

Page 1 1 J12728766 2 3 UNITED STATES PATENT AND TRADEMARK OFFICE 4 5 BEFORE THE PATENT TRIAL AND APPEAL BOARD 6 7 SMAXTEC INC. AND 8 SMAXTEC ANIMAL CARE GMBH, 9 Petitioner 10 v. 11 ST REPRODUCTIVE TECHNOLOGIES, LLC 12 Patent Owner. 13 14 Case: IPR2024-00885 15 Patent No. 8,823,515 16 17 VIDEOCONFERENCED DEPOSITION OF MEREDITH KNOFF 18 19 Date Edith A. Boggs, CSR 20 21 4-29-2025 HOUSTON, TEXAS 22 23 24 25	Page 3 1 A P P E A R A N C E S 2 3 4 ATTORNEY FOR PETITIONER: 5 6 Gibson Dunn & Crutcher 7 2001 Ross Avenue, Suite 2100 8 Dallas, Texas 75201-6911 9 10 By: Nathan R. Curtis, Esq. 11 (Present via videoconference) 12 13 ATTORNEY FOR PATENT OWNER: 14 15 Akin Gump Strauss Hauer & Feld LLP 16 1111 Louisiana Street, 44th Floor 17 Houston, Texas 77002 18 By: Thomas W. Landers, IV, Esq. 19 (Present via videoconference) 20 21 REPORTED REMOTELY BY: 22 23 Ms. Edith A. Boggs 24 25
Page 2 1 2 3 4 5 6 7 8 VIDEOCONFERENCED DEPOSITION OF MEREDITH KNOFF 9 10 11 DEPOSITION AND ANSWERS of MEREDITH KNOFF, taken 12 before Edith A. Boggs, a certified shorthand reporter in 13 Harris County for the State of Texas, via 14 videoconference with the witness appearing from Houston, 15 Texas, on the 29th day of April, 2025, between the hours 16 of 9:57 a.m. and 12:09 p.m. 17 18 19 20 21 22 23 24 25	Page 4 1 EXAMINATION INDEX 2 3 QUESTIONS BY PAGE 4 5 Mr. Curtis 5 6 7 Mr. Landers 60 8 9 Mr. Curtis 65 10 11 INDEX OF EXHIBITS 12 13 NO. PAGE FIRST DESCRIPTION 14 15 REFERENCED 16 17 Exhibit 1005 9 Trevarthen Thesis 18 19 Exhibit 1030 12 Affidavit of Nathaniel E. 20 21 Frank-White 22 23 Exhibit 2011 8 Declaration of Meredith 24 25 Knoff

Page 5 1 MEREDITH KNOFF 2 was called as a witness and, being first duly sworn by 3 the notary, testified as follows: 4 EXAMINATION 5 Q. (BY MR. CURTIS) Good morning. 6 A. Good morning. 7 Q. Can you state your name for the record. 8 A. My name is Meredith Knoff. 9 Q. Last name pronounced Knoff; is that right? 10 A. Yes. Silent K. 11 Q. Ms. Knoff, have you ever been deposed before? 12 A. I have not, no. 13 Q. You understand that your testimony today is 14 under oath, correct? 15 A. I do. 16 Q. To begin the deposition today, I want to 17 explain how it might go, as you've never been deposed 18 before. Is that okay? 19 A. Absolutely. 20 Q. As you can see, there is a court reporter on 21 the line who will be recording your testimony today. Do 22 you understand that? 23 A. Yes. 24 Q. And so if we can do the best we can to speak 25 one at a time to make it as easy for Ms. Boggs as	Page 7 1 Mr. Landers, is in the same room with you right now? 2 A. Yes. 3 Q. Is there anyone else in that room with you? 4 A. There's not. 5 Q. Do you have any written materials in front of 6 you? 7 A. I do not. 8 Q. Do you have any open means of communication, 9 such as a chat window or a text message thread with your 10 attorney? 11 A. I don't. 12 Q. You understand that your deposition today 13 relates to two related IPRs, correct? 14 A. Yes. 15 Q. And for the record, one of those is IPR 16 2024-00875 on U.S. Patent No. 9,844,206. Does that 17 sound correct? 18 A. If that is what's on my declaration, yes. 19 Q. And the other one relates to IPR 2024-00885 on 20 U.S. Patent No. 8,823,515. Does that sound correct? 21 A. Again, if that's what's on my declaration, then 22 yes. 23 Q. And you submitted a declaration in both of 24 these IPRs, correct? 25 A. Yes.
Page 6 1 possible, would that work? 2 A. Yes. 3 Q. And you understand that you should provide 4 audible answers. You know, nods and head shaking won't 5 be captured by the transcript, correct? 6 A. I do. 7 Q. I'm going to ask you a series of questions 8 today, and I hope you can give me your best responses. 9 And if you do not understand a question I ask you, are 10 you able to ask me for clarification? 11 A. Yes. 12 Q. The deposition today, just to be fully 13 transparent, isn't going to go too long, but there may 14 be one or two breaks that happen today. Usually I like 15 to take breaks about every hour or so, but if there's 16 any point, Ms. Knoff, where you need a break and I have 17 not, you know, suggested one, please feel free to ask 18 for a break, and you can have one. Do you understand? 19 A. I do. 20 Q. Is there any reason why you cannot give 21 truthful and accurate testimony today? 22 A. No. 23 Q. Where are you located today? 24 A. I'm in Houston, Texas. 25 Q. And am I to understand that your attorney,	Page 8 1 Q. And that declaration for each IPR was labeled 2 as Exhibit 2011; is that correct? 3 A. If that's what's on my deposition, yes -- or my 4 declaration. 5 Q. So right before the Zoom -- sorry. Scratch 6 that. 7 Right before this deposition began, I put a 8 document in the chat window. Are you able to open that 9 document for me? 10 A. Yes, I have it open now. 11 Q. What do you understand this document to be? 12 A. A copy of my signed declaration. 13 Q. And that declaration is in the IPR ending in 14 00875, correct? 15 A. Yes, it is. 16 Q. To the best of your understanding, are the 17 declarations you provided in the two IPRs materially the 18 same? 19 MR. LANDERS: Object to form. And I'll 20 just jump in and state for the record that this is 21 Thomas Landers here on behalf of Akin representing the 22 patent owner. And I'm just objecting to form. I wanted 23 to put that on the record. 24 You can answer. 25 A. Oh. Yes.

Page 9 1 Q. (BY MR. CURTIS) Okay. So just to clarify the 2 record, it's your understanding that the two 3 declarations you provided are materially the same? 4 A. Yes. 5 Q. And so for simplicity today, if I ask you 6 questions about the declaration you have open relating 7 to the 00875 IPR, your testimony with respect to that 8 declaration will apply equally to your other 9 declaration? 10 A. Yes. I understand. 11 Q. I'm uploading to the chat window an exhibit. 12 Let me know when you are able to open it. 13 A. I should have it open. 14 Q. And, Ms. Knoff, what do you understand this 15 document to be? 16 A. It's a copy of the Trevarthen thesis. 17 Q. And for the record, this thesis is labeled as 18 Exhibit 1005 in both IPRs, correct? 19 A. Yes. 20 Q. And so this is the reference that you refer to 21 in your declaration as Trevarthen? 22 A. Yes. 23 Q. And it says on here at the top that Trevarthen 24 is an honors thesis, correct? 25 A. Yes.	Page 11 1 correct? 2 A. That's what it looks like. 3 Q. What do you understand the University of 4 Wollongong to be? 5 MR. LANDERS: Object to form. 6 A. An institute of higher ed located in Australia. 7 Q. (BY MR. CURTIS) What do you understand the 8 "Research Online" to refer to? 9 A. The institution's institutional repository. 10 Q. Can you explain to me what an institutional 11 repository is? 12 A. An institutional repository is a database that 13 many schools will create as a place to host often 14 faculty datasets and other documents, frequently journal 15 publications and that sort of thing. 16 Q. Are institutional repositories typically 17 searchable? 18 MR. LANDERS: Object to form. 19 A. I think it depends on what you mean by 20 "searchable." I can't speak for every institutional 21 repository. 22 Q. (BY MR. CURTIS) Are you aware of any 23 institutional repositories that are searchable? 24 MR. LANDERS: Object to form. 25 A. I have used institutional repositories that
Page 10 1 Q. And it was written in 2005, correct? 2 MR. LANDERS: Object to form. 3 A. I -- it says on the document that it was 4 written in 2005. 5 Q. (BY MR. CURTIS) Okay. Do you have any reason 6 to dispute that this document was written in 2005? 7 MR. LANDERS: Object to form. 8 A. I can see what the document says. 9 Q. (BY MR. CURTIS) So other than what's on the 10 face of the document, you have no basis to dispute that 11 this document is from 2005, correct? 12 MR. LANDERS: Object to form and 13 characterization of the testimony. 14 A. I think I answered that already. 15 Q. (BY MR. CURTIS) I just wanted the record to be 16 clear. So do you have any reason to believe that this 17 document was not written in 2005? 18 MR. LANDERS: Same objections. 19 A. I can see what the date on the document says. 20 Q. (BY MR. CURTIS) On the top of the first page 21 of Exhibit 1005 it says, "Research Online." Do you see 22 that? 23 A. I do see it. 24 Q. And then right above that it says, "University 25 of Wollongong," if I didn't butcher that name; is that	Page 12 1 have a search function. 2 Q. (BY MR. CURTIS) Is it your understanding that 3 Trevarthen Exhibit 1005 can be located on the University 4 of Wollongong's Research Online repository? 5 MR. LANDERS: Object to form. 6 A. I can tell you that I saw the document on the 7 Research Online repository. 8 Q. (BY MR. CURTIS) I'm going to upload a third 9 exhibit here. This one is a little bit bigger, so it 10 may take a moment to upload. Can you let me know when 11 you see it in the chat? 12 A. Uh-huh. 13 All right. It's in the chat, and I'm 14 downloading it currently. 15 All right. I have that open. 16 Q. This document is labeled Exhibit 1030, correct? 17 A. Yes. 18 Q. And at the top it says, "Affidavit of Nathaniel 19 E. Frank-White," correct? 20 A. It does. 21 Q. Can you explain to me what your understanding 22 of what Exhibit 1030 is? 23 A. An explanation of how the internet archive 24 functions. 25 Q. And Mr. Frank-White included some exhibits to

