

Exhibit 2

Public Version

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF VIRGINIA
NORFOLK DIVISION

-----x
I/P ENGINE, INC., :
Plaintiff, :
v. : Civil Action No.
AOL, INC., et al., : 211-cv-512
Defendants. :
-----x

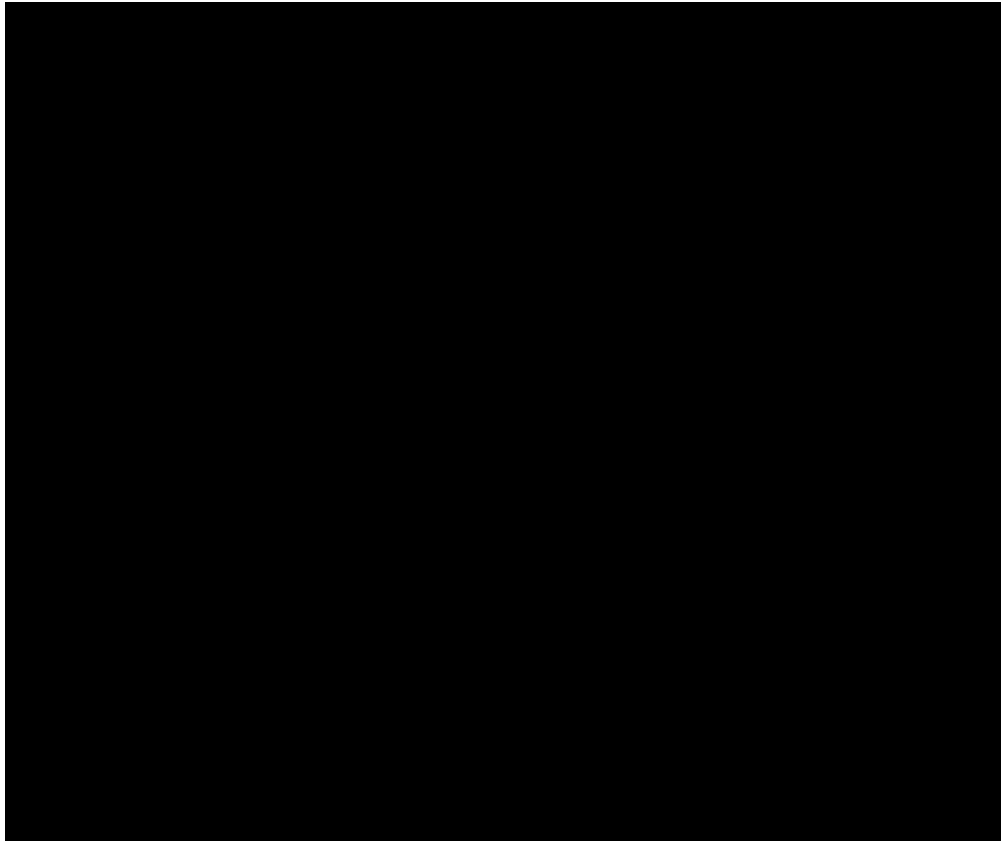
CONFIDENTIAL - OUTSIDE COUNSEL ONLY
Videotaped Deposition of BARTHOLOMEW FURROW
Redwood Shores, California
Friday, September 20, 2013
9:38 a.m.

