

# Exhibit 29

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UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

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NETWORK-1 TECHNOLOGIES, INC., :  
Plaintiff, :  
vs. : 14 Civ. 2396 (PGG)  
GOOGLE, LLC and YOUTUBE, LLC, : 14 Civ. 9558 (PGG)  
Defendants. :

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VIRTUAL VIDEOTAPED DEPOSITION OF: TREVOR DARRELL  
DATE: Friday, July 10, 2020  
TIME: 1:11 p.m. EDT  
LOCATION: Remote Proceedings  
REPORTED BY: Denise M. Brunet, RPR  
Reporter/Notary

Veritext Legal Solutions  
1250 Eye Street, N.W., Suite 350  
Washington, D.C. 20005

Job No. CS4168610

<p style="text-align: right;">Page 102</p> <p>1 aware of that, for example, on page 97 and on 2 page 108 and the following two pages. And I also 3 cite code on pages 115, 117, and so on and so 4 forth. 5 Q All right. Well, let's look at the code 6 that you referenced on page 97. Is this code that 7 appears on page 97 of your report code that was 8 compiled into the Clango alpha release? 9 A I believe it has, and I believe I relied 10 on the testimony of the creators of this system 11 for that opinion. 12 Q So you did not have a separate 13 compiled -- or directory of the code that was 14 itself actually compiled into the alpha. You're 15 relying on the testimony that this is code that 16 was in the alpha? 17 A Whatever my opinions are, I believe my 18 basis for them in these paragraphs are the 19 testimony from the creator's depositions. 20 Q And that's it, the testimony, right? 21 A That is it. 22 Q There was no other document, for example,</p>	<p style="text-align: right;">Page 104</p> <p>1 SCCS. 2 Q And what is include file? 3 A It's a file that was used -- in 4 particular, this is an include file in the C 5 programming language, and it is part of the source 6 code for a computer application or a computer 7 program. 8 Q And an include file identifies other 9 source code files to be included in the 10 definitional and functional sense of the code. Is 11 that fair? 12 A I actually think it might be slightly 13 more fair to reverse it and say an include file is 14 a file that another source code file includes to 15 access routinely defined or included elements. 16 Q Okay. Was the source code that you 17 excerpt on page 108 of your report included in the 18 Clango alpha release? 19 A I can't recall which release it was, as I 20 sit here today. I would have to refresh my memory 21 from the report. 22 Q Well, let me direct you to the text you</p>
<p style="text-align: right;">Page 103</p> <p>1 that indicated that this particular code on 2 page 97 of your report was actually part of the 3 Clango alpha release, correct? 4 MR. HARDY: Objection to form. 5 THE WITNESS: I don't recall seeing 6 anything like that. 7 BY MR. LEDAHL: 8 Q Okay. And you also mention code that you 9 excerpted starting at page 108 of your report; is 10 that right? 11 A Yeah. 12 Q Now, this code on page 108 is an include 13 file? 14 A Well, I believe it's literally an SCCS 15 file. But it's an SCCS file that represents an 16 underlying include file. 17 Q When you say an SCCS file, what do you 18 mean by that? 19 A As described in paragraph 189 of my 20 report, it's the file from a source code control 21 system. The name of that -- of the particular 22 source code control system was, unsurprisingly,</p>	<p style="text-align: right;">Page 105</p> <p>1 have in paragraph 189. You offer the assertion 2 that this source code file was created on 3 July 26th, 2000. Do you see that? 4 A Yes. 5 Q And that's three weeks after the date you 6 say the Clango alpha release took place, right? 7 A That's correct. 8 Q So unless people at Audible Magic were 9 engaged in time travel, this file would never have 10 been a part of any alpha release of the Audible 11 Magic Clango system, correct? 12 A No. 13 Q So it's your testimony that this file 14 created on July 26th was included in a release 15 created at least three weeks earlier, according to 16 your testimony? 17 A I believe my testimony is this is 18 representative and is consistent with Mr. Wold's 19 testimony. And as you know from other discussions 20 in this matter, the source code control system, 21 this just shows the latest date this file could 22 have been created. This file may have existed for</p>