Page 13 1 this declaration, correct? 2 A. If those are the documents scrolling further 3 down, yes. 4 Q. Can you flip to Page 6 of Exhibit 1030. Let me 5 know when you are there. 6 A. I'm on it. 7 Q. What do you understand Page 6 of this exhibit 8 to be? 9 MR. LANDERS: Object to form. 10 A. It's a screenshot of a record of internet 11 archives holding of what the web page of Research Online 12 looked like on a specific date. 13 Q. (BY MR. CURTIS) And that date would be 14 September 7th, 2007, correct? 15 A. That's what it shows at the top. 16 Q. I want to direct your attention to the first 17 question under "Questions and answers." Do you see 18 that? 19 A. Yes. 20 Q. And the question is, "What is Research Online?" 21 A. Uh-huh. Yes. 22 Q. And under the question, the response here is, 23 "Research Online is an open access digital archive or 24 institutional repository promoting the scholarly output 25 of the University of Wollongong," correct?	Page 15 1 do make an active marketing or promotional effort, what 2 do those efforts look like? 3 MR. LANDERS: Object to form. 4 A. I -- I've never seen one, so I can't tell you 5 what it would look like. 6 Q. (BY MR. CURTIS) Might it include getting the 7 papers posted by the institutional repository locatable 8 by search engines? 9 MR. LANDERS: Object to form and asked and 10 answered. 11 You have to answer -- 12 THE WITNESS: Sorry. 13 MR. LANDERS: -- after I've noted my 14 objection. 15 A. Again, since I have not seen an active 16 promotion of an institutional repository, I couldn't 17 answer that question. 18 Q. (BY MR. CURTIS) So are you suggesting that 19 when Research Online says that it is promoting the 20 scholarly output of the University of Wollongong, it is 21 not actually doing anything to do that? 22 MR. LANDERS: Object to form. 23 A. I don't know the university. I'm not familiar 24 with the repository, so I can't make a decision. 25 Q. (BY MR. CURTIS) So you have no opinions on
Page 14 1 A. That's what it says. 2 Q. How does an institutional repository promote 3 scholarly output? 4 MR. LANDERS: Object to form. 5 A. My understanding of the word "promote" would be 6 to sort of market or somehow actively make people aware 7 of it, and so I -- my general understanding is most 8 institutional repositories do not actively promote via 9 marketing to sort of an outside audience or population. 10 Q. (BY MR. CURTIS) Let me make sure I understand 11 your answer. You said, if I'm understanding you, that 12 the word "promote" generally to you means some sort of 13 marketing; is that correct? 14 MR. LANDERS: Object to form. 15 A. In this context, based on what I'm reading, 16 that is how I am interpreting that word. 17 Q. (BY MR. CURTIS) Then you also said that it's 18 also your understanding that most institutional 19 repositories do not actively promote via marketing; is 20 that correct? 21 A. In my experience with specific institutional 22 repositories that I have -- you know, at institutions I 23 have worked at or heard of, they have not made an active 24 sort of marketing or promotional effort. 25 Q. And for those institutional repositories that	Page 16 1 what it means here for the Research Online to promote 2 the scholarly output of the University of Wollongong, 3 correct? 4 MR. LANDERS: Object to form. 5 A. I can't make any assumptions about what they 6 mean when they say that. 7 Q. (BY MR. CURTIS) Under the next question on 8 Page 6 of Exhibit 1030, there's a reference to making 9 documents, quote, "accessible," closed quote, on search 10 engines such as Google. Do you see where I'm referring 11 to? 12 A. You are saying -- so the question of, "What is 13 an institutional repository," that question? 14 Q. Correct. 15 A. Let me -- can you read out where it says that? 16 Q. Yes. If you're looking at the end of the first 17 paragraph after that question. Can you maybe read that 18 to yourself and let me know when you're done? 19 A. "The majority of institutional repositories are 20 open access, meaning that the works held within them are 21 freely accessible and can be located using internet 22 search engines such as Google." 23 MR. LANDERS: When you're reading 24 something, slow down just a bit for the court reporter. 25 I know that's a little new, but just to throw that out

Page 17 1 there. 2 THE WITNESS: Will do. 3 Q. (BY MR. CURTIS) Yes, that's the sentence I'm 4 referring to. 5 A. Okay. 6 Q. In context, would you understand this reference 7 to making documents accessible and locatable using 8 search engines to be a form of promoting scholarly 9 output? 10 MR. LANDERS: Object to form. 11 A. I think you can't -- you can't for certain sort 12 of put something on Google or ensure when it would be 13 indexed or crawled by Google, and so I can't speak to 14 what they mean when they say that it's accessible or 15 locatable just because I can't confirm how they would 16 ensure or, you know, commit to it being indexed by 17 Google. 18 And I should say when I say "indexed," I 19 mean when a Google crawler has crawled the page and then 20 added it to Google's internal index. 21 Q. (BY MR. CURTIS) You're jumping a little bit 22 ahead, and I'll ask you later, I do want to know about 23 web crawlers, but let me skip to something else first, 24 and I think we'll get back to that. 25 Can you turn back to your declaration,	Page 19 1 Q. And then as the first part of my question, you 2 don't dispute that Trevarthen at least existed on the 3 internet prior to 2009, correct? 4 MR. LANDERS: Object to form. 5 A. My understanding of what I was asked to do in 6 this situation was determine if I could find Trevarthen 7 using a search engine, and when I tested that out, I was 8 unable to find Trevarthen, which, again, in my 9 understanding of what public accessibility means, it 10 means that a person of reasonable skill would have to be 11 able to find it on the internet. 12 Q. (BY MR. CURTIS) Well, I think I'm trying to 13 break public accessibility into two parts, one being the 14 reference actually exists and, two, that someone can 15 find that reference. And so as to the first portion, 16 would you agree with me that Trevarthen actually existed 17 on the internet prior to 2009? 18 MR. LANDERS: Object to form. 19 A. I -- in my declaration, I know I defined what I 20 understood public accessible to be. 21 Q. (BY MR. CURTIS) Well, let's flip back to 22 Exhibit 1030 that you should still have open and go to 23 Page 13. Let me know when you are there. 24 A. All right. I'm on there. 25 Q. What do you understand Page 13 of Exhibit 1030
Page 18 1 Exhibit 2011, and in particular paragraph 19, and let me 2 know when you are there. 3 A. Okay. Okay. 4 Q. I want to direct your attention to the very 5 last sentence of that paragraph. It spans Pages 7 to 8, 6 where you say, "There is a fundamental difference 7 between a reference existing on the internet and a 8 reference that can be located through a search engine." 9 Do you see that sentence? 10 A. I do see it. 11 Q. Can you explain to me what you mean by that? 12 A. Yes. So just because I post something on the 13 internet does not mean that it will be crawled and 14 indexed by a search engine, and even if it is indexed by 15 a search engine and added to their internal database 16 does not mean that a discovery tool like Google Search 17 will necessarily return that specific page to a search 18 query that someone puts into the search tool. 19 Q. So with respect to Trevarthen specifically, am 20 I correct that you don't dispute that Trevarthen existed 21 on the internet prior to 2009, but it's your opinion 22 that Trevarthen could not be located through a search 23 engine prior to 2009, is that accurate? 24 A. When I tested my searches using Google, I did 25 not find Trevarthen in those results.	Page 20 1 to be? 2 A. It's the document record for the Trevarthen 3 thesis. 4 Q. And this was pulled from the internet archive, 5 correct? 6 A. That's what the heading says on the page. 7 Q. And the date of that from the internet archive 8 is March 22nd, 2008; is that correct? 9 A. That's what it says. 10 Q. And from this document record for Trevarthen, 11 someone could have downloaded the full text of 12 Trevarthen, correct? 13 MR. LANDERS: Object to form. 14 A. I -- looking at this page, I can't necessarily 15 determine. It has a bold line on it that says "download 16 the document," but since I'm not on that page, I can't 17 confirm whether or not I would have been able to 18 download it. 19 Q. (BY MR. CURTIS) In preparing your declaration, 20 did you ever navigate to this page and try to click on 21 the link that says "download the document"? 22 A. I wasn't asked to download the document. I was 23 asked to determine if I could find it using search 24 methods, which I did not. 25 Q. Turn now to Page 15 of Exhibit 1030 and let me

