

AMENDED Exhibit 909

PLAINTIFFS' OMNIBUS OPPOSITION TO DEFENDANTS' MOTIONS FOR SUMMARY JUDGMENT

Case No.: 4:22-md-03047-YGR

MDL No. 3047

In Re: Social Media Adolescent Addiction/Personal Injury Products Liability Litigation

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1 UNITED STATES DISTRICT COURT
2 NORTHERN DISTRICT OF CALIFORNIA
3 IN RE: SOCIAL MEDIA Case No. 4:22-MD-03047-
4 ADOLESCENT ADDICTION/ YGR MDL No.
PERSONAL INJURY PRODUCTS 3047
LIABILITY LITIGATION

5 _____
6 This Document Relates to:
7 ALL ACTIONS
8 _____

9
10 VIDEOTAPED DEPOSITION OF
11 BILL SAPHIR
12 HIGHLY CONFIDENTIAL
13 Tuesday, March 25, 2025
14 SAN FRANCISCO, CALIFORNIA
15
16
17
18
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20
21
22
23

Reported By:
24 KATHLEEN A. MALTBIE, STENOGRAPHIC REPORTER
California CSR 10068, Nevada CCR 995, Texas CSR
25 12212, RPR-RMR-CRR-CCRR-CLR-CRC-RDR

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VIDEOTAPED DEPOSITION OF BILL SAPHIR

BE IT REMEMBERED that on Tuesday,
March 25, 2025, commencing at the hour of 9:08 a.m.
thereof, before me, Kathleen A. Maltbie,
RPR-RMR-CRR-CCRR-CLR-CRC-RDR, a Certified
Stenographic Shorthand Reporter, in and for the
State of California, Nevada and Texas, personally
appeared BILL SAPHIR, a witness in the
above-entitled court and cause, who, being by me
first duly sworn, was thereupon examined as a
witness in said action.

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Brian Fronzaglia, exhibit tech
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1 MARCH 25, 2025

9:08 A.M. PACIFIC TIME

2 P R O C E E D I N G S

3
4 MORNING SESSION

5 THE VIDEOGRAPHER: We are now on the
6 record. My name is Nathan Arndt. I'm the
7 videographer for Golkow. Today's date is
8 March 25th, 2025, and the time is 9:08 a.m. This
9 deposition is being held in San Francisco,
10 California, in re Social Media Adolescent Addiction
11 Personal Injury Products Liability Litigation, for
12 the United States District Court of the Northern
13 District of California. Our deponent is
14 Bill Saphir.

15 Will counsel please identify themselves
16 for the record.

17 MS. CONROY: Jayne Conroy for the
18 plaintiffs.

19 MS. HURD: Ellen Hurd for the plaintiffs.

20 MR. WILLEN: Brian Willen for the
21 defendants.

22 MR. DON: Avishai Don for the defendants.

23 MS. BAKER: Toni Baker for Google.

24 THE VIDEOGRAPHER: Our court reporter is
25 Kathleen Maltbie, and she will now swear in the

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1 witness.

2 THE REPORTER: Good morning. This morning
3 it is March 25th, 2025. My name is Kathleen
4 Maltbie. I am a certified shorthand reporter,
5 License No. 10068, also licensed in Nevada and
6 Texas.

7 Would you raise your right hand, please?

8 BILL SAPHIR,

9 having been duly sworn,

10 was examined and testified as follows:

11 EXAMINATION BY MS. CONROY

12 BY MS. CONROY:

13 Q. Good morning. Is it Saphir, Mr. Saphir?

14 A. Mm-hmm.

15 Q. My name is Jayne Conroy. I'm going to be
16 asking you some questions today. And just a couple
17 of ground rules. If you can, wait until I finish my
18 question before you start answering it, even though
19 our court reporter, Kat, can probably take it down,
20 we'll try to make today easier for her.

21 If you need to take a break, let me know.
22 We'll unhook ourselves from the mics. The only
23 thing I ask is that you not request a break when
24 I've asked a question and you haven't answered it
25 yet.

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1 Is that okay?

2 A. Mm-hmm.

3 Q. And one other thing that we're going to
4 try and remember is, when you answer a question,
5 please try to do it verbally without an "mm-hmm."
6 So try to say "yes" or "no" or whatever. That makes
7 it easier for the court reporter too.

