: 10 Q. Yeah, let me ask you this: Have you ever 11 heard of the patent law concept of teaching away? 12 A. I am aware of it, but again, I am not a 13 lawyer, so... 14 Q. Okay. So these parts of column 2 where 15 Lubell talks about previously proposed systems where 16 users can choose their own speeds or pace themselves, 17 now in reviewing and considering those portions of 18 Lubell, did you consider whether that would have 19 directed a POSITA not to look at other protocols 20 where users could pace themselves or choose their own 21 speeds? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. So when I read column 2, there's nothing

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Page 290 1 here that would tell me not to look at a reference 2 like Ceci as an alternative exercise protocol. 3 BY MR. SWISHER: 4 Q. Okay. So even though Lubell says that an 5 object of its invention is to avoid drawbacks of 6 previously proposed devices, which Lubell says 7 include devices where a user could pace themselves, 8 and instead automatically pace the subject through a 9 straightforward training protocol, that didn't impact 10 whether or not you thought a POSITA would have been 11 motivated to look at Ceci? 12 MS. NGUYEN: Objection, form. 13 BY THE WITNESS: 14 A. Sorry, can you tell me where you're reading? 15 BY MR. SWISHER: 16 Q. Yes. I'm reading from line 45 to 50 of 17 column 2. 18 A. Okay. 19 Q. And you see how Lubell is saying: 20 "Accordingly, one of the objects of the invention is 21 to avoid the drawbacks of the previously proposed 22 devices." 23 Do you see that? 24 A. I see that.	Page 292 1 column 2 above the statement there at line 45 where 2 it talks about prior devices that allowed a user to 3 pace themselves or to choose their own speed of 4 exercise, the fact that Lubell talks about those as 5 being previous devices and then says that an object 6 of its invention is to avoid the drawbacks of 7 previous devices, that didn't lead you to consider 8 whether or not a POSITA would have been motivated to 9 look at a self-regulated protocol like Ceci's? 10 MS. NGUYEN: Objection, form. 11 BY THE WITNESS: 12 A. So line 35 of column 2 is talking about some 13 previously proposed fitness monitors, which is 14 certainly not Ceci. So I don't see why I would not 15 combine Ceci. 16 BY MR. SWISHER: 17 Q. Yeah, maybe I can be a little more clear, 18 and then we can wrap this up in a minute. 19 So Ceci discloses a protocol where the 20 subject gets to choose, essentially, how intense 21 their exercise is, right? 22 MS. NGUYEN: Objection, form. 23 BY THE WITNESS: 24 A. In Ceci, they are asked to perform at
Page 291 1 Q. Okay. And it says, in order to avoid those 2 drawbacks, Lubell is proposing to automatically 3 calculate VO2 max by automatically pacing the subject 4 through a straightforward training protocol, right? 5 A. So again, both of those are examples, and 6 Lubell is very clear on that, e.g., maximal oxygen 7 uptake level, so that's an example of a fitness 8 parameter, and then an example of a way to get that 9 is automatically pacing the subject through 10 straightforward training protocol. 11 So there's nothing in that sentence or in 12 that paragraph that would lead me not to look at 13 Ceci. 14 Q. Okay. And what about the first portion of 15 that paragraph where Lubell says an object of the 16 invention is to avoid the drawbacks of previously 17 proposed devices, did that impact your consideration 18 of the combination with Ceci? 19 A. So of course it's trying to avoid drawbacks 20 of previously proposed devices. Lubell was in 1983. 21 Q. Mm-hmm. 22 A. So that, along with everything else in the 23 disclosure, affected my opinions. 24 Q. Okay. But specifically, the portion of	Page 293 1 certain ratings of perceived exertion levels, and 2 then they choose how to achieve those levels. 3 BY MR. SWISHER: 4 Q. Right. They choose what feels -- 5 A. Light. 6 Q. -- light, what feels medium, and what feels 7 somewhat hard, right? 8 A. Right. 9 Q. Okay. So what I'm asking is, here in 10 column 2 where Lubell talks about prior approaches 11 where subjects were allowed to choose the speed at 12 which they exercised or to pace themselves at various 13 speeds, and then explains one of the objects of the 14 Lubell invention is to avoid the drawbacks of those 15 previously proposed devices where subjects were 16 allowed to choose their own speed or pace themselves, 17 why then would a POSITA look to Ceci where Ceci also 18 tells the user they can choose the speed that 19 corresponds to light or to medium or to hard 20 exertion, for example? 21 MS. NGUYEN: Objection, form. 22 BY THE WITNESS: 23 A. So the first -- column 2, line 35 to 37, 24 does not describe Ceci.