Page 21 1 know when you are there. 2 MR. LANDERS: What page was that? 3 MR. CURTIS: Page 15. 4 A. I'm on there. 5 Q. (BY MR. CURTIS) Is this page also a document 6 record for Trevarthen from the internet archive? 7 A. It looks like it's the article record. 8 Q. And this record is from September 7th, 2007? 9 A. According to -- yeah, according to the heading 10 there. 11 Q. Do you know whether an individual could 12 download the full text of Trevarthen from the record on 13 Page 15 of Exhibit 1030? 14 A. I -- I don't know because I'm not downloading 15 it, and I wasn't attempting to download it on the date 16 of September 7th. 17 MR. LANDERS: Sorry. I'd just ask that you 18 pause a bit just to give me time if I have objections. 19 THE WITNESS: Sorry. 20 Q. (BY MR. CURTIS) Can you turn with me to 21 page -- or paragraph 28 of your declaration, 22 Exhibit 2011. 23 A. You said paragraph 28? 24 Q. Correct. 25 A. All right. I'm there.	Page 23 1 classify Trevarthen as grey literature? 2 A. Not to my knowledge based on my experience 3 working within research circles and with research 4 faculty and research I've done. Grey literature means 5 conference papers, dissertations, things that wouldn't 6 have appeared in a formalized means of publishing. 7 Q. Is everything on the University of Wollongong's 8 Research Online grey literature? 9 MR. LANDERS: Object to form. 10 A. I couldn't tell you because I'm not searching 11 all of the university's repository. I couldn't make a 12 statement either way. 13 Q. (BY MR. CURTIS) Later in that same paragraph, 14 you say that Google deprioritizes grey literature, is 15 that accurate? 16 A. In the sentence, "Compounding that issue, 17 Google's relevance algorithm would deprioritize grey 18 literature references, making them exceedingly difficult 19 to locate," that one? 20 Q. Yes. 21 A. Okay. I see that. 22 Q. Do all search engines deprioritize grey 23 literature? 24 MR. LANDERS: Object to form. 25 A. I was speaking specifically to Google.
Page 22 1 Q. Okay. In paragraph 28, you refer to a term, 2 quote, "grey literature," closed quote; is that correct? 3 A. Yes. 4 Q. Can you give me a brief explanation of what you 5 understand grey literature to be? 6 A. I think in the sentence after that in that 7 paragraph, I define what grey literature is. 8 Q. So that sentence you state, "Grey literature 9 consists of research, articles or other literature that 10 is not produced through traditional publishing means, 11 such as a peer reviewed journal." Is that an accurate 12 reading of your statement? 13 A. That's what I put in my declaration, yes. 14 Q. And so you -- it's your opinion that Trevarthen 15 is grey literature, correct? 16 MR. LANDERS: Object to form. 17 A. Based on the definition that I put in my 18 declaration, under most sort of understandings, people 19 would classify Trevarthen's thesis as being a grey 20 literature. 21 Q. (BY MR. CURTIS) You said under most 22 understandings, it would be classified as grey 23 literature? 24 A. Uh-huh. 25 Q. Is there an understanding that would not	Page 24 1 Q. (BY MR. CURTIS) Do you know whether Yahoo 2 deprioritizes grey literature? 3 A. Yahoo is not a widely used search engine. I 4 looked at Google based on consistent research methods 5 that people in fields use. 6 Q. So is it your testimony that no one in the 7 field uses Yahoo? 8 A. In my experience, I've not worked with a 9 researcher that uses Yahoo search. 10 Q. Can you turn to paragraph 12 of your 11 declaration for me. Let me know when you are there. 12 A. Okay. I'm there. 13 Q. So here you say that, "A person of ordinary 14 skill in the art or POSA would routinely search for 15 literature in library catalogs, online journals and 16 using internet search engines, such as Google, Google 17 Scholar and/or Yahoo." Do you see that? 18 A. I do. 19 Q. So is your testimony now that POSAs would not 20 use Yahoo as a search engine? 21 MR. LANDERS: Object to the form and the 22 characterization. 23 A. Yahoo would count as a search engine, which is 24 why it is listed as a search engine. I chose to look at 25 Google as the dominant search engine that researchers

Page 25 1 use. 2 Q. (BY MR. CURTIS) So setting aside whether a 3 searcher would or would not use Yahoo, do you know 4 whether Yahoo deprioritizes grey literature? 5 A. I examined Google for the purposes of my 6 declaration. 7 Q. So is that a no? 8 MR. LANDERS: Object to form. Asked and 9 answered. 10 A. I focused on Google, which is the declaration I 11 submitted. 12 Q. (BY MR. CURTIS) Do you know whether Google 13 Scholar deprioritizes grey literature? 14 A. I chose not to look at Google Scholar just 15 because I can't reproduce what methods Google Scholar 16 would return in that situation because it only limits 17 dates in terms of the citation publications, and so I 18 chose not to include it in my declaration. 19 MR. CURTIS: Move to strike as 20 nonresponsive. 21 Q. (BY MR. CURTIS) The question is do you know 22 whether Google Scholar deprioritizes grey literature? 23 MR. LANDERS: Object to the motion and 24 asked and answered. 25 A. Again, I spoke to Google. That's what I chose	Page 27 1 A. Nine years. 2 Q. In those nine years, have you ever used Google 3 Scholar to search for scholarly articles? 4 A. I have used Google Scholar, yes. 5 Q. Have other researchers, in your experience, 6 used Google Scholar to search for scholarly articles? 7 A. Yes. 8 Q. Besides Google and Google Scholar, are there 9 any other search engines you have used in your years as 10 a librarian for searching for scholarly articles? 11 A. Predominantly, licensed and subscription 12 databases. 13 Q. Aside from anything paid, like a licensed or 14 subscription database, are there any free search engines 15 or search tools you have used for searching for 16 scholarly articles? 17 A. No, there aren't. 18 Q. Do all search engines return the same results? 19 MR. LANDERS: Object to form. 20 A. Search engines return results based on their 21 individual indexes that they maintain. 22 Q. (BY MR. CURTIS) And a few minutes ago, you 23 referred to a web crawler. Do you recall that 24 testimony? 25 A. Yes, I do.
Page 26 1 to speak to. I -- because I didn't include it in my 2 declaration, I don't want to speak definitely on Google 3 Scholar. 4 Q. (BY MR. CURTIS) Do you know whether Google 5 Scholar was available prior to 2009? 6 MR. LANDERS: Object to form. 7 A. I know Google Scholar existed, but again, I -- 8 because of the reasons I stated, I didn't include my 9 searching in it. 10 Q. (BY MR. CURTIS) Would persons of ordinary 11 skill in the art have used Google Scholar to search for 12 information prior to 2009? 13 MR. LANDERS: Object to form. 14 A. I don't think that I can speak definitively to 15 that. I responded to the expert searching in response 16 that I was provided, which is consistent with the types 17 of searches I have seen researchers in the field use. 18 Q. (BY MR. CURTIS) Have you ever seen researchers 19 in the field use Google Scholar? 20 MR. LANDERS: Object to form. 21 A. That's -- I'm not speaking to researchers I've 22 worked with in the past, but I can talk about the 23 research that I've done in relation to this case. 24 Q. (BY MR. CURTIS) How many years of experience 25 do you have as a university librarian?	Page 28 1 Q. And for the record here, can you briefly 2 explain how web crawlers work and locate and index 3 websites? 4 MR. LANDERS: Object to form. 5 A. I will do my best to be brief. So I can tell 6 you the way that Google uses web crawlers. Google is 7 divided into three different processes when it comes to 8 building its -- when it comes to the results that you 9 will see when you perform a search query within Google. 10 So the initial part is to send crawlers 11 that crawl across the internet using various means to 12 locate and then index websites. 13 There's a number of decisions that go into 14 whether or not Google even decides to index a website, 15 and then once it is enter into Google's index, which is 16 its internal, privately maintained database of the 17 internet as such as it has indexed, it then uses a 18 discovery tool to search within that index, and it's 19 that discovery tool that determines which results you 20 will see in a Google search based on the search query 21 that you input. 22 Q. (BY MR. CURTIS) I appreciate that answer, and 23 I feel like you cut it very brief. I'm sure you know a 24 lot more than that. 25 I want to focus on -- my question is how