8 A. Okay.

9 Q. Thank you.

10 Have you ever been deposed before?

11 A. No.

12 Q. Okay. Did you -- are you represented here
13 today by a lawyer?

14 A. I guess so, yes.

15 MR. WILLEN: Hope so.

16 BY MS. CONROY:

17 Q. And without telling me about any of the
18 conversations you've had with your lawyer, have you
19 met with your lawyer in advance of this deposition?

20 A. Yes.

21 Q. Okay. On how many occasions?

22 A. Twice.

23 Q. And were they in person or on some
24 other -- like, on the phone or something?

25 A. Once in person, once -- once on -- over --

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1 over GVC.

2 Q. That's right. We had to remember.

3 It's not Zoom, right?

4 A. Right.

5 Q. And where was the in-person meeting?

6 A. Next door, the office next to us.

7 Q. Okay. And we're here in a law office in
8 San Francisco?

9 A. Say again.

10 Q. And we're here in a law office in
11 San Francisco?

12 A. Yeah.

13 Q. Okay. And where do you -- [REDACTED]

[REDACTED]

15 [REDACTED].

16 [REDACTED]

[REDACTED]

[REDACTED]

19 A. No.

20 [REDACTED]

[REDACTED].

22 [REDACTED]

[REDACTED]

[REDACTED].

25 Q. I'm going to mark as Exhibit 1 your

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1 LinkedIn profile. So we'll pass you a copy of this
2 so you can take a look at it.

3 (Whereupon, Deposition Exhibit 1
4 was marked for identification.)

5 BY MS. CONROY:

6 Q. How old are you, Mr. Saphir?

7 A. [REDACTED]

8 Q. Scary to say that, isn't it?

9 A. It is.

10 Q. This -- have you seen this LinkedIn
11 profile before?

12 A. Yes.

13 Q. Okay. And is it current?

14 A. Yes.

15 Q. And I see that it says you're the
16 principal engineer, director of engineering at
17 Google.

18 Is that -- that's your current title?

19 A. No. My title is director of engineering.

20 Q. Okay.

21 A. I started off as principal engineer and
22 they -- if you have more than a larger -- a team
23 larger than a certain size, you are turned into a
24 director of engineering.

25 Q. Do you have a team that reports to you?

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1 A. Yes.

2 Q. Okay. And how many -- how many
3 individuals are on that team?

4 A. Around 65.

5 Q. And where are they located?

6 A. Mostly in San Bruno. A couple are remote,
7 and a couple are in Mountain View. A few are in
8 Mountain View.

9 Q. Mountain View is also in California,
10 correct?

11 A. Yes.

12 Q. And I see you've been at Google, and as
13 you said, you started as a principal engineer.
14 You started in May of 2011, correct?

15 A. That's right. I did not start as a
16 principal engineer, no.

17 Q. What was your title when you started --

18 A. Senior engineer.

19 Q. And did you begin -- when did you begin to
20 do work for YouTube?

21 A. From the beginning.

22 Q. And it says here right underneath San
23 Bruno (as read):

24 Lead for recommendations,
25 infrastructure at YouTube.

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1 Do you see that?

2 A. That's right.

3 Q. And what does that mean?

4 A. My team is called the discovery
5 infrastructure team, and we build all of the
6 plumbing that other engineers use to build discovery
7 services. So discovery services, any page where we
8 show you a bunch of videos that you -- that you can
9 select from.

10 Q. And those are the page that someone that
11 goes on to YouTube can see?

12 A. Yeah.

13 Q. And when it says "recommendations," what
14 does that mean?

15 A. Recommendation is a -- any -- any content
16 that is selected by -- by YouTube to show to a user
17 who is using YouTube. It's not a precisely-defined
18 term.

19 Q. Okay. For how long have you been the
20 lead -- just approximately -- the lead for
21 recommendations infrastructure at YouTube?

22 A. Probably -- probably maybe seven years,
23 seven or eight years.

24 Q. And who was your predecessor, if you know?

25 A. Well, in this role, [REDACTED]. So --

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1 and he left more -- he left at least ten years ago,
2 so maybe ten years, yeah.