<p style="text-align: right;">Page 106</p> <p>1 months or years before. And indeed this file was,  2 according to the testimony, most likely obtained  3 from a external open source repository that had  4 existed for years and reflected source code and  5 algorithmic knowledge that one of ordinary skill  6 in the art would be very familiar with it.  7       So I believe my testimony in  8 paragraph 189 is clear, which is that it's  9 consistent with the testimony regarding the alpha  10 release.  11       Q So as to the functioning of the alpha  12 release, am I understanding correctly that you're  13 relying on testimony and that the code that you  14 reviewed was not actually the code from that alpha  15 release?  16       MR. HARDY: Objection to form.  17       THE WITNESS: I don't believe I've give  18 an opinion on that one way or the other. It's  19 very consistent with the testimony. And the  20 testimony was that they incorporated available  21 implementations of approximate nearest neighbor  22 searching, and that this file is consistent with</p>	<p style="text-align: right;">Page 108</p> <p>1       Q What's the first date that this source  2 file was in Audible Magic Clango software?  3       A I'm not sure.  4       MR. HARDY: Objection to form. Sorry.  5 BY MR. LEDAHL:  6       Q You don't know?  7       A I don't know a specific date. I only  8 know the testimony of the creators.  9       Q And you wrote that Mr. Wold created  10 kd-tree code in July of 2000 in paragraph 189 of  11 your report, correct?  12       A Correct.  13       Q So do you have any basis to suggest that  14 that file was created before July 5th, 2000?  15       A Yeah. The file he created -- I believe  16 his testimony is not that he wrote this, but that  17 he had downloaded it and used it. His testimony  18 is that they had a version that was running prior  19 to this. Obviously, there's no evidentiary record  20 of a version earlier than this, but that's not  21 evidence that it didn't exist before.  22       So I'm relying on the testimony of the</p>
<p style="text-align: right;">Page 107</p> <p>1 what they did at the time even though the date on  2 this -- the date that they have on the record  3 was -- perhaps it had been moved -- in fact, if  4 you look at the source code control metadata, it  5 appears that they cleaned up or relabeled or  6 renamed the files.  7       This file is clearly based on an  8 implementation of algorithms that, you know, date  9 from 1997 to 1993 that were, according to the  10 testimony, not written by Muscle Fish, but they  11 were downloaded and used by Muscle Fish. So this  12 file is just one of many copies that had likely  13 been around the web that you could get.  14       And so the fact that this file has a date  15 on it of July of 2000 is not evidence that they  16 didn't have access to the source code earlier;  17 it's just this happens to be the date that the --  18 whatever archive process had produced.  19       I find the source file useful in showing  20 an illustration of a contemporaneous example of  21 what the testimony was talking about.  22 BY MR. LEDAHL:</p>	<p style="text-align: right;">Page 109</p> <p>1 creators for the dates and I'm relying on the  2 source code to show an example of what they were  3 talking about.  4       Q So just to be clear, you've seen no  5 evidence of an actual file that implemented a  6 kd-tree structure that's dated earlier than  7 July 26th, 2000; is that correct?  8       A Well, I certainly have in the world.  9 These -- this software release was well-known and  10 available to anyone who wanted to download it for  11 years prior to 2000.  12       Q Sorry. Let me be clear. You've not seen  13 any evidentiary record that Audible Magic or the  14 Clango system had a file that implemented a  15 kd-tree structure prior to July 26th, 2000,  16 correct?  17       A The evidentiary record that I have seen  18 is that they express the desire and interest to  19 find an approximate nearest neighbor search  20 algorithm in 1999 and early 2000, well before  21 July, and it seems they went and found one of the  22 standard open source repositories that had been</p>