Page 29 1 does Google know -- or how does a Google web crawler 2 know where to start crawling? 3 A. So one of the biggest ways that web crawlers 4 work is that it goes through how often a web page is 5 seen on other web pages, so it will often track sort of 6 paths depending on who is linked to a page or how often 7 it appears in others'. There's other ways that do it as 8 well. That's the one that I'm most familiar with. 9 Q. If I were to create a blog that's linked from 10 nowhere but I wanted that blog to be discoverable on 11 Google, am I able to submit that blog to Google so it is 12 crawled by their web crawlers? 13 MR. LANDERS: Object to form. 14 A. You can't submit anything to Google. If you 15 sign up, you can use search engine optimization tools to 16 request that Google crawl it, but that doesn't 17 necessarily mean that Google will crawl it, and even if 18 Google were to crawl it, that does not mean that it 19 would make the decision to index it. 20 Q. (BY MR. CURTIS) So what do you mean by "search 21 engine optimization tools"? Are those provided by 22 Google? 23 A. No. And I mean, I'll be honest, often those 24 are tricks. I don't believe they existed to that extent 25 back in 2008, and they would have to be added on to an	Page 31 1 would or wouldn't operate in a specific way. 2 Q. And each search engine web crawler may decide 3 differently whether to follow particular links, correct? 4 A. Search engines operate under their own models. 5 Q. Do you know -- are you familiar with the 6 Wayback Machine? 7 A. I am familiar with it. 8 Q. Does the Wayback Machine use web crawlers? 9 A. The Wayback Machine actually asks people to 10 specifically request that it archive a version of a 11 website on a specific date. 12 Q. Do you have an understanding of how the Wayback 13 Machine crawls through a website when that site is 14 requested to be archived? 15 MR. LANDERS: Object to form and scope. 16 A. The Wayback Machine tracks a website on the day 17 that you ask it to archive it. 18 Q. (BY MR. CURTIS) Do you know whether the 19 Wayback Machine follows all available links on a web 20 page? 21 MR. LANDERS: Object to form. 22 A. In my experience, it does not. 23 Q. (BY MR. CURTIS) Let's turn to paragraph 25 of 24 your declaration, Exhibit 2011. 25 A. You said paragraph 25?
Page 30 1 extra layer. 2 Q. So do you know whether in 2008 or prior someone 3 could request for Google to crawl their website? 4 MR. LANDERS: Object to form. 5 A. I don't know specifically based on that date. 6 However, again, that's not what I was asked to do. I 7 was asked to determine if using Google as a search 8 engine, if I would be able to locate Trevarthen. 9 Q. (BY MR. CURTIS) Once a web crawler begins to 10 crawl a website, does it begin at the root most link and 11 then span through all available links on each web page? 12 MR. LANDERS: Object to form. 13 A. I want to make sure that I understand what 14 you're asking. That when a web crawler goes to a web 15 page to crawl, it will by default then move on to every 16 web page that is linked from that web page? 17 Q. (BY MR. CURTIS) Yes. Is that how web crawlers 18 work, I guess is my question? 19 A. Not automatically. 20 Q. Okay. So which link does a web crawler choose 21 to follow versus not? 22 A. I couldn't hypothetically tell you. It would 23 depend on each individual page as it sort of appears. 24 There isn't a universal answer, so I hesitate to give 25 you a definitive answer on whether or not a web crawler	Page 32 1 Q. Yes. Let me know when you are there. 2 A. All right. I'm on there. 3 Q. Okay. The first sentence reads, "In the 2008, 4 2009 timeframe, Google's indexing capabilities were 5 limited and resulted in significant delays between when 6 a web page became available on the internet and when 7 Google indexed the page to become available through its 8 search results"; is that correct? 9 A. Yes. 10 Q. When you say "significant delays" in that 11 sentence, what order of magnitude of delay are you 12 referring to? 13 A. I was responding to the notion that a page 14 would be available the next day compared to the actual 15 search results. 16 Q. In your experience, after a web page is indexed 17 by Google, how soon does it become available as a result 18 in a search result? 19 MR. LANDERS: Object to form. 20 A. I can never confirm whether or not a page has 21 been indexed by Google, so I wouldn't be able to tell 22 you. 23 Q. (BY MR. CURTIS) In your experience, how long 24 is the typical delay between when a web page becomes 25 available on the internet and when Google indexes the

Page 33 1 page to become available through its search results? 2 MR. LANDERS: Object to form. 3 A. Again, because I can't confirm on a day when a 4 page is indexed, I can't confirm whether or not it would 5 be available for the Google search tool to return it in 6 a search result, so I can't say definitively. 7 Q. (BY MR. CURTIS) I'm trying to understand when 8 you said there are significant delays in this sentence, 9 what you're basing that on. Can you tell me what that's 10 based on? 11 A. Sure. It's based on the way that Google 12 updates its algorithm and the speed at which it does 13 search and crawl the Internet, which has increased since 14 the Caffeine update. So the expectation of crawling is 15 much faster now compared to prior to that date. 16 Q. So prior to the Caffeine update, are we talking 17 delays of weeks between when a web page becomes 18 available and when Google indexes it? 19 MR. LANDERS: Object to form. 20 A. Again, I can never confirm on which date Google 21 has crawled a page and then if they have crawled it and 22 decided to index it, at which point it would have been 23 indexed and at which point it would have been available 24 to be returned in a search result. 25 Q. (BY MR. CURTIS) Would you consider a delay of	Page 35 1 crawls today, and I would not know for 2008 either. 2 Q. Do you have a best estimate of how often a 3 crawler crawls websites? 4 MR. LANDERS: Object to form. 5 A. I don't. 6 Q. (BY MR. CURTIS) Will you turn to paragraph 19 7 of your declaration, Exhibit 2011. Let me know when you 8 are there. 9 A. I'm on there. 10 Q. In that paragraph, you state -- beginning on 11 the fourth line, you have a sentence beginning, "Even 12 today." Do you see that sentence? 13 A. I see, yes, the beginning of it. 14 Q. In that sentence you say that, "Scholarly 15 research papers uploaded to our institutional repository 16 IU Scholarworks are generally not available on Google 17 for a few days at best." Do you see that? 18 A. I do. 19 Q. What's that opinion based on? 20 A. My work with our discovery team at Indiana. 21 Q. And so at Indiana, you've experienced seeing a 22 paper uploaded to your institutional repository and then 23 a few days later being available in a Google search 24 result; is that correct? 25 A. I've never specifically searched for it, but
Page 34 1 a month to be a significant delay in this context? 2 MR. LANDERS: Object to form. 3 A. I -- I don't think there's a definitive answer. 4 I think it's all dependent on a lot of factors, and so I 5 don't want to give a blanket response. 6 Q. (BY MR. CURTIS) Would you consider a delay of 7 a year to be a significant delay in this context? 8 MR. LANDERS: Object to form. 9 A. I think it probably depends on the importance 10 of what it is that you are searching. 11 Q. (BY MR. CURTIS) In the 2008 and 2009 12 timeframe, assuming a web page is one that is crawled 13 and indexed by Google and there's a change to that web 14 page, do you know how long it takes for the web crawler 15 to index those changes and make it available in the 16 search results? 17 A. Again, that assumes that I know exactly when 18 something is crawled, and I cannot know when something 19 is crawled or when it's indexed. 20 Q. I'm not asking when something is crawled as 21 compared to how frequently something is crawled. Do you 22 have any understanding of how frequently in the 2008 and 23 2009 timeframe web crawlers for Google would crawl 24 websites? 25 A. I can't tell you how often a Google crawler	Page 36 1 based on my experience looking for things and working 2 with people who manage institutional repositories, 3 that's where that opinion comes from. 4 Q. Do you know whether that time period would have 5 been longer or shorter in the 2008 and 2009 timeframe? 6 A. I can't guarantee. 7 Q. So you don't know one way or the other? 8 A. I wouldn't -- not enough to feel like I could 9 answer that. 10 MR. CURTIS: Let's take a quick break. 11 I've got a few more questions, and I want to take a 12 pause now to see what else I want to ask, but we'll be 13 done before the next break is up. 14 (Short recess.) 15 Q. (BY MR. CURTIS) Welcome back, Ms. Knoff. 16 A. Thank you. 17 Q. Can you turn to paragraph 21 of your 18 declaration, Exhibit 2011. 19 A. Yes. 20 Q. In this paragraph, you discuss download counts; 21 is that correct? 22 A. I do. 23 Q. And on the fourth line down in that paragraph, 24 you opine that, "Download counts are notoriously 25 unreliable"; is that correct?