3 Q. Okay. And did you have -- before you
4 became lead, did you have involvement in the
5 recommendations infrastructure at YouTube?

6 A. Yes.

7 Q. Okay. And was that true from the time you
8 started at YouTube?

9 A. Yes.

10 Q. And you -- you described for me that
11 you -- you would build the plumbing for the
12 infrastructure; is that correct?

13 A. Yes.

14 Q. Can you give me a little bit more of an
15 explanation of the types of things that would go
16 into building the infrastructure or doing the
17 plumbing?

18 A. Yes. So what I mean by that is -- it
19 includes a bunch of things. One is the APIs that
20 engineers use to build recommendation services.

21 Q. Let me just stop you there.

22 What does "API" stand for? We have a
23 jury, so ...

24 A. Application programming interface.

25 Q. Thank you. You can continue.

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1 A. It includes some of the data sources that
2 we use, especially for personalization, notably,
3 watch history. It includes -- and that -- that type
4 of data is used for personalization and also is used
5 for training ML models.

6 We own the infrastructure that
7 orchestrates the training of -- of ML, machine
8 learning, models, and the infrastructure for some of
9 the data sources that are used for -- for building
10 recommendations.

11 Q. When you're talking about infrastructure
12 to train machine learning modules, you're talking
13 about machine learning for better selection of
14 recommended videos?

15 A. Yes.

16 Q. And when you're talking about the
17 infrastructure for data sources, what type of
18 sources are you talking about?

19 A. So number one, information about users who
20 use YouTube. So, for example, watch history. But
21 other information also that's, you know, linked to
22 that user. Other data sources where we're more of a
23 middleman, in a way, are information about videos
24 that we might want to recommend, information about
25 channels, information about playlists and data

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1 sources that provide sort of -- we call them
2 candidates or -- or lists of videos that we might
3 consider for recommending.

4 Q. And has the machine learning models been
5 available to you since you started in 2011?

6 A. No. We didn't use machine learning when I
7 started. My guess is that would have started around
8 2013 or so.

9 Q. Did you help develop that?

10 A. No.

11 Q. Who did that?

12 A. The name that I associate most with that
13 is [REDACTED].

14 Q. And so then did machine learning become
15 available to you as part of your abilities to
16 recommend videos?

17 MR. WILLEN: Objection to the form.

18 THE WITNESS: Can you -- can you say what
19 you mean by "available to me"?

20 BY MS. CONROY:

21 Q. Well, you talked about part of your
22 responsibilities were to collect videos for
23 recommendations. Does that make sense to you?

24 Is that what you did?

25 A. I wouldn't -- I wouldn't call it collect

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1 videos. Let me give a little more background here
2 to help understand.

3 The team that I joined was originally
4 called the personalization team. And the focus of
5 that team was video recommendations on the YouTube
6 home page. Since that time, the scope has -- has
7 gradually grown, so, for example, recommendations on
8 the watch page didn't become something my team
9 worked on until, you know, much later, maybe 2019 or
10 2020.

11 And we had the -- so, for example, the
12 first use of machine learning, I believe, was -- was
13 on the -- on the watch page. So when that was first
14 introduced, my -- my team wasn't -- wasn't using it
15 directly. And the -- historically -- so my team
16 does not own any of the machine learning models. So
17 we don't train the models, we don't determine what
18 the -- what objectives they are trained with. And
19 for the most part, those models are owned by the
20 teams that actually build the features that are
21 actually trying to improve recommendations on -- on
22 YouTube.

23 What my team owns there, and this is more
24 recent, is the infrastructure that allows us to
25 coordinate the training of these models. You know,

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1 they have to read from certain data sources and
2 they -- they need to be -- have some simple test run
3 before they're released into production. They have
4 to be staged in various places before they reach
5 production, so that kind of connecting the model
6 trainers with the data and all of the coordination
7 involved there is the kind of work that my -- my
8 team does.

9 So that's why when you talk about machine
10 learning models, like, my team doesn't use them, we
11 just facilitate their training and use.