Page 294 1 BY MR. SWISHER: 2 Q. Yeah, I think we're not -- we're talking 3 past each other a little bit. 4 What I'm saying is column 2 refers to not 5 Ceci, but to other previously proposed approaches 6 where users were able to pace themselves or choose 7 their own speed, right? 8 A. As I read this line, those approaches are 9 different than what's described in Ceci. 10 Q. Okay. How are they different? 11 A. I would say how are they the same? 12 Q. Well, they are the same in that, you know, 13 in Ceci, do you disagree that a person running at the 14 perceived exertion level of light gets to determine 15 themselves what speed that is for them? 16 A. So line 35 says: "Fitness monitors that 17 provide pacing tones to provide a footfall cadence 18 for runners to pace themselves at various speeds," 19 and certainly that's not happening in Ceci. 20 Q. Mm-hmm. And then for -- 21 A. There's no pacing tones. 22 Q. Yeah. No, I understand, I'm not saying they 23 are exactly the same. I'm just referring to the 24 commonalty of a user getting to choose the speed that	Page 296 1 A. Okay, thank you for letting me read it. 2 Now I'm -- what was the question, or... 3 Q. Did you have any opinions in your 4 declaration discussing the previously proposed 5 fitness monitoring systems described in column 2 of 6 Lubell? 7 MS. NGUYEN: Same objection. 8 BY THE WITNESS: 9 A. In my declaration I do not cite column 2, 10 lines 35 to 37. 11 BY MR. SWISHER: 12 Q. Okay. And did you cite column 2 lines 1 13 through 8? 14 A. No. 15 MR. SWISHER: All right. I have no further 16 questions. 17 MS. NGUYEN: Should we take a short break? 18 Short break, please. 19 MR. SWISHER: Sure. 20 THE VIDEOGRAPHER: Off the record at 6:24. 21 (A short break was taken.) 22 THE VIDEOGRAPHER: Back on the record at 23 6:28. 24 MS. NGUYEN: Dr. Lynch, we do not have any
Page 295 1 they exercise at. 2 MS. NGUYEN: Objection, form. 3 BY THE WITNESS: 4 A. So I'm reading the words here and 5 interpreting them, and they don't describe anything 6 that's like Ceci. So if I read this, I don't see 7 Lubell saying don't use Ceci's protocol. 8 BY MR. SWISHER: 9 Q. Okay. So it's fair to say you didn't 10 consider, when you were forming your opinions, 11 whether or not this material in column 2 would have 12 been impacted a POSITA's motivation to combine Lubell 13 with Ceci? 14 A. I absolutely considered the entire 15 specification. 16 Q. Okay. Do you have any opinions in your 17 declaration about this portion of column 2? 18 MS. NGUYEN: Objection, form. 19 BY THE WITNESS: 20 A. Are you referring to paragraphs 88 to 93? 21 BY MR. SWISHER: 22 Q. Sure. Or anywhere in your declaration. 23 A. Can I have a moment to read it? 24 Q. Sure.	Page 297 1 questions. 2 MR. SWISHER: Okay. 3 THE VIDEOGRAPHER: Okay, this completes the 4 deposition, off the record at 6:28. 5 (Deposition concluded at 6:28 p.m.) 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

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Page 298 1 CERTIFICATE OF 2 CERTIFIED SHORTHAND REPORTER 3 I, Beth Radtke, a Certified Shorthand 4 Reporter of the State of Illinois, CSR License No. 5 084-004561, do hereby certify: 6 That previous to the commencement of the 7 examination of the aforesaid witness, the witness 8 was duly sworn by me to testify the whole truth 9 concerning the matters herein; 10 That the foregoing deposition transcript was 11 stenographically reported by me and was thereafter 12 reduced to typewriting under my personal direction 13 and constitutes a true and accurate record of the 14 testimony given and the proceedings had at the 15 aforesaid deposition; 16 That I am not a relative or employee or attorney 17 or counsel for any of the parties herein, nor am I 18 interested directly or indirectly in the outcome of 19 this action. 