Job No.: 44843
Pages: 1 - 214
Reported by: Diane S. Martin, CSR, CCRR

1 servers. We go to SmartAds after the creative 10:17:58
2 server. I think you said that was essentially the 10:18:04
3 same for new AdWords. And then to the ad mixer for 10:18:06
4 participation in the auction. I think that's where 10:18:10
5 you said that's where we have some new things going 10:18:12
6 on. 10:18:15
7 A. Right. Would you like me to describe them? 10:18:16
8 Q. That would be great. 10:18:20
9 A. Okay. The -- so in the old AdWords system, 10:18:22
10 as we're using the term, there would be this 10:18:28
11 promotion disabling step and this disabling step. 10:18:31
12 In the new system, [REDACTED] 10:18:35
13 [REDACTED] 10:18:37
14 The step that happens -- the auction step 10:18:39
15 does happen. And in the auction step we have a -- 10:18:45
16 [REDACTED] 10:18:59
17 [REDACTED] 10:19:04
18 [REDACTED] 10:19:07
19 [REDACTED] 10:19:10
20 [REDACTED] 10:19:14
21 [REDACTED] 10:19:17
22 [REDACTED] 10:19:20
23 [REDACTED] 10:19:22
24 [REDACTED] 10:19:25
25 [REDACTED] 10:19:34

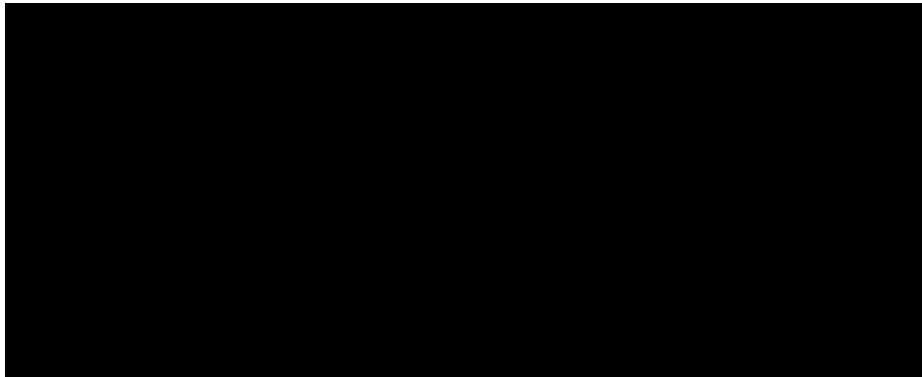
CONFIDENTIAL VIDEOTAPED DEPOSITION OF BARTHOLOMEW FURROW
CONDUCTED ON FRIDAY, SEPTEMBER 20, 2013

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

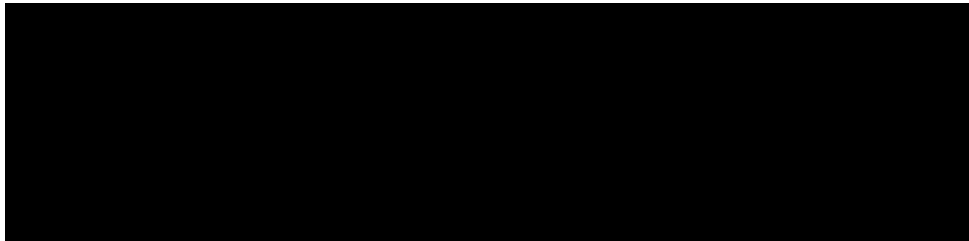


10:19:36
10:19:38
10:19:42
10:19:45
10:19:47
10:19:50
10:19:55
10:19:58
10:20:07
10:20:09
10:20:10
10:20:11
10:20:14
10:20:19
10:20:20
10:20:23
10:20:25
10:20:28
10:20:31
10:20:33
10:20:35
10:20:35
10:20:45
10:20:46
10:20:49

MR. PERLSON: Objection. Form.



BY MR. CIMINO:



CONFIDENTIAL VIDEOTAPED DEPOSITION OF BARTHOLOMEW FURROW
CONDUCTED ON FRIDAY, SEPTEMBER 20, 2013

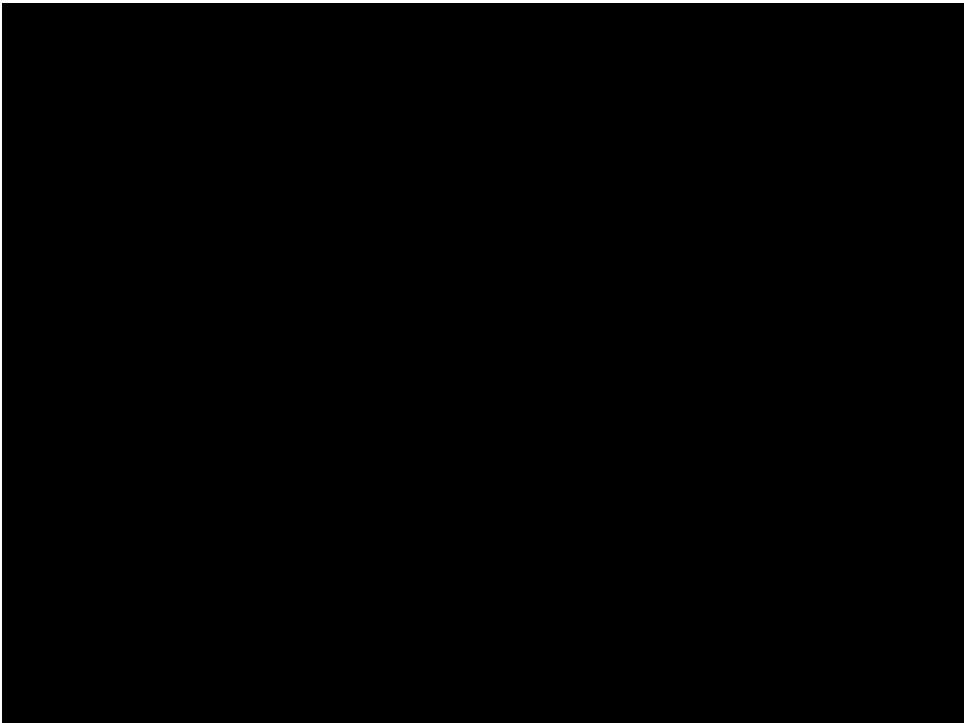
1	[REDACTED]	10:20:52
2	[REDACTED]	10:20:54
3	I should mention, because I believe I	10:20:55
4	mentioned it in the context of the old AdWords	10:20:58
5	system, [REDACTED]	10:21:01
6	[REDACTED]	10:21:04
7	[REDACTED]	10:21:07
8	Q. That's still in place?	10:21:08
9	A. That's still in place.	10:21:09
10	[REDACTED]	10:21:10
11	[REDACTED]	10:21:18
12	[REDACTED]	10:21:22
13	[REDACTED]	10:21:26
14	[REDACTED]	10:21:26
15	[REDACTED]	10:21:28
16	[REDACTED]	10:21:30
17	[REDACTED]	10:21:30
18	[REDACTED]	10:21:31
19	[REDACTED]	10:21:33
20	[REDACTED]	10:21:38
21	[REDACTED]	10:21:38
22	[REDACTED]	10:21:41
23	[REDACTED]	10:21:41
24	[REDACTED]	10:21:43
25	[REDACTED]	10:21:50

CONFIDENTIAL VIDEOTAPED DEPOSITION OF BARTHOLOMEW FURROW
CONDUCTED ON FRIDAY, SEPTEMBER 20, 2013

1		10:21:52
2		10:21:56
3		10:21:57
4		10:22:01
5		10:22:05
6		10:22:08
7		10:22:09
8		10:22:09
9		10:22:11
10		10:22:15
11		10:22:18
12		10:22:26
13		10:22:29
14		10:22:32
15		10:22:34
16		10:22:36
17		10:22:41
18		10:22:42
19		10:22:44
20		10:22:48
21		10:22:56
22		10:23:01
23		10:23:05
24		10:23:06
25		10:23:08