Page 37 1 A. Yes. 2 Q. Can you explain to me your best understanding 3 of why download counts are unreliable? 4 A. There's a number of reasons. You can't confirm 5 who specifically has downloaded it, how many downloads 6 it has had. It's just not a reflection of its actual 7 use. 8 Q. But before we talk about confirming who may 9 have been downloading it, is it your opinion that the 10 numbers reflected in a download count in an 11 institutional repository is not accurate? 12 MR. LANDERS: Object to form. 13 A. I think you can't decide if it's accurate, and 14 because you can't decide if it's accurate, you can't 15 inherently trust that it is a reflection of how many 16 people have downloaded or read it. 17 Q. (BY MR. CURTIS) And can you give me any reason 18 as to why the number itself would not be accurate? 19 A. I guess I feel like I've said how specifically 20 they're not is because I, you know -- I don't know who 21 has downloaded that. I have downloaded my own articles 22 from web pages before, which contributes to the download 23 count. There's just no definitive way to say this is a 24 reflection of its importance or how many people have 25 read it or how many people have actually seen it.	Page 39 1 couldn't speculate as to what the real number would 2 potentially be. 3 Q. (BY MR. CURTIS) Could the real number be 4 higher than the number posted on the institutional 5 repository? 6 A. I don't think so. 7 Q. In your experience for your own articles, would 8 you say that the number is more than double what the 9 actual download count should be? 10 A. I don't know that I can set what a download 11 count should be, so I couldn't say if it exceeded or 12 under met what my expectations would be. 13 Q. Well, would you say that the download count is 14 more than double what the actual download count is? 15 MR. LANDERS: Objection, asked and 16 answered. 17 A. Yeah, I don't -- I don't have a way to tell. 18 So I don't think I can give a definitive answer to that. 19 Q. (BY MR. CURTIS) If download counts are so 20 unreliable, why do institutional repositories include 21 them? 22 MR. LANDERS: Object to form and scope. 23 A. I would say in this specific situation, the 24 number of download counts doesn't necessarily impact 25 whether or not I can find that article using search
Page 38 1 Q. So it may not be a reflection of how many 2 different people have seen it, but would you at least 3 agree that a download count is an accurate reflection of 4 how many times the PDF was downloaded? 5 MR. LANDERS: Object to form. 6 A. I mean, I don't know the mechanics of how the 7 University of -- the institutional repository works. I 8 know that it is -- based on my experience talking with 9 the people who run repositories and my experience 10 looking at other repositories who also agree that 11 download counts are not an accurate measure, that I 12 would not rely on the download counts for an article -- 13 to confirm that it's been downloaded. 14 Q. (BY MR. CURTIS) So even if it's been reported 15 as having been downloaded 500 times, are you saying that 16 it may never have been downloaded? 17 A. I would say that I do not trust download 18 numbers for articles that I have written and had posted 19 online. 20 Q. And to your best estimate, how far off from the 21 actual number of downloads are the download numbers for 22 articles that you have written and posted online? 23 MR. LANDERS: Object to form. 24 A. Since I can't confirm -- I guess to me, since I 25 can't confirm the reliability of those downloads, I also	Page 40 1 methods. It's not reflected by Google's ability to sort 2 of crawl that. It's not implicated in terms of whether 3 or not it goes beyond just that page of download counts. 4 So to me, it's just not related to whether or not it 5 would be publicly accessible. 6 Q. (BY MR. CURTIS) Okay. So my question is a 7 little bit different. 8 MR. CURTIS: And I move to strike that as 9 nonresponsive to the question. 10 Q. (BY MR. CURTIS) The question is if download 11 counts are so unreliable, why do institutional 12 repositories include them? 13 MR. LANDERS: Objection to the motion, and 14 also I object to form and asked and answered. 15 A. I think I do actually say in my declaration. 16 Q. (BY MR. CURTIS) Can you direct me to what 17 you're referring to? 18 A. Yeah. I'm looking for it currently. 19 So it's in paragraph 21 on the top of Page 20 No. 9. I say that, "Libraries may attempt to rely on 21 download counts to justify the value of institutional 22 repositories, but in practice, download counts are 23 untrustworthy, particularly in a world of internet bots 24 and where the download count conflicts with the rate 25 cited. Second, download counts do not provide any

Page 41 1 explanation as to how the downloader located the 2 reference. In the context of academic research, 3 including that done in an undergraduate setting, it is 4 common to circulate a link to your research amongst 5 friends, family, peers, faculty, prospective employers 6 and more. Any resulting views or downloads from that 7 direct link thus would not have come from Google, yet 8 download counts are unable to provide that distinction." 9 Q. So I'm going to focus in a moment on who is 10 doing the downloads, but looking at that first sentence 11 you read starting with, "Libraries may attempt to rely 12 on download counts," there's a reference to "the world 13 of internet bots." Do you see that? 14 A. I do. 15 Q. And you read that, correct? 16 A. I did. 17 Q. What do you mean by "the world of internet 18 bots"? 19 A. Just that there's a number of ways that 20 resources are accessed on the internet that are not 21 accessed by a human person. 22 Q. And so an internet bot may cause the download 23 count to increase? 24 A. Bots can cause a lot of problems when trying to 25 accurately reflect the number of views or any sort of	Page 43 1 its list of websites that's created, it puts weight on 2 those things as well. 3 So when you're using Google to search for 4 something, regardless of if bots have or haven't 5 interacted with the content, Google is not using that to 6 determine if it's pertinent to the search that you are 7 using to try and find resources like Trevvarthen or other 8 research documents. So the bot itself isn't going to 9 impact its public accessibility. 10 Q. Does the bot impact the download count reported 11 on the institutional repository? 12 A. I don't -- I can't say with any certainty in 13 this specific situation if a bot impacted that, but what 14 I can say is that the download counts and whether or not 15 they are coming from bots or friends would not have 16 impacted whether or not I would find Trevvarthen on a 17 search engine. When I tried to do it on Google, I did 18 not locate it. 19 Q. Is a web crawler an internet bot? 20 A. A web crawler is a tool that Google uses. It 21 is different than an internet bot in terms of its 22 purpose and what it extracts is different, but again, 23 the bot itself does not impact the way that a search 24 engine, specifically Google in this situation, does or 25 doesn't weight a page that it indexes in terms of when
Page 42 1 metric like that. 2 Q. But what is an internet bot? 3 A. I guess that's not relevant to what I was asked 4 to look at in this case. I wasn't asked to talk about 5 bots, but instead whether or not I would be able to 6 find -- or a reasonable researcher would be able to find 7 the Trevvarthen thesis. 8 Q. So are you able to explain to me why an 9 internet bot would be downloading a thesis? 10 MR. LANDERS: Object to form. 11 A. I don't know that I can speak to that in this 12 specific situation. 13 Q. (BY MR. CURTIS) Do you have an understanding 14 of what an internet bot is? 15 A. I understand what -- yes, I understand what an 16 internet bot is, but again, regardless of whether a bot 17 is or isn't going across a page, that doesn't impact 18 whether or not something would be findable in Google 19 because of the way that these types of pages are 20 indexed. It depends on sort of what's inherently in the 21 page. 22 So frequently what's the heading of the 23 article based on the way that sort of the web page is 24 constructed all impacts whether or not Google would 25 index it, and then even when it's in its index, which is	Page 44 1 it would or wouldn't return that as a result to a search 2 query. 3 Q. In your experience, do most institutional 4 repositories report download counts? 5 MR. LANDERS: Object to form. 6 A. I think that if a repository chooses to include 7 count on the page, it's decided that it's worthwhile by 8 its own metrics, those metrics still would not impact 9 whether or not that page would go beyond the repository 10 itself. 11 Q. (BY MR. CURTIS) My question is a little bit 12 different. I think you answered why an institutional 13 repository might include download count, but in your 14 experience, do most institutional repositories report 15 download counts? 16 A. There are a lot of institutional repositories. 17 I have not seen enough to feel like I could tell you if 18 it was a usual practice or not. 19 Q. Of the ones you've seen, would you say that 20 more include download counts or do not include download 21 counts? 22 A. I don't actually look for download counts, so I 23 could not tell you just because I don't put enough 24 emphasis on it to notice it. 25 Q. Let's turn to Exhibit 1030 again. I want to go