<p style="text-align: right;">Page 110</p> <p>1 available for years to anyone who was interested 2 in this matter.</p> <p>3 And the specific file that I reproduced 4 on 108 was, I assume, the earliest record they 5 could have which has a date of July 26th, 2000. 6 And that doesn't prove or disprove what dates they 7 may have earlier had this file.</p> <p>8 Q And you -- my question to you, sir, is 9 the simple question: You've seen no evidence of 10 the existence of this file at Audible Magic 11 earlier than July 26th, 2000, correct?</p> <p>12 A I mean, I'd say no. I have seen evidence 13 that this file was available to anybody who wanted 14 on the Internet in the late '90s. And I've seen 15 evidence in their testimony that they wanted to go 16 out and get something like that and they got it. 17 So to me, that's evidence.</p> <p>18 Q What evidence have you seen that this 19 file was implemented in any version of the Clango 20 system prior to July 26th, 2000, sir?</p> <p>21 A The deposition testimony of the creators 22 of the system.</p>	<p style="text-align: right;">Page 112</p> <p>1 we've been discussing on page 108, that Mr. Wold 2 testified that that was in the Clango system in 3 July of 2000.</p> <p>4 And separately, on page 113, in 5 paragraph 189, I then proceed to discuss software 6 related to the Clango August beta application.</p> <p>7 Q Which file are you talking about in 8 connection with the August Clango beta application 9 that you're discussing on page 113?</p> <p>10 A I'm confused by your question, because I 11 didn't refer to a file in the August beta 12 application.</p> <p>13 Q Okay. So you're not discussing an actual 14 source code file of the August beta application in 15 paragraph 113; is that fair? Or on page 113.</p> <p>16 A No.</p> <p>17 Q Well, what file are you talking about, 18 then?</p> <p>19 A Well, in paragraph 196, I say that I have 20 examined the source code files reflected in 21 Exhibit 18 from the Audible Magic deposition. And 22 then I reproduced a graphical folder depiction of</p>
<p style="text-align: right;">Page 111</p> <p>1 Q And that's all?</p> <p>2 A That's quite enough.</p> <p>3 Q Have you seen evidence that that file 4 that you excerpted on page 108 was incorporated 5 into a beta release of the Clango system?</p> <p>6 A In paragraph 195, I refer to the 7 testimony of Mr. Wold who discusses the source 8 code of the Clango August beta application.</p> <p>9 Q Is that this file or a different file?</p> <p>10 A I'm sorry, could you repeat that 11 question? I'm not sure I understand what you mean 12 by "this file."</p> <p>13 Q Well, we've been talking about a file 14 that you've reproduced, or part of one, on 15 page 108 of your report. And you just mentioned 16 testimony that you referred to from Mr. Wold and 17 discussed in paragraph 195 of your report about 18 the Clango beta release, you say.</p> <p>19 Is that testimony about this file that is 20 on page 108 of your report?</p> <p>21 A I believe my testimony in paragraph 189 22 is that the source code and include file that</p>	<p style="text-align: right;">Page 113</p> <p>1 the set of those files that I'm referring to in 2 paragraph 198 -- excuse me, 196.</p> <p>3 Q Now, the modification date of all the 4 files that you referred to there on page 114, in 5 paragraph 196, those are all -- with the exception 6 of the first two files, those are all listing 7 modification dates in 2013, correct?</p> <p>8 A Yeah.</p> <p>9 Q Do you have any understanding of what 10 modifications were made to those files prior to 11 that date in 2013?</p> <p>12 A Could you repeat the question?</p> <p>13 Q Sure. The files that are listed on 14 page 114 of your report from this directory all 15 reflect a modification date in 2013. Do you have 16 any understanding as to what modifications were 17 made to those files at any time between 2000 and 18 2013?</p> <p>19 A My understanding is there were none 20 because the testimony of Mr. Wold is that he 21 represents this was the source code from the 22 period in question, from the beta release.</p>

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