CONFIDENTIAL VIDEOTAPED DEPOSITION OF BARTHOLOMEW FURROW
CONDUCTED ON FRIDAY, SEPTEMBER 20, 2013

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

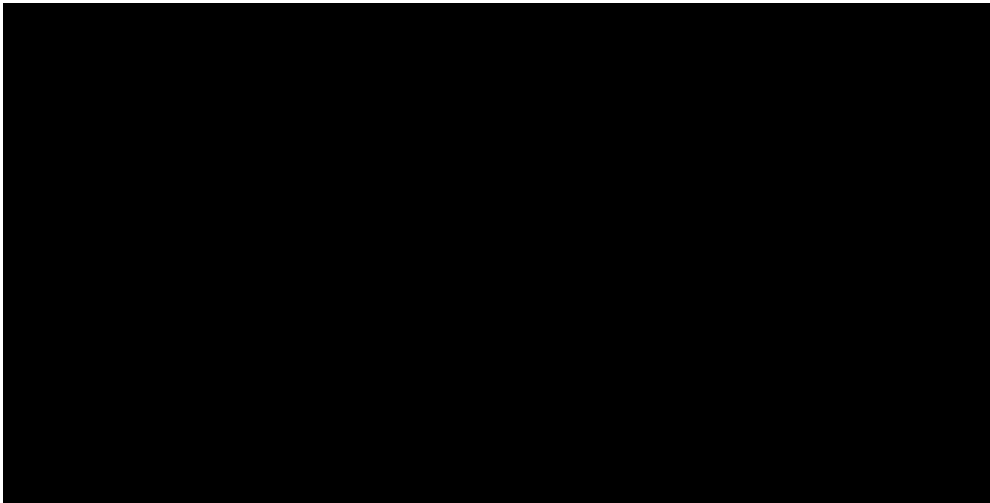


10:27:17
10:27:21
10:27:29
10:27:31
10:27:34
10:27:37
10:27:40
10:27:41
10:27:44
10:27:46
10:27:50
10:27:53
10:27:55
10:28:00
10:28:05
10:28:08
10:28:11
10:28:14
10:28:16
10:28:18
10:28:20
10:28:23
10:28:25
10:28:27
10:28:29