Page 45 1 to Page 13. Let me know when you are there. 2 A. All right. I'm on there. 3 Q. And this page, which we discussed before, at 4 the very bottom -- sorry. Strike that. Let me start 5 over. 6 Again, for the record, this is a Wayback 7 Machine capture of the record of the Trevarthen thesis 8 from March 22nd, 2008, correct? 9 A. Yes, that's what it says on there. 10 Q. And at the bottom of the page it says, "This 11 item has been downloaded 569 times." Do you see that? 12 A. I do see that. 13 Q. Of those 569 downloads, do you have any 14 opinions on how many of those would have been internet 15 bots? 16 A. I think that those downloads most likely came 17 from people who had the direct link to it. I can't 18 differentiate, but I think the link itself would have 19 driven those downloads. 20 Q. And what kind of people would have had the 21 direct link to this page? 22 A. People that Trevarthen shared it with. 23 Q. Do you know whether someone could have located 24 this page from any search features on Research Online? 25 A. Because I didn't use the search features, I	Page 47 1 Q. Is that a common practice? 2 A. Amongst people that I have seen, yes, it is. 3 Q. And you're communicating with other people in 4 your same field, correct? 5 MR. LANDERS: Object to form. 6 A. People in my same field, people in the 7 university, people from other universities. 8 Q. (BY MR. CURTIS) Is it fair to say that the 9 people aren't going to follow the link and download the 10 paper unless they're interested in that subject matter? 11 MR. LANDERS: Object to form. 12 A. I don't know that I could speak to other 13 people's motivations. I have seen my, you know, 14 colleagues link things, and I have looked at them out of 15 interest of what work they are doing, but I can't make a 16 guess as to someone else's motivations for clicking on 17 my article or not. 18 Q. (BY MR. CURTIS) Have you ever provided a link 19 to any of your publications to prospective employers? 20 A. Well, I've included them on my CV, which I know 21 is attached to here, and when I apply to jobs, I include 22 my CV. 23 Q. Do you know whether Mr. Trevarthen included his 24 link to this -- to his thesis when he applied for any 25 jobs?
Page 46 1 can't say, but I will tell you that it is highly 2 unlikely that this search function within Research 3 Online would be sophisticated enough to pull key words 4 like the ones that I was provided with and from the full 5 text. So I don't think it would be sophisticated enough 6 to find if you were not looking for this specific thesis 7 by this specific person. 8 Q. Do you know what kinds of people Mr. Trevarthen 9 may have provided the direct download link to? 10 A. I think I did say it in my declaration. On 11 paragraph 21 on Page 9, that, "In the context of 12 academic research, including that done in an 13 undergraduate setting, it's common to circulate a link 14 to your research amongst friends, family, peers, 15 faculty, prospective employers and more." 16 Q. Have you ever circulated a link to your 17 research to more than 500 people? 18 A. I have included it in E-mail communications 19 when I have published something recently. So if I have 20 E-mailed someone -- and I often E-mail more than 500 21 people in a month -- they would have seen that link. 22 Q. Do you include the link at the bottom of the 23 E-mail in your signature block? Is that what you're 24 saying? 25 A. Yes.	Page 48 1 A. I have not seen his job applications, so I 2 can't say. 3 Q. So when you say it's common to circulate your 4 link to prospective employers, you're referring to 5 generally, not to anything Mr. Trevarthen may have done 6 specifically, correct? 7 A. I'm speaking to standards of the field. In 8 order to apply to any position, you would submit a 9 resume or CV. 10 Q. Do you have any estimate of the 569 downloads 11 of the Trevarthen thesis, how many came from friends and 12 family of Mr. Trevarthen? 13 A. I think all of them would have been from 14 friends, family or people that he had provided a direct 15 link to it. 16 Q. I guess I was trying to distinguish between 17 friends and family on the one hand and prospective 18 employers and other people on the other hand. Do you 19 have any view of just the friends and family category, 20 how many of those 569 downloads would have been from 21 friends and family? 22 A. I don't know how many friends or family 23 Trevarthen has, so I don't want to make a guess. My 24 guess -- I mean, if I were to make a guess, a lot of my 25 friends and family want to support me and have

Page 49 1 downloaded my articles to see what I've been working on. 2 Q. Would you say that, you know, of your own 3 articles, more than 100 friends and family download the 4 article? 5 MR. LANDERS: Object to form. 6 A. Yes, I would. 7 Q. (BY MR. CURTIS) Do you know whether the 8 Trevarthen paper, Exhibit 1005, was ever cited in any 9 other scholarly publications? 10 A. When I did a search for its citation, it didn't 11 appear in any prior to that, the date I was asked to 12 look for, 2008, 2009. 13 Q. Do you know whether it appeared after 2008 or 14 2009 as a citation in any scholarly articles? 15 A. I don't want to say for certainty I did it at 16 the time. I don't want to, you know, make a statement 17 on something that I did that I didn't put in my 18 declaration. 19 Q. Do you know whether a citation to the 20 Trevarthen thesis in another scholarly article would 21 include the direct link to the thesis? 22 MR. LANDERS: Object to form and 23 hypothetical. 24 A. I will say it would depend on the citation 25 style.	Page 51 1 documents that you cite? 2 MR. LANDERS: Object to form. 3 A. I'm trying to understand what you're asking and 4 I don't know that I do. 5 Q. (BY MR. CURTIS) Well, let me step back then. 6 So one way and it seems like a common way 7 to locate publications to cite in your work is to 8 search, whether it's through a free search service or a 9 paid search service, is that accurate so far? 10 A. You're asking if those are the two ways that I 11 search for -- 12 Q. No. I'm asking if those are common ways that 13 you search for publications to cite in your own work? 14 MR. LANDERS: Object to form. 15 A. Yes, those are ways to search for resources. 16 Q. (BY MR. CURTIS) So other than -- we'll call 17 them online search tools, what other ways are there that 18 someone may locate a reference to cite in their 19 publications? 20 A. Well, it would depend on the discipline. 21 Q. Do you have any understanding of how that may 22 have occurred in the discipline of Mr. Trevarthen's 23 thesis? 24 MR. LANDERS: Object to form and scope. 25 A. When working with researchers in those
Page 50 1 Q. (BY MR. CURTIS) Okay. If you were citing an 2 honors thesis in one of your own publications, would you 3 provide a direct link to it? 4 MR. LANDERS: Object to form. 5 A. It would, again, depend on the citation style. 6 Q. (BY MR. CURTIS) When you are citing documents, 7 do you ever consider how easy or difficult it will be 8 for individuals to download or -- to locate or download 9 that specific document? 10 MR. LANDERS: Object to form. 11 A. In the course of my own research, I use 12 documents and articles that support my perspective or 13 thesis. I don't consider the availability of it. I 14 consider what is relevant to my own individual research 15 work. 16 Q. (BY MR. CURTIS) And when you are connecting 17 your own individual research work, I think you touched 18 on this before, you use tools like Google and Google 19 Scholar to locate relevant publications? 20 MR. LANDERS: Object to form and 21 characterization. 22 A. In addition to other search tools, yes. 23 Q. (BY MR. CURTIS) Other than search tools -- 24 thinking through your own publications here, other than 25 search tools, are there any other ways that you locate	Page 52 1 disciplines, searching is the only way that I've helped 2 them in the past. 3 Q. (BY MR. CURTIS) I want to go back to some 4 testimony that occurred earlier today, and I'm not 5 trying to misquote you. I just want to go back there. 6 I believe you said that currently, at least in your 7 experience as a librarian, and it goes back nine years 8 or so, you typically use Google as the main search 9 engine for locating documents? 10 A. I wouldn't say that Google is the search engine 11 that I personally use to locate documents. In this 12 situation, it's the tool I used to test if I would be 13 able to find the Trevarthen thesis. 14 Q. So thinking -- okay. Thanks for that 15 clarification. Let me ask this differently then. 16 In your experience as a librarian, for 17 persons of ordinary skill in the art, is it correct that 18 they typically use Google to locate relevant research 19 and documents? 20 MR. LANDERS: Object to form. 21 A. Yes. Google is often the first place that I 22 start when working with researchers. That's what they 23 have come to me as their starting place as well. 24 Q. (BY MR. CURTIS) And then after Google, what 25 would be the next place you would typically go with

Page 53 1 persons of ordinary skill in the art for research? 2 MR. LANDERS: Object to form. 3 A. Library resources. 4 Q. (BY MR. CURTIS) Do those include paid 5 repositories of scholarly articles? 6 A. I'm going to differentiate that it's not paid 7 repositories. We have licensed and subscription 8 databases that we access through specific vendors. 9 That's generally what I mean when I say "library 10 resources." 11 Q. Thanks for that clarification. 12 Do you know whether -- sorry. Let me start 13 that question over. 14 Would the same tools have been used by 15 persons of ordinary skill in the art around 2007 and 16 2008? 17 MR. LANDERS: Object to form. 18 A. Yes. The search tools haven't changed that 19 much. Google is often the starting place for most 20 researchers and then moving into the licensed and 21 subscription databases. 22 Q. (BY MR. CURTIS) When you say that Google is 23 often the starting place, does that include Google 24 Scholar or do you consider Google Scholar as something 25 separate?	Page 55 1 2008 as well? 2 A. Since I wasn't working with researchers at that 3 point, I don't necessarily want to say which individual 4 discipline a researcher would or wouldn't use. 5 When I tested out using Google search, 6 which over the last -- you know, as a student myself and 7 then as a professional librarian, Google has been the 8 starting place for it. 9 Q. Other than Google, do you know whether there 10 were any other general search engines used by persons of 11 ordinary skill in the art in 2007, 2008? 12 A. If we're talking about use, Google was and 13 continue and will continue to be the dominant and far 14 and away most often used search engine. 15 Q. Do you know whether Yahoo was used in 2007, 16 2008? 17 A. I can tell you that Yahoo's use was 18 significantly lower than Google's. 19 Q. But still may have been used? 20 MR. LANDERS: Object to form. 21 A. Based on my experience previously, it is often 22 not used. I don't know that I've, again, ever seen 23 someone come to me with a Yahoo search. I have never 24 initiated a Yahoo search. I've never seen it working 25 with researchers or personally as a researcher.
Page 54 1 A. I consider Google Scholar separate. 2 Q. In your experience, do researchers search on 3 Google Scholar for relevant scholarly publications? 4 MR. LANDERS: Object to form. 5 A. In my experience, most people start with 6 general Google. 7 Q. (BY MR. CURTIS) In your experience, do people 8 use Google Scholar even if they don't start with it? 9 MR. LANDERS: Object to form. 10 A. General -- most often -- and I would say this 11 is almost always when I work with people, it isn't clear 12 which resources we may or may not use. It depends on 13 what we find for an initial search. 14 Oftentimes if we find something on Google 15 and it doesn't necessitate us to move into something 16 like Google Scholar, we won't. I won't introduce a tool 17 just to introduce it. It's dependent on what my 18 research process is and what materials I do and don't 19 locate. 20 Q. (BY MR. CURTIS) So Google Scholar is one 21 potential tool you may use with a researcher, correct? 22 MR. LANDERS: Object to form. 23 A. Yes. 24 Q. (BY MR. CURTIS) And would that have been true 25 for persons of ordinary skill in the art in 2007 and	Page 56 1 Q. (BY MR. CURTIS) Do you know whether Research 2 Online of the University of Wollongong ever requested 3 that Google crawl it with its web crawlers? 4 MR. LANDERS: Object to form. 5 A. I don't have any way of knowing that since I 6 didn't work for the university, I don't know anyone that 7 works for the university, I was not present for when 8 they were posting articles at that time. 9 Q. (BY MR. CURTIS) Do you know whether 10 institutional repositories typically request that Google 11 crawl its websites with web crawlers? 12 MR. LANDERS: Object to form. 13 A. I would say, in my experience working within 14 higher ed, our funding is such that we do not have the 15 time or the staffing to perform those kinds of 16 activities. 17 Q. (BY MR. CURTIS) Do you know whether your 18 university's institutional repository has been crawled 19 with Google's web crawler? 20 A. Again, I don't know if a website is ever 21 crawled, regardless if it's the institution that I work 22 at or a different institution. 23 Q. Do you know whether scholarly articles hosted 24 by your university's institutional repository appear in 25 Google search results?

Page 57 1 A. I've not tested that. When I performed these 2 searches, it was using the key words to look for this 3 specific article, which I was unable to find. 4 Q. A couple of final questions about your 5 searching on Google and, in particular, the date limited 6 searches that you used. 7 So let me direct your attention to 8 paragraph 33 of your declaration, Exhibit 2011, and let 9 me know when you are there. 10 A. I'm on -- I'm at paragraph 33. 11 Q. Okay. Would you agree with me that in 2025, 12 it's impossible to recreate the exact search results 13 from what a search would have returned on Google in 14 2007, 2008? 15 A. So I would say that the date limiter tool is 16 always going to be pulling from the same results that 17 would have been available at that time. So regardless 18 of the search results that were pulled from Google 19 searches of its index, that will change regardless of 20 how often I do it, but that same amount of results and 21 specific results will still be pulled from that. 22 Q. If a website URL was crawled in 2007 and that 23 website link is subsequently removed, would that website 24 appear in a date limited search in 2025 that is 25 searching for URLs from 2007?	Page 59 1 completely dead, that -- and I search for something 2 that's responsive that would capture that URL, the 3 search results may include that, but when I click on 4 that, it will just take me to a dead link and say error? 5 A. I didn't test that, and I know that the 6 Trevarthen article has re -- as far as I understand it, 7 remained online, and so it wouldn't necessarily be 8 relevant to this specific situation. 9 Q. Have you ever run a date limited search and 10 found a document that clearly was not from the date 11 limited time period? 12 MR. LANDERS: Object to form. 13 A. Not that I can recall. 14 Q. (BY MR. CURTIS) So if I were searching for 15 documents from between 2006 and 2009 and the search 16 returned a PDF that was generated in 2015, what would 17 that tell you? 18 MR. LANDERS: Object to form. 19 A. The best I could guess is that it's just the 20 Google search returning based on what it's determined is 21 pertinent, but I couldn't tell you definitively tell you 22 why or why that wouldn't happen. 23 MR. CURTIS: Okay. I have no further 24 questions. 25 MR. LANDERS: Okay. Let's take a break.
Page 58 1 A. Are you asking if a dead link would be included 2 within a date limiter search? 3 Q. Correct. 4 A. When I performed these searches, it did not 5 include dead links, but it will still include links to 6 the most recent updated version, but it's reflecting the 7 date at which that site was pulled within that index. 8 Q. I guess I'm a little confused by your response. 9 What do you mean when you say it will not pull dead 10 links? 11 A. I have not seen it pull dead links. So a dead 12 link is a link to a site that no longer exists. So it 13 happens often, URLs change, but if you don't change the 14 link to that URL specifically. 15 And so in this specific situation, Google 16 will actually continue with that URL. So even though 17 within a date limited search, it's reflecting that that 18 page existed within that date, if you click that link, 19 because it updates its crawling and its index, it will 20 still take you to the current live version even though 21 in that search result that you're receiving from a 22 Google search, it's reflecting what would have been 23 returned in that result at the time you searched it. 24 Q. Okay. So if I'm understanding correctly then, 25 if there were a URL that existed in 2007 that is	Page 60 1 It might take me a moment just to review everything, but 2 if I can just have a moment. 3 (Short recess.) 4 EXAMINATION 5 Q. (BY MR. LANDERS) All right. Welcome back, 6 Ms. Knoff. 7 A. Thank you. 8 Q. I'm going to ask you just a few follow-up 9 questions pertaining to some of the questions that 10 Mr. Curtis asked you earlier today. 11 Do you recall earlier in the deposition 12 when Mr. Curtis asked you if there's any reason a web 13 page in 2015 might not show up in a Google date limited 14 search from say 2006 through 2009? 15 A. Yes. 16 Q. And I believe he asked what would that tell 17 you, something to that effect? 18 A. Yes. 19 Q. Can you explain if your consideration of that 20 question impacts your opinion on the public 21 accessibility of Trevarthen? 22 A. Yes. So while I have not had dates beyond a 23 date limited search be returned in a search I've done 24 before, even if let's say an article from 2015 showed up 25 in a date limited search I did from 2006 to 2009, that

Page 61 1 doesn't change what still would have been available in 2 that timeframe. 3 Because it -- you know, Trevarthen has 4 appeared in more places, it's more likely that it would 5 potentially slip into that, and because it didn't even 6 when I was performing these searches currently tells me 7 that it still would be less likely for it to have been 8 found then, and then when I tested the searches, it 9 still didn't show up. 10 So while I can't account for why a 2015 11 article might appear in a date limited search, I do not 12 believe that that impacts the validity of the results 13 that I had when I did a date limited search in this 14 situation. 15 Q. And do you recall Mr. Curtis asking you some 16 questions about indexing in Google? 17 A. Yes. 18 Q. And do you also recall being asked about search 19 results in Google? 20 A. Yes. 21 Q. And do you recall being asked about this 22 concept of web crawling? 23 A. Yes. 24 Q. Can you explain any differences, if there are 25 any, between those three features of Google?	Page 63 1 into my search query itself. 2 So when I did this search for Trevarthen, 3 it doesn't mean that Trevarthen wasn't in the index, it 4 just means that Google didn't weigh it as pertinent 5 enough to the search that I was doing using those 6 specific key words to return it to that search result. 7 Q. Okay. And do you recall being asked about the 8 Yahoo search tool? 9 A. Yes. 10 Q. And I believe you said you weren't asked to 11 perform a search with Yahoo in this case? 12 A. Yes. 13 Q. Do your results in your analysis using Google 14 tell you anything about what would have happened if you 15 had attempted a similar analysis using Yahoo search 16 tools? 17 A. So Google is the dominant search engine for a 18 reason. It does a much better job of capturing websites 19 and then doing a search on those. 20 So in my opinion, the reason that someone 21 wouldn't do Yahoo is because even if they were doing 22 that same search with those same key words, because you 23 didn't find it in Google, you would be even less likely 24 to find it in Yahoo. 25 It's just not as sophisticated a tool as
Page 62 1 A. Sure. So the way Google operates is in these 2 sort of three distinct and different functions. So a 3 web crawler is sort of that initial contact that Google 4 will make with a website. 5 Once it's crawled, that crawler decides 6 whether or not it's going to include that website into 7 the Google index. And the Google index is what Google 8 maintains. So when you are searching for something 9 using the Google search tool, you are searching its 10 index. You are not searching the internet. 11 So then once it is in Google's index, the 12 Google search tool is what you are using to search the 13 index, and it's that Google search tool that will decide 14 if something is pertinent to the key words that you are 15 using in a search query. 16 So if I -- when I did the search using the 17 expert key words, the search tool searched the Google 18 index, and let's say it came up with result A, B, C, D 19 and E were -- it found to be pertinent to my search 20 query, but based on the different things it gives weight 21 to, it could have said, well, E is not actually 22 pertinent to what I think this person is searching for, 23 so I'm only going to return results A, B, C and D. And 24 I, the searcher, will never know that result E was even 25 in the index, let alone that it did not come back to me	Page 64 1 Google search is, and so regardless of search terms that 2 I would be using in Google, I would not get the same 3 results from Yahoo -- or I should say I would not get 4 the Trevarthen response from a Yahoo search, the same 5 way I did not get it from the Google search. 6 Q. Do you recall being asked about an exhibit 7 today that purported that there were supposedly 569 8 downloads of Trevarthen? 9 A. Yes. 10 Q. Does that mean to you that 569 different people 11 downloaded the reference? 12 A. No. So I think it's highly unlikely that that 13 many individual users downloaded that article. What 14 most likely happened is that Trevarthen shared that link 15 and then the same person could have downloaded it 5 16 times, 10 times, 15 times. 17 So I am incredibly guilty of this myself, 18 where if I'm looking for an article that I know exists 19 that someone has shared with me or I have seen as a 20 citation, rather than searching through my files of 21 downloaded PDFs, articles, just because I have so many, 22 it's faster for me just to go back to that specific web 23 page and redownload it. So I know I've got 5 to 10 plus 24 copies of the same PDF in my files just because it's 25 faster for me to redownload it, and I think that's what