20 IN WITNESS WHEREOF, I do hereunto set my hand at 21 Chicago, Illi  er, 2023. 22 23 Beth Radtke, RPR, CRR 24 License No. 084-004561	Page 300 1 DEPOSITION REVIEW 2 CERTIFICATION OF WITNESS 3 ASSIGNMENT REFERENCE NO: 6087021 4 CASE NAME: Lululemon Athletica Canada Inc., et al. v. Nike, Inc. 5 DATE OF DEPOSITION: 9/27/2023 6 WITNESS' NAME: Kevin M. Lynch, Ph.D. 7 In accordance with the Rules of Civil 8 Procedure, I have read the entire transcript of 9 my testimony or it has been read to me. 10 I have made no changes to the testimony 11 as transcribed by the court reporter. 12 13 Date Kevin M. Lynch, Ph.D. 14 Sworn to and subscribed before me, a 15 Notary Public in and for the State and County, 16 the referenced witness did personally appear 17 and acknowledge that: 18 They have read the transcript; 19 They signed the foregoing Sworn 20 Statement; and 21 Their execution of this Statement is of 22 their free act and deed. 23 24 I have affixed my name and official seal 25 this ____ day of _____, 20____. ____ Notary Public ____ Commission Expiration Date
Page 299 1 Veritext Legal Solutions 2 1100 Superior Ave 3 Suite 1820 4 Cleveland, Ohio 44114 5 Phone: 216-523-1313 6 7 October 4, 2023 8 To: Jean Nguyen 9 10 Case Name: Lululemon Athletica Canada Inc., et al. v. Nike, Inc. 11 12 Veritext Reference Number: 6087021 13 14 Witness: Kevin M. Lynch, Ph.D. Deposition Date: 9/27/2023 15 16 Dear Sir/Madam: 17 18 Enclosed please find a deposition transcript. Please have the witness 19 20 review the transcript and note any changes or corrections on the 21 22 included errata sheet, indicating the page, line number, change, and 23 24 the reason for the change. Have the witness' signature notarized and forward the completed page(s) back to us at the Production address shown above, or email to production-midwest@veritext.com. If the errata is not returned within thirty days of your receipt of this letter, the reading and signing will be deemed waived. Sincerely, Production Department NO NOTARY REQUIRED IN CA	Page 301 1 DEPOSITION REVIEW 2 CERTIFICATION OF WITNESS 3 ASSIGNMENT REFERENCE NO: 6087021 4 CASE NAME: Lululemon Athletica Canada Inc., et al. v. Nike, Inc. 5 DATE OF DEPOSITION: 9/27/2023 6 WITNESS' NAME: Kevin M. Lynch, Ph.D. 7 In accordance with the Rules of Civil 8 Procedure, I have read the entire transcript of 9 my testimony or it has been read to me. 10 I have listed my changes on the attached 11 Errata Sheet, listing page and line numbers as 12 well as the reason(s) for the change(s). 13 I request that these changes be entered 14 as part of the record of my testimony. 15 16 I have executed the Errata Sheet, as well 17 as this Certificate, and request and authorize 18 that both be appended to the transcript of my 19 testimony and be incorporated therein. 20 21 Date Kevin M. Lynch, Ph.D. 22 23 Sworn to and subscribed before me, a 24 Notary Public in and for the State and County, 25 the referenced witness did personally appear and acknowledge that: They have read the transcript; They have listed all of their corrections in the appended Errata Sheet; They signed the foregoing Sworn Statement; and Their execution of this Statement is of their free act and deed. I have affixed my name and official seal this ____ day of _____, 20____. ____ Notary Public ____ Commission Expiration Date