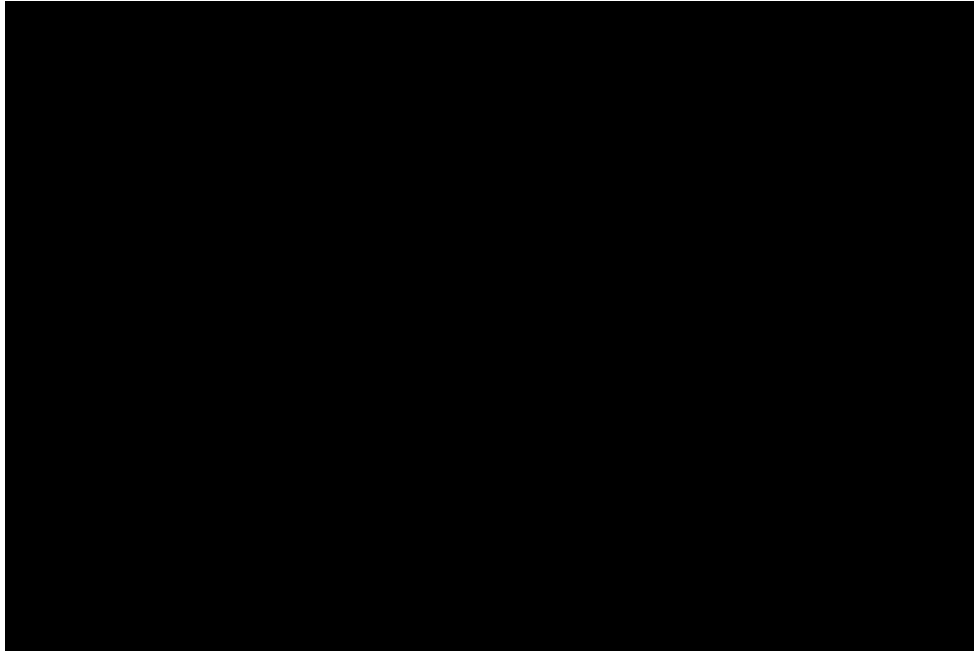

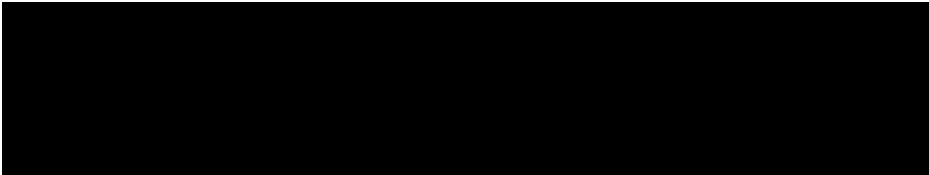
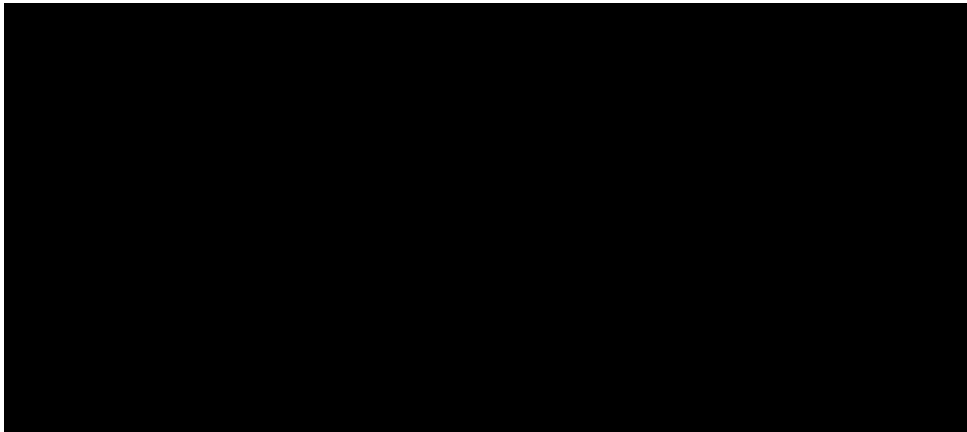
Q. And who would be most familiar with that?

A. I don't know who would be most familiar.

Q. Okay. So back to the new AdWords auction.



There could actually be no ads that even
made it to the ad mixer. Perhaps none of the
keywords had any ads associated with them. So in

1	side; otherwise, the other signals are the same?	10:40:28
2	A. That's correct, yes.	10:40:30
3		10:40:31
4		10:40:35
5		10:40:38
6		10:40:41
7		10:40:45
8		10:40:48
9		10:40:50
10		10:40:58
11		10:41:01
12		10:41:03
13		10:41:04
14	MR. PERLSON: Objection. Form.	10:41:04
15		10:41:04
16		10:41:09
17		10:41:12
18	BY MR. CIMINO:	10:41:18
19		10:41:18
20		10:41:23
21		10:41:23
22		10:41:28
23		10:41:29
24		10:41:36
25		10:41:44

CONFIDENTIAL VIDEOTAPED DEPOSITION OF BARTHOLOMEW FURROW
CONDUCTED ON FRIDAY, SEPTEMBER 20, 2013

57

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

[REDACTED]

MR. PERLSON: Objection. Form.

[REDACTED]

BY MR. CIMINO:

[REDACTED]

[REDACTED]

Q. So you said "LTV." I thought you said something like LTV changes based on impression cost. So I thought there was a different signal in new LTV.