Page 65 1 happened with Trevarthen too. 2 Q. Okay. That's all the questions I have. I 3 really appreciate your time today, Ms. Knoff. 4 FURTHER EXAMINATION 5 Q. (BY MR. CURTIS) Can I ask a few follow-up 6 questions, Ms. Knoff? 7 A. Yes. 8 Q. Going back to the issue of Google's index, once 9 a website has been indexed in Google's index, can it be 10 removed? 11 A. I don't believe it would be removed, no. 12 Q. So you're not aware of any circumstances where 13 a website would have been in Google's index in say 2007 14 and not be in the index in 2025? 15 A. Well, so, I mean, the internet is forever, 16 right? Like once it's on there, it's not coming down. 17 Regardless of whether or not you can find it, it's still 18 exists. And I can't think of a single reason that 19 Google would take the time to remove things from its 20 individual index rather than just continuing to add to 21 it. 22 Q. Do you know whether there are any websites that 23 are indexed on Yahoo that are not indexed on Google? 24 A. There's no way for me to personally know, but I 25 highly doubt there are any websites that are indexed on	Page 67 1 MR. LANDERS: Object to form, hypothetical. 2 A. I mean, I'll even say that I've done that, yes. 3 I'll misremember an article and then look at it and go, 4 "Oh, that's not saying what I thought it said." 5 Q. (BY MR. CURTIS) And so you return to the 6 article because it's pertinent to something that you're 7 thinking about or working on? 8 MR. LANDERS: Object to form, 9 mischaracterizes the testimony. 10 A. I'll return to an article if I remember it 11 vaguely and then read it and find out that, oh, this is 12 not pertinent to my research. I read so many articles 13 at this point that they do tend to get conflated. 14 Q. (BY MR. CURTIS) Would you return 10 or 15 15 times, each time deciding again that the article is not 16 relevant to your work? 17 MR. LANDERS: Object to form. 18 A. Yes, I would. 19 MR. CURTIS: I have no further questions. 20 MR. LANDERS: All right. Me neither. 21 (Whereupon, at 12:09 p.m. 22 the deposition was concluded.) 23 24 25
Page 66 1 Yahoo and not indexed on Google. I would be very 2 surprised to learn that. 3 Q. So if you were to draw a Venn diagram of 4 Google's index and Yahoo's index, the Google index would 5 be a circle within the Google circle, correct? 6 A. The Yahoo circle would be within Google. 7 Q. Sorry. 8 A. Yes. Yes. I believe that everything in Yahoo 9 would also be in Google, and I believe that there are 10 things in Google that would not be in Yahoo. 11 Q. When you testified that there were documents or 12 research references that you downloaded repeatedly 13 rather than saving on your own hard drive, why was it 14 that you kept going back to that particular document? 15 A. If I needed to reference it again, if I was 16 trying to remember something, I write in it, and it's 17 not that I didn't save it on my own personal laptop. I 18 did save it. I just didn't want to go through the 19 effort of searching my laptop. It's still there. I 20 will have copy 1, 2, 3, 4 of the same article in my 21 files. 22 Q. Is it fair to say that a person of ordinary 23 skill in the art wouldn't repeatedly download a 24 reference unless he or she found that reference to be 25 pertinent to something they were working on?	Page 68 1 CHANGES AND SIGNATURE 2 WITNESS NAME: MEREDITH KNOFF 3 DATE OF DEPOSITION: 4-29-2025 4 PAGE LINE CHANGE REASON 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

Page 69	Page 71
1 I, MEREDITH KNOFF, have read the foregoing 2 deposition and hereby affix my signature that same is 3 true and correct, except as noted above. 4 5 _____ 6 MEREDITH KNOFF 7 THE STATE OF _____) 8 COUNTY OF _____) 9 Before me, _____, on this day 10 personally appeared MEREDITH KNOFF, known to me (or 11 proved to me under oath or through _____) 12 (description of identity card or other document) to be 13 the person whose name is subscribed to the foregoing 14 instrument and acknowledged to me that he executed the 15 same for the purposes and consideration therein 16 expressed. 17 18 Given under my hand and seal of office, this 19 _____ day of _____, _____. 20 21 _____ 22 NOTARY PUBLIC IN AND FOR 23 THE STATE OF _____ 24 25 My commission expires: _____ 26 _____ No Changes Made _____ Amendment Sheet(s)	1 2 3 Certified to by me on this, the 29th day of 4 April, 2025. 5 <u>Edith A. Boggs</u> 6 Edith A. Boggs, CSR No. 3022 7 Firm Registration No. 03 8 Expiration Date: 7-31-2026 9 1235 North Loop West, Suite 510 10 Houston, Texas 77008 11 Ph. No.: (713) 524-4600 12 13 14 15 16 17 18 19 20 21 22 23 24 25
Page 70	Page 72
1 UNITED STATES PATENT AND TRADEMARK OFFICE 2 BEFORE THE PATENT TRIAL AND APPEAL BOARD 3 4 SMAXTEC INC. AND 5 SMAXTEC ANIMAL CARE GMBH, 6 Petitioner 7 8 v. 9 10 ST REPRODUCTIVE TECHNOLOGIES, LLC 11 Patent Owner. 12 REPORTER'S CERTIFICATION OF THE ORAL 13 DEPOSITION OF MEREDITH KNOFF 14 4-29-2025 15 I, Edith A. Boggs, a Certified Shorthand 16 Reporter in and for the State of Texas, hereby certify 17 to the following: 18 That the witness, MEREDITH KNOFF, was duly 19 sworn by the officer and that the transcript of the oral 20 deposition is a true record of the testimony given by 21 the witness; 22 23 That the original deposition was delivered to 24 Nathan Curtis, Esq.; 25 That a copy of this certificate was served on all parties and/or the witness shown herein on _____. I further certify that pursuant to FRCP Rule 30(e)(2) that the signature of the deponent: _____ was requested by the deponent or a party before the completion of the deposition and that the signature is to be before any notary public and returned within 30 days from date of receipt of the transcript. If returned, the attached Changes and Signature Page contains any changes and the reasons therefore: _____ was not requested by the deponent or a party before the completion of the deposition. I further certify that I am neither counsel for, related to, nor employed by any of the parties or attorneys in the action in which this proceeding was taken, and further that I am not financially or otherwise interested in the outcome of the action.	1 COUNTY OF HARRIS) 2 STATE OF TEXAS) 3 4 I hereby certify that the witness was notified 5 on _____ that the witness has 30 days or 6 (____ days per agreement of counsel) after being 7 notified by the officer that the transcript is available 8 for review by the witness and if there are any changes 9 in the form or substance to be made, then the witness 10 shall sign a statement reciting such changes and the 11 reasons given by the witness for making them; 12 That the witness' signature was/was not 13 returned as of _____. 14 Subscribed and sworn to on this, the 29th day 15 of April, 2025. 16 17 18 19 <u>Edith A. Boggs</u> 20 Edith A. Boggs, CSR No. 3022 21 Firm Registration No. 03 22 Expiration Date: 7-31-2026 23 1235 North Loop West, Suite 510 24 Houston, Texas 77008 25 Ph. No.: (713) 524-4600