12 Q. Thank you. That was helpful.

13 The -- the teams that do machine learning,
14 are they part of YouTube?

15 A. Yes.

16 Q. And do they have a name?

17 A. There are several teams. For example,
18 there's a home page team. There is a watch next
19 team, watch next being the recommendations on the
20 watch page. There's a Shorts team for Shorts
21 recommendations. There are many other teams that
22 are, you know, increasing distance organizationally
23 who work, for example, on the classifiers for
24 videos, whether it has to do with responsibility or
25 Trust & Safety or Kids, whatever the topic, those

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1 are all different teams that own their own ML
2 models.

3 Q. And an ML model is a machine learning
4 model?

5 A. That's right.

6 Q. And your team and you help coordinate
7 those -- the individuals and the teams working with
8 the machine learning models with the sources that
9 are going to collect the data from?

10 A. That's right.

11 Q. And can you tell me what those sources
12 area?

13 Where are they collecting the data from?

14 MR. WILLEN: Objection to the form.

15 THE WITNESS: There are many -- I think I
16 mentioned them earlier. There are many different
17 sources having to do with data about users, data
18 about videos, data about playlists.

19 BY MS. CONROY:

20 Q. Slow down for a second.

21 Data, what are you saying, data what?

22 A. Data about --

23 Q. Data about, okay.

24 A. Yeah.

25 About users, about videos, about channels,

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1 about playlists. The recommendations involves --
2 you know, generating recommendations involves
3 combining all of that -- all of that data.

4 Q. And is that data housed at YouTube?

5 A. Not at -- not at YouTube. It's housed in
6 Google data centers.

7 Q. And you have access to that data that's
8 housed in Google?

9 MR. WILLEN: Objection to the form.

10 THE WITNESS: I don't personally have
11 access.

12 MR. WILLEN: Excuse me.

13 THE WITNESS: The -- the systems that
14 actually -- you know, the computers that generate
15 recommendations do.

16 BY MS. CONROY:

17 Q. I see on Exhibit 1 you have some prior
18 experience, Numenta, where you were director of
19 engineering.

20 Do you see that?

21 A. Yes.

22 Q. And what kind of a business was Numenta?

23 A. Numenta, I -- I'm not sure I would
24 characterize it as a business right now, but it --
25 it's attempting to build machine learning models in

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1 a way that faithfully represents what the -- how the
2 human brain works.

3 Q. And did you work on building machine
4 learning models while you were there?

5 A. I did not. Similar to at YouTube, my role
6 there was primarily about the -- the infrastructure
7 and the plumbing.

8 Q. And why did you leave Numenta to go to
9 Google?

10 A. After -- I think I had worked there about
11 five years, and we did not have a product, I was
12 interested in working on something that people were
13 using.

14 Q. Okay. Did you receive, for want of a
15 better term, on-the-job training when you started at
16 Google?

17 A. Maybe clarify the question?

18 Do you mean formal training, like classes
19 or --

20 Q. Well, did -- was there any sort of formal
21 training or apprenticeship or anything like that, or
22 did you just go right in and begin working?

23 A. I went right in and began working, yeah.

24 Q. Did you know anyone that was at Google
25 when you started?

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1 A. Yes.

2 Q. Who was that?

3 A. [REDACTED] was one of them.

4 Do you want a full list of everyone that I
5 remember knowing at Google from that time?

6 Q. No.

7 I meant -- what I was -- did anyone else
8 from Numenta go to Google with you?

9 A. [REDACTED] was from -- from Numenta, and he
10 went before I did, I think.

11 Q. And where -- where did he work? Was
12 he -- strike that.

13 Was he at YouTube?

14 A. Yes.

15 Q. What did he do?

16 A. I don't remember exactly. Yeah. I
17 don't -- I don't remember.

18 Q. Okay. That's fine.

19 A. He did -- he did not -- he was not on my
20 team.

21 Q. Did he work on infrastructure?

22 A. I -- I think so, yeah. As far as I know,
23 he did not work on, like, a user-facing feature.

24 Q. You used the word "personalization."
25 What does that mean in the -- in the

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1 context of YouTube?

2 A. That is a -- first of all, it's a fuzzy
3 definition, and I would say it often depends -- you
4 know, the details depend on context. Broadly
5 speaking, any time we change a -- the experience of
6 a user coming to YouTube or we provide an experience
7 that is based, at least in part, on information that
8 we have about that user.