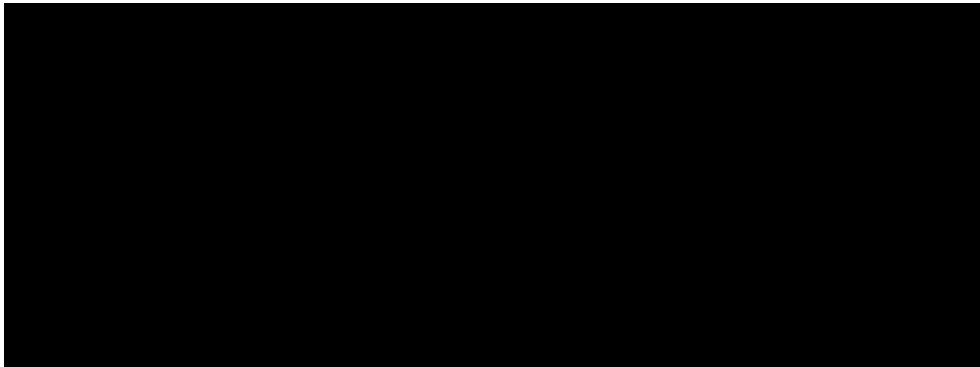
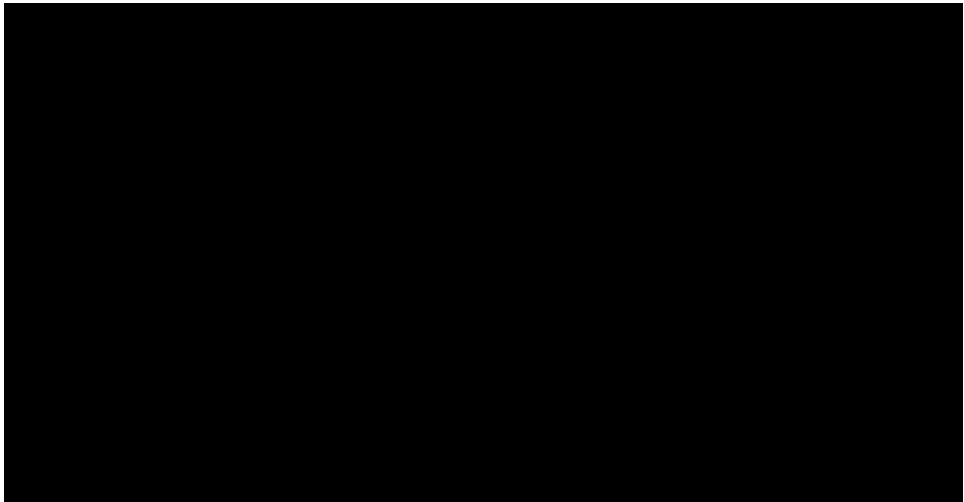
What did you mean by that?

A. The LTV formula has -- is essentially the

10:41:47
10:41:47
10:41:48
10:41:49
10:41:54
10:41:57
10:41:58
10:42:04
10:42:07
10:42:07
10:42:07
10:42:12
10:42:13
10:42:15
10:42:18
10:42:21
10:42:28
10:42:28
10:42:31
10:42:31
10:42:36
10:42:39
10:42:41
10:42:43
10:42:44

CONFIDENTIAL VIDEOTAPED DEPOSITION OF BARTHOLOMEW FURROW
CONDUCTED ON FRIDAY, SEPTEMBER 20, 2013

65

1	BY MR. CIMINO:	11:06:14
2	Q. Okay. Going back to QBB. Has the strategy	11:06:14
3	behind having QBB in old AdWords, is that reflected	11:06:22
4	anywhere in new AdWords?	11:06:27
5	A. The --	11:06:30
6	MR. PERLSON: Objection. Form.	11:06:30
7	THE WITNESS: The strategy, as I understood	11:06:31
8	it, was it was a very sort of course, if you will,	11:06:34
9	filter to try to reduce the number of ads that	11:06:38
10	would make it to later in the process.	11:06:42
11		11:06:44
12		11:06:48
13		11:06:52
14		11:06:57
15		11:07:02
16		11:07:06
17	BY MR. CIMINO:	11:07:10
18		11:07:10
19		11:07:11
20		11:07:14
21		11:07:17
22		11:07:18
23		11:07:23
24		11:07:29
25		11:07:31