9 Q. That's the -- were you -- I'm sorry, were
10 you finished?

11 A. Yes.

12 Q. Have you seen personalization abbreviated
13 to p13n?

14 A. Yes.

15 Q. And can you explain for the jury what p13n
16 means?

17 A. Right. If you -- if you spell out the
18 word personalization, there are 13 letters between
19 the P and the N.

20 Q. Okay. And that's where the p13n comes
21 from?

22 A. That's right. It's much easier to type or
23 write.

24 Q. And personalization, as you said, kind of
25 broadly speaking is when you provide an experience

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1 to a user that's based on information that you --
2 and I'm using "you" as YouTube -- has about the
3 user?

4 A. Yes. That's right.

5 Q. And what kind of information, broadly,
6 does YouTube have about a user?

7 MR. WILLEN: Objection to the form.

8 THE WITNESS: So especially in the context
9 of personalization, I -- I think there's a --
10 there's a list that we have documented on a -- on a
11 public website. I think it's the how -- how YouTube
12 works. So that will have things that I don't
13 remember, but, you know, most importantly is watch
14 history, the record of videos that a user has
15 watched on YouTube. Includes likes and dislikes,
16 channel subscriptions, dismissals, which is a
17 product feature where the user can say they're not
18 interested in a video.

19 And there are probably a few others.
20 Those are -- those are some of the important ones.

21 BY MS. CONROY:

22 Q. What about the age of the user?

23 MR. WILLEN: Objection to the form.

24 THE WITNESS: Yes. We have, for example,
25 the age of a -- of a user that they specified when

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1 they signed up for their account.

2 BY MS. CONROY:

3 Q. Is that also referred to as declared age?

4 A. That's right. Declared age.

5 Q. What about gender?

6 A. [REDACTED]

7 [REDACTED].

8 Q. Do they provide an address or what country
9 they're in?

10 MR. WILLEN: Sorry. Objection to the
11 form.

12 THE WITNESS: Yeah, I -- I don't actually
13 know. I do know that we don't use an address, and
14 I -- I don't know about country.

15 BY MS. CONROY:

16 Q. You mentioned that they sign up for an
17 account.

18 Where do they do that?

19 MR. WILLEN: Objection to the form.

20 THE WITNESS: I -- I don't have any
21 special knowledge about that. It's not -- no part
22 of YouTube.

23 BY MS. CONROY:

24 Q. When you say, "it's not part of YouTube,"
25 do they sign up for an account at Google?

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1 A. It's a Google account, yes.

2 Q. Okay. Are you familiar with the term
3 "GAIA account"?

4 A. Yes.

5 Q. That's G-A-I-A, all capitals?

6 A. I don't know about capitals, but that's
7 how you spell it, yes.

8 Q. Okay. And what is that?

9 A. That means -- that's a -- a Google
10 account. And every Google account is -- is
11 identified -- is associated with a number that we
12 call a GAIA ID.

13 Q. And so when you are providing an
14 experience for a user based on the information that
15 they provide to you, that is coming from the GAIA
16 account?

17 MR. WILLEN: Objection to the form.

18 THE WITNESS: Yes, if they are signed in
19 when they use YouTube. And if they're signed out,
20 the corresponding ID is just a -- a number. It's
21 called a visitor ID. And there's no account
22 associated with visitor ID, that's specific to -- to
23 a device.

24 BY MS. CONROY:

25 Q. Do you select watch history connected to a

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1 visitor ID?

2 MR. WILLEN: Objection to the form.

3 THE WITNESS: Yes.

4 BY MS. CONROY:

5 Q. By "you," I mean, you know, YouTube.

6 A. YouTube, yes. Uh-huh.

7 I should -- should qualify, you know,
8 users have the ability to turn off collection, but
9 by -- by default, yes.

10 Q. So what you just said, they have the
11 ability to turn off collections, so a user can --
12 there's some process by which a user could turn off
13 the ability of YouTube to see their watch history?

14 MR. WILLEN: Objection to the form.

15 THE WITNESS: I wouldn't characterize it
16 as turn -- the way you phrased it wasn't right,
17 but -- but they can turn off the -- YouTube's
18 collection of history.

19 BY MS. CONROY:

20 Q. And what -- what does that -- what's the
21 practical application of that?

22 Does it just -- does YouTube then just not
23 collect or is it something else that's happening?

24 MR. WILLEN: Objection to the form.

25 THE WITNESS: What that means from a maybe

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1 technical perspective is that we don't -- we don't
2 store that information in serving systems where it
3 can be used for -- for personalization,
4 personalization and a few other things. So, for
5 example, if you're signed in and you've watched a
6 video, it shows a red bar under the video showing
7 that you've watched it. So, you know, that --
8 source of that feature is watch history, so that
9 also isn't there for videos that you watched when
10 your history was turned off.

11 BY MS. CONROY:

12 Q. And what that actually means is if someone
13 has turned off -- did you call it the watch time?
14 What did you --

15 MR. WILLEN: Sorry.

16 BY MS. CONROY:

17 Q. I think you said you turn off the
18 collection.

19 MR. WILLEN: Objection to the form. I
20 don't know what the question is. Sorry.

21 BY MS. CONROY:

22 Q. I'm trying to use the correct term.
23 When you said they can -- they can turn
24 off, is it --

25 (Simultaneous speakers - inaudible.)

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1 THE WITNESS: We usually -- we usually say
2 they turn off watch history.

3 BY MS. CONROY:

4 Q. Watch history, okay.

5 And when they turn off watch history, that
6 means that you don't -- "you" meaning YouTube -- are
7 unable to use that history for personalization?

8 A. Yes. That's right.

9 Q. Okay. Is it fair to say that it does not
10 mean that the watch history is not collected, just
11 means it's not used for personalization?

12 MR. WILLEN: Objection to the form.

13 THE WITNESS: [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] We can't use
17 it for personalization. And then that -- that --
18 that data [REDACTED] is not retained.

19 BY MS. CONROY:

20 Q. When you say that data is not retained,
21 it's not retained with the [REDACTED]

22 MR. WILLEN: Objection to the form.

23 THE WITNESS: No. We can talk about it
24 separately. So with -- with a GAIA ID, for example,
25 it means that it is deleted or anonymized within --

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1 within 60 days.

2 BY MS. CONROY:

3 Q. And if after 60 days a user changes their
4 setting and allows watch history collection, does
5 that just start up fresh?

6 MR. WILLEN: Objection to the form.

7 THE WITNESS: I'm not sure how to
8 interpret "start up fresh."

9 BY MS. CONROY:

10 Q. Well, is there -- is there any ability to
11 go back and find their previous watch history after
12 60 days, or is it -- when I say "start fresh," is it
13 starting up again on the date that they changed the
14 setting?

15 MR. WILLEN: Objection to the form.

16 THE WITNESS: Right. The -- the data
17 that -- any data that was collected while history is
18 off is gone. So it's only -- only for new activity
19 after they re-enable the setting.

20 BY MS. CONROY:

21 Q. Are you familiar with the term "inferred
22 age"?

23 MR. WILLEN: Objection to the form.

24 THE WITNESS: Yes.

25 / /

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1 BY MS. CONROY:

2 Q. Okay. And what does that mean to you in
3 a -- obviously talking about YouTube or Google?

4 A. It means a -- I might describe it as a --
5 a guess about -- about the user's age.

6 Q. And have you -- have you ever had anything
7 to do with building an infrastructure or an ability
8 to guess a user's age?

9 A. No.

10 Q. Okay. Who does that?

11 A. There's an ads team that does that.

12 Q. And that's A-D-S?

13 A. Yes.

14 Q. Is that short for advertising?

15 A. Yes.

16 Q. And are they part of Google or YouTube?

17 A. Google.

18 Q. And why do they guess a user's age?

19 MR. WILLEN: Objection to the form.

20 THE WITNESS: I -- I don't know.

21 That's -- that's an ads thing.

22 BY MS. CONROY:

23 Q. If they -- if they do guess a user's age,
24 do you know one way or the other whether that is or
25 becomes part of the personalization of a user?

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1 MR. WILLEN: Objection to the form.

2 THE WITNESS: Yes. When it's available,
3 we may use inferred age.

4 BY MS. CONROY:

5 Q. And how would it -- when you say -- when
6 you said when available, how would it become
7 available to you?

8 A. The ads team would make it available.

9 Q. And why would they do that?

10 MR. WILLEN: Objection to the form.

11 THE WITNESS: Why would they do that?

12 I -- I can't -- at some level, I can't
13 speculate on -- on why. But they do make it
14 available, and it's regularly available for some
15 fraction of -- of users.

16 BY MS. CONROY:

17 Q. Do you ever ask for it?

18 A. It has been available, you know, for -- I
19 don't recall when it became available and how this
20 initially started. But certainly for -- for quite a
21 while it's been -- it's available in our -- in our
22 systems.

23 Q. Do you think it's been available since
24 2015?

25 A. I'd say probably. I don't know for sure.

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1 Q. And when you say "been available," it
2 means it's something that you can -- in your
3 position, can use that data if you deem it useful to
4 you?

5 MR. WILLEN: Objection to the form.

6 THE WITNESS: My responsibility there and
7 what -- of course, not me personally -- that -- ■

■ [REDACTED]

■ [REDACTED]

10 BY MS. CONROY:

11 Q. So you're -- you're able to -- once the
12 data -- once -- let me strike that.

13 Once the ads team makes that data
14 available to YouTube, you can facilitate the use of
15 that data to other teams within YouTube?

16 A. Yeah. To the -- to the systems that those
17 other teams are building.

18 Q. And have you ever done that?

19 MR. WILLEN: Objection to the form.

20 THE WITNESS: I have not personally done
21 that. Our -- my -- the systems that my team owns,
22 you know, make that data available, you know,
23 subject to all of the standard, you know, reviews
24 that teams have to go through before we give them
25 access to data.

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1 BY MS. CONROY:

2 Q. And is it fair to say that you, or anyone
3 on your team at YouTube, has not been involved in
4 the infrastructure of the ads team inferred age
5 data?

6 MR. WILLEN: Excuse me. Objection to the
7 form.

8 THE WITNESS: That's right. We have not
9 been involved.

10 BY MS. CONROY:

11 Q. And do you do any quality control or
12 anything like that at YouTube with respect to that
13 data that's available for you to facilitate for your
14 teams to use?

15 MR. WILLEN: Objection to the form.

16 THE WITNESS: So -- I think I can
17 interpret that question a couple of ways, but I'll
18 say, so we don't do any -- there's no -- we don't
19 evaluate whether it's correct, you know, how correct
20 is it or how many -- you know, when it's available
21 and when it's not. Except part two, I think in the
22 past, we have noticed that signal wasn't being made
23 available at all, and, you know, escalated that to
24 the ads team as a -- as a bug. So we -- we would do
25 kind of that level of -- of quality control if -- if

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1 it seems to be completely missing for a while.

2 BY MS. CONROY:

3 Q. All right. Let me see if I understand
4 what you're saying.

5 So you -- you at YouTube are looking to
6 facilitate access to that data, and you find out for
7 some reason the data is not accessible, you call
8 that a bug, and so you may get involved to figure
9 out why you can't see that data?

10 MR. WILLEN: Objection to the form.

11 THE WITNESS: Yes. That's right. So in
12 the overall scheme of things, [REDACTED]

13 [REDACTED] I -- I mention that
14 because I believe we have had outages, so to speak,
15 where it was not available for weeks at a time.

16 [REDACTED]
17 [REDACTED] but someone noticed, and -- and
18 we then asked the ads team about it.

19 And I was answering that in the context of
20 do you do quality control. Like, that's kind of the
21 level of our involvement in, you know, the quality
22 of the data.

23 BY MS. CONROY:

24 Q. Okay. Why in the overall scheme of things
25 [REDACTED]?

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1 A. Let me start by defining a term. So
2 when -- when we use an ML model, we -- "we" meaning
3 our systems -- send it -- a lot of data, data about
4 maybe about the user, data about the videos,
5 whatever it is the ML model is trying to tell us
6 something about. And so those -- each piece of data
7 is called a feature.

8 So inferred demographics, [REDACTED] age [REDACTED]
9 [REDACTED], [REDACTED] used as a feature for ML models. And
10 there are one of, I think, thousands of features
11 that are -- that are provided to the -- to the
12 model. And, you know, I have no -- no personal
13 knowledge about, you know, which features are --
14 are -- you know, most influence the model
15 predictions, because I don't work for the models
16 themselves. But if that data is not there, you
17 know, I don't [REDACTED]

[REDACTED] [REDACTED]
[REDACTED] [REDACTED]
20 [REDACTED]
[REDACTED] [REDACTED]
[REDACTED] [REDACTED]

23 Q. And that would be -- that's -- you
24 would -- [REDACTED]

[REDACTED]

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1 [REDACTED]

2 [REDACTED]

3 MR. WILLEN: Objection to the form.

4 THE WITNESS: [REDACTED]

5 [REDACTED] If

6 the -- the data is -- and that's what I know most

7 about. If the data is used for other purposes where

8 it might be more important than, you know, that --

9 it's all a matter of when it might get escalated to

10 me. That's how I -- how I view the importance.

11 BY MS. CONROY:

12 Q. And that's because you are -- you're sort
13 of the expert or the leader in the infrastructure at
14 YouTube, right?

15 A. Because my team would be responsible for
16 addressing, you know, a problem that was reported,
17 yeah.

18 Q. Okay. And so you're gauging -- when
19 you're answering me with respect to whether it's
20 important, you're basing that on your everyday
21 crises, and that's just not a typical everyday
22 crisis?

23 MR. WILLEN: Objection to the form.

24 THE WITNESS: That's right. In
25 particular, I'm saying that I -- I don't really know

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1 much about the machine learning models themselves,
2 so that's kind of my indirect indicator of
3 importance.

4 BY MS. CONROY:

5 Q. And when you hear about problems, how does
6 that happen?

7 Does somebody call you, or is it -- does
8 it come over on some electronic system, or how --
9 how does your team get alerted to problems?

10 A. It depends very much on the kind of
11 problems. Sometimes people will file a bug.
12 There -- there is an on-call team of system
13 reliability engineers that -- that may get paged for
14 particularly serious problems. We have, typically,
15 business hours support for problems, but, you know,
16 people are available by -- via phone if there's a --
17 a big emergency outside of business hours. That's
18 quite rare.

19 Q. Are you available 24/7 for those big
20 emergencies?

21 A. Un- -- well, any time I have my phone with
22 me, it's -- it's set to break through do not
23 disturb. So in that sense, yes. Those, these days,
24 almost never come to me.

25 Q. That's because your team can handle it?

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1 A. That's right.

2 Q. Let me show you what's been marked as
3 Exhibit 2.

4 (Whereupon, Deposition Exhibit 2
5 was marked for identification.)

6 BY MS. CONROY:

7 Q. And you're free to look through this, but
8 I'm actually just going to show you the picture
9 because that's you, isn't it, there on the right?

10 A. Sure is, yes.

11 Q. Okay. And who is that in the middle?

12 A. That's Cristos Goodrow.

13 Q. Okay. And do you still work with him?

14 A. Yes.

15 Q. Okay. And who is that on the left?

16 A. That is [REDACTED] I don't believe he's
17 at Google anymore.

18 Q. Can you tell who any of the others are?

19 A. I think that's probably [REDACTED] in
20 the hat. Guy named [REDACTED] who is next to me. Those
21 are the ones that I recognize.

22 Q. Do you know what office that was at? San
23 Bruno?

24 A. That must have been San Bruno, yeah.

25 Q. Are you still working in that office?

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I, Kathleen A. Maltbie, Certified Shorthand Reporter licensed in the State of California, License No. 10068, the State of Nevada, CCR 995, and the State of Texas, CSR 12212, hereby certify that deponent was by me first duly sworn, and the foregoing testimony was reported by me and was thereafter transcribed with computer-aided transcription; that the foregoing is a full, complete, and true record of proceedings.

I further certify that I am not of counsel or attorney for either or any of the parties in the foregoing proceeding and caption named or in any way interested in the outcome of the cause in said caption.

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In witness whereof, I have hereunto set my hand this day:

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Kathleen Maltbie

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