CONFIDENTIAL VIDEOTAPED DEPOSITION OF BARTHOLOMEW FURROW
CONDUCTED ON FRIDAY, SEPTEMBER 20, 2013

79

1	[REDACTED]	[REDACTED]
2	[REDACTED]	[REDACTED]
3	[REDACTED]	[REDACTED]
4	[REDACTED]	[REDACTED]
5	BY MR. CIMINO:	11:23:57
6	Q. For each auction in new AdWords, [REDACTED]	11:23:57
7	[REDACTED]	11:24:00
8	[REDACTED]	11:24:08
9	MR. PERLSON: Objection. Form.	11:24:09
10	[REDACTED]	11:24:10
11	[REDACTED]	11:24:15
12	[REDACTED]	11:24:18
13	[REDACTED]	11:24:20
14	BY MR. CIMINO:	11:24:23
15	Q. So it's essentially the same signal; isn't	11:24:23
16	that right?	11:24:27
17	MR. PERLSON: Objection. Form.	11:24:27
18	THE WITNESS: LTV isn't a signal. It's a	11:24:28
19	score.	11:24:30
20	BY MR. CIMINO:	11:24:30
21	Q. Okay. The score represents the same	11:24:30
22	information about the ad; is that right?	11:24:35
23	A. It makes -- it makes use of the same inform	11:24:38
24	-- no. Sorry. Let me correct that.	11:24:40
25	[REDACTED]	11:24:42

1 [REDACTED] And so we did it for the 12:16:23
2 right-hand side/bottom as well. 12:16:30

3 And in April we finished the -- oh, I beg 12:16:33
4 your pardon. [REDACTED] 12:16:39

5 [REDACTED] 12:16:41
6 [REDACTED] 12:16:44
7 [REDACTED] 12:16:49
8 [REDACTED] 12:16:51
9 [REDACTED] 12:16:56
10 [REDACTED] 12:17:01

11 [REDACTED] In -- that was before I provided my 12:17:03
12 written declaration. 12:17:05

13 And in July we [REDACTED] 12:17:06

14 [REDACTED] 12:17:10
15 [REDACTED] 12:17:13
16 [REDACTED] 12:17:16
17 [REDACTED] 12:17:20

18 Q. I understand. 12:17:22

19 Desktop is regular AdWords? 12:17:22

20 A. I don't recall regular AdWords, but it's 12:17:25
21 ads shown on Google.com. 12:17:29

22 Q. Okay. 12:17:30

23 A. But for desktop browser or laptop, rather 12:17:31
24 than a mobile phone. 12:17:33

25 Q. Mobile, yep. 12:17:34

CONFIDENTIAL VIDEOTAPED DEPOSITION OF BARTHOLOMEW FURROW
CONDUCTED ON FRIDAY, SEPTEMBER 20, 2013

130

1 [REDACTED] 12:35:00
2 [REDACTED] 12:35:03
3 [REDACTED] 12:35:06
4 Q. But to your knowledge, no information as to 12:35:07
5 whether those were ads that in the prior system 12:35:12
6 would have been filtered out? 12:35:16
7 A. Right. To my knowledge that analysis 12:35:18
8 wasn't done, but it could have been. 12:35:21
9 Q. Okay. In paragraph 10, second sentence, it 12:35:22
10 says, "The auction predicted click-through rate, 12:35:25
11 advertisers' bid and other factors are used to 12:35:28
12 calculate LTV scores." 12:35:30
13 That's still correct for new AdWords? 12:35:32
14 [REDACTED] 12:35:37
15 [REDACTED] 12:35:40
16 [REDACTED] 12:35:43
17 [REDACTED] But otherwise, yes. 12:35:46
18 Q. And the next sentence says, "LTV scores are 12:35:49
19 used to perform a variety of functions, including 12:35:57
20 ad ranking and pricing." 12:36:01
21 "Ad ranking" there is the auction? 12:36:05
22 A. Yes. 12:36:06
23 Q. Okay, if you look down to paragraph 12, I 12:36:06
24 think there might be an inaccuracy here. 12:36:09
25 "Google has modified the accused AdWords, 12